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**STUDY PROJECT**

INTELLIGENCE FOR THE DIVISION --
-- A G2 PERSPECTIVE --

BY

Colonel Richard J. Quirk III
United States Army

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92-16673
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92 6

| REPORT DOCUMENTATION PAGE | | Form Approved OMB No. 0704-0188 |
|---|---|---|
| **1a. REPORT SECURITY CLASSIFICATION** UNCLASSIFIED | **1b RESTRICTIVE MARKINGS** | |
| **2a. SECURITY CLASSIFICATION AUTHORITY** | **3 DISTRIBUTION / AVAILABILITY OF REPORT** | |
| **2b. DECLASSIFICATION / DOWNGRADING SCHEDULE** | | |
| **4. PERFORMING ORGANIZATION REPORT NUMBER(S)** | **5. MONITORING ORGANIZATION REPORT NUMBER(S)** | |

| 6a. NAME OF PERFORMING ORGANIZATION Student Detachment US Army War College | 6b. OFFICE SYMBOL (If applicable) | 7a. NAME OF MONITORING ORGANIZATION |
|---|---|---|
| **6c. ADDRESS (City, State, and ZIP Code)** Carlisle Barracks, PA 17013-5050 | | **7b. ADDRESS (City, State, and ZIP Code)** |

| 8a. NAME OF FUNDING / SPONSORING ORGANIZATION USAWC-SSI | 8b. OFFICE SYMBOL (If applicable) AWCI | 9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER | | |
|---|---|---|---|---|
| **8c. ADDRESS (City, State, and ZIP Code)** Carlisle Barracks, PA 17013-5050 | | **10. SOURCE OF FUNDING NUMBERS** | | |
| | | PROGRAM ELEMENT NO. | PROJECT NO. | TASK NO. | WORK UNIT ACCESSION NO. |

**11. TITLE (Include Security Classification)**
Intelligence for the Division: A G2 Perspective

**12. PERSONAL AUTHOR(S)**
Richard J. Quirk III

| 13a. TYPE OF REPORT MSP | 13b. TIME COVERED FROM _____ TO _____ | 14. DATE OF REPORT (Year, Month, Day) 92/05/30 | 15. PAGE COUNT 390 |
|---|---|---|---|

**16. SUPPLEMENTARY NOTATION**

| 17. COSATI CODES | | | 18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) |
|---|---|---|---|
| FIELD | GROUP | SUB-GROUP | |
| | | | |
| | | | |

**19. ABSTRACT (Continue on reverse if necessary and identify by block number)**

See reverse.

| 20. DISTRIBUTION / AVAILABILITY OF ABSTRACT ☐ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS | 21 ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED | |
|---|---|---|
| **22a. NAME OF RESPONSIBLE INDIVIDUAL** DOUGLAS V. JOHNSON II, LTC, USA | **22b TELEPHONE (Include Area Code)** (717) 245-3010 | **22c. OFFICE SYMBOL** AWCI |

**DD Form 1473, JUN 86**          *Previous editions are obsolete*          SECURITY CLASSIFICATION OF THIS PAGE

The Assistant Chief of Staff, G2, has been serving American combat commanders for over fifty years. The duty is complex, and demanding, and considered by many as the epitome of the tactical intelligence profession. Nevertheless, the military intelligence community has generated very little literature describing the G2 experience. Generations of new G2s have undertaken this duty armed with only their own experiences as preparation. This paper describes one G2's experience. It serves primarily to help the prospective G2 to appreciate the issues and challenges that he may face, and secondarily as an historical record for future academic study.

The G2's role is an important and difficult one. He provides a sizable share of the enemy, weather, and terrain information needed by a large tactical formation to execute modern combat operations. He helps to steer higher level intelligence efforts to support these large tactical formations, and thereby to win on the battlefield. The duty demands strength of character, broad expertise, and a wide variety of skills. The G2 is called upon to be tactician and technician, expert in friendly and enemy, versed in the processes of intelligence and knowledgeable in the advanced systems that execute those processes.

This paper is not a guidebook or a 'how-to' manual. It is a narrative description of a G2's experience in peace, crisis, and war. It is a very personal account, which presents the psychological and ethical aspects of the job as well as the procedural. Although it does present techniques and practical lessons-learned, the paper identifies many more problems than solutions. In so doing, it can acquaint the new G2 with issues that might otherwise become evident only after trial and error.

## USAWC MILITARY STUDIES PROGRAM PAPER

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INTELLIGENCE FOR THE DIVISION: A G2 PERSPECTIVE

AN INDIVIDUAL STUDY PROJECT

by

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# ABSTRACT

**AUTHOR:** Richard J. Quirk III

**TITLE:** Intelligence for the Division: A G2 Perspective

**FORMAT:** Individual Study Project

**DATE:** 27 April 1992    PAGES:321   CLASSIFICATION: U

The Assistant Chief of Staff, G2, has been serving American combat commanders for over fifty years. The duty is complex and demanding, and considered by many as the epitome of the tactical intelligence profession. Nevertheless, the military intelligence community has generated very little literature describing the G2 experience. Generations of new G2s have undertaken this duty armed with only their own experiences as preparation. This paper describes one G2's experience. It serves primarily to help the prospective G2 to appreciate the issues and challenges that he may face, and secondarily as an historical record for future academic study.

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To Our Great G2 Soldiers

# INTRODUCTION

This paper is written to help prepare military intelligence officers to serve as division G2s. It is a record of the development of the 24th Infantry Division (Mechanized) G2 Staff during times of peace, crisis, and combat operations in the Gulf War.

Thirty years after its birth as a professional branch of the Army, Military Intelligence got its first opportunity to support brigades, divisions, and corps in conventional combat during the Gulf Crisis. The experience that we gained as individuals and units was invaluable. It is important now to gather and organize that experience into a formal body of knowledge, in order to deepen our professional thought on the military intelligence profession. I hope that this paper contributes one piece to that body of knowledge.

The paper is my personal recollection of a G2's experience. As the former G2 of the 24th Infantry Division, I describe the challenges that we faced and the ways we responded to those challenges. The paper records more than historical events; it also describes the psychological aspects of the job, in an attempt to provide the reader with as complete and genuine an experience as possible. The G2 Staff and I grew throughout the period. The paper traces the causes and effects of that growth. Although I describe the

evolution of a single organization, my purpose is to illuminate issues common to all division intelligence staffs, and, thereby, to aid in their successful development.

## Plan for this Presentation

In order to express its lessons in an understandable way, this story unfolds as a narrative, beginning with my assignment to the Division in June 1989. It proceeds through the next twenty-two months, examining the evolution and experiences of the G2 staff through seven phases of intelligence operations. The paper identifies the challenges which arose in each phase, the succession of our attempts to meet the challenges, the ideas that worked, and those that didn't. The seven intelligence phases were:

PHASE 1. June 89 - May 90: The Building of a Philosophical and Practical Basis of Operations in G2.

PHASE 2. June - July 90: Adapting to a New Commanding General and Orienting toward Mideast Operations.

PHASE 3. August 90: Deployment Intelligence Operations.

PHASE 4. September - November 90: Long term Defensive Intelligence Operations in the Desert.

PHASE 5. November 90 - 23 January 91: Preparing for Offensive Operations.

PHASE 6. 24 January - 23 February 91: The Tough Transition to Combat.

PHASE 7. 24 February - 8 March 91: Combat Intelligence Supporting the Attack.

My recollections are far from complete. They are a collection of individual episodes, which, taken together, point toward certain themes and lessons. For this paper I have strung them in chronological order. I have written only about those issues and duties which have left strong impressions. My lack of comment in other areas is a commentary on my limited memory rather than on the unimportance of those issues. With each episode I discuss:

1.    What the G2 Staff was asked to do.

2.    How we reacted.

3.    How the issue came out (Figure 1).



Fig. 1. Format for Discussion in this Paper.

This study is a critical analysis of our performance, and tends to be critical in its tone. I have examined our flaws with a magnifying glass, but I have not given equal time to our successes. The officers, warrant officers,

sergeants, and soldiers of the G2 Staff performed superbly throughout the entire period. Their dedication, ingenuity, and selflessness are well known, and the fruits of their labors contributed directly to the division's outstanding accomplishment. I have neglected to highlight many of their achievements for fear of turning this into a private and congratulatory reminiscence, rather than a tool for future G2s. The few acknowledgements that I have made in these pages should be taken as examples of the outstanding work done by each of our soldiers. All of them have my respect and appreciation.

## My Initial Biases

I came to this job as a tactical intelligence officer, having served as a battalion S2 in the Berlin Brigade, a G2 Operations Officer, Battalion S3, and XO in the 82d Airborne Division, a VII Corps G2 planner, and a commander of a Corps Tactical Exploitation Battalion. I had spent two years researching tactical intelligence and decision-making for my master's degree, and another year studying the same subjects at VII Corps Headquarters. These periods of experience and study brought me to this job with a set of opinions and biases.

## The Capabilities System

I subscribed to the Capabilities System of intelligence, which proposes that the commander will know

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everything that he needs to know in any situation if he understands current enemy and friendly capabilities. The Capabilities System conflicts with our intelligence doctrine, which is based on the Intentions System. That doctrine tells us that we can and should predict future enemy capabilities, actions, and intentions. In my opinion, no one could reliably predict the future. It was unnecessary and dangerous to base combat decisions on such predictions[1]. I was satisfied that a commander who understands current capabilities can determine the risks to his command, develop plans, and make decisions, without knowing what the enemy would do, or would like to do. Despite criticisms that the Capabilities System produces only history, I was convinced that it helps the commander to focus on his plan and the risks that threaten it, rather than encouraging him to center on what he thinks the enemy will do. The "Capabilities versus Intentions" argument is a subtle and complex one. It deserves deep study by all intelligence professionals. As a result of some study, I supported the Capabilities System. One of my main motives for seeking a G2 position was to test the Capabilities argument in this day of modern intelligence systems and Intelligence Preparation of the Battlefield. I brought this bias to the job; it affected all of my subsequent actions, and the conclusions discussed herein.

## The Command and Control Process

I believed that the G2 is an extension of the person of

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the commander. It would be my duty to help the commander
fulfill his command and control process by acting in his
stead, and within his intent. Our doctrine defines the Com-
mand and Control Process as;

> "...t..e procedures and techniques used to find out what
> is going on, to decide what action to take, to issue in-
> structions, and to supervise execution".[2]

After studying that definition carefully, I had identi-
fied four distinct elements in the process, Perception, Con-
ception, Decision, and Action.[3]

## Perception

Perception is the commander's effort to see the present
situation as it really is. Although information abounds on
the battlefield, accurate information is a rare commodity.
The commander bases all of his decision-making on his per-
ception, which he must develop on the battlefield by piecing
together information from many sources, always trying to
keep track of the knowns and unknowns, the facts and the as-
sumptions. The ultimate goal of perception is _truth_: an ac-
curate understanding of present realities. Perception is
flawed not so much by gaps in our information as by inaccu-
racies in our information. To be sure of the limitations of
his Perception, the commander must know the limits of his
confirmed information. My greatest fear as a G2 was that the
Commanding General would make decisions without being able
to separate truth from falsehood in his perception.

Therefore my top priority was to aid his perception by keeping him aware of the reliability of all the information that he used, and by providing him confirmed information whenever possible.

## Conception

Conception is a creative process of envisioning future situations, missions, and methods of execution. Its ultimate goal is beyond truth. It aims to discover possibilities, which are potential future realities. The innovative commander begins his conception somewhat unconstrained by present truths, striving to expand his view of the possible. He later adjusts his visions based upon his perception, his understanding of the limits of reality. The G2 can help the commander by giving him model conceptions of future enemy capabilities and some specific conceptions for the use of intelligence resources.

## Decision

In his Decision, the commander compares his various conceptions, identifies risks, chooses one conception over others, and communicates his choice as a plan or order. I believed that the key to decision-making, and therefore the key to intelligence, is an appreciation of the "Risks", the imbalances, between friendly and enemy capabilities. I saw my role as one of helping the commander to understand the present enemy capabilities so that he could balance them

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against present friendly capabilities and identify his risks. I also expected to help the commander's decision by advising him on the use of intelligence assets to minimize his risks, and by preparing intelligence orders based on his decisions.

## Action

It is in the command's Action that the commander applies combat power and other resources to bring his chosen conception into reality. I believed that I should provide staff supervision over the friendly intelligence effort, thereby aiding the commander's perception of the changing situation. Secondarily, I knew that the G2 is an action agent himself, carrying out various tasks assigned by the commander and yet not covered in doctrine.

Fig. 2. The G2's Ends

It was important for me to distinguish between these various responsibilities. We had too often confused perception and conception, becoming unable to separate fact from assumption in our intelligence estimates. We had used conception to develop pictures of the current situation, without informing our customers that these pictures were hypotheses. I believed that the blurring of fact and assumption had resulted in intelligence failures, costing us the trust of many senior commanders. Figure 2 expresses my view of the G2's "Ends", which lie in aiding the commander in his Perception, Conception, Decision, and Action.

Before becoming a G2, I had concluded that the one negotiable instrument, the one trustworthy medium of exchange between the G2 and his commander is truth, and that seeking

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and providing truth about the <u>current</u> situation should be my major goal.

CHAPTER 1


PHASE 1. JUNE 89 - MAY 90:

THE BUILDING OF A PHILOSOPHICAL AND PRACTICAL BASIS OF

OPERATIONS IN THE G2 STAFF


In June 1989, the 24th Infantry Division was an ex-
tremely active organization, oriented especially toward a
rigorous training program at the National Training Center
(NTC). The focus of field training was at the brigade and
battalion level. The division used command post exercises to
build expertise above the brigade.


## Focus on Brigades and Battalions

Soon after my arrival, the division commander, MG H.G.
Taylor, gave me my first direction. He was dissatisfied with
skills of the battalion S2s. He had determined that they
neither knew the enemy nor the rudiments of analysis. At the
National Training Center, the S2s were providing inaccurate
and irrelevant information, and their failures had effected
the performances of their units. The S2s were not achieving
their ends; they were not aiding their commanders'
Perception or Conception. The CG told me to assist the G1 in

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programming advanced course graduate MI captains to fill all maneuver battalion S2 positions. The CG would personally approve all S2 assignments and would give successful S2s top consideration for MI company commands. The former G2, LTC Bill Peterson, had done most of the spadework. Both the G1 and I, with the assistance of our deputies, kept watch over all incoming, assigned, and departing officers, and programmed a sequence of three positions to take each of them through a four year assignment. We met quarterly, along with the MI Battalion Commander, and came up with an S2 assignment slate that considered the needs of the division and the officer. The process was time consuming and restrictive, but the results were worth the effort. Over time, we developed a corps of highly qualified and highly motivated officers working in these crucial positions. They served their commanders well, and they gave those commanders an appreciation for intelligence that would benefit the Army in the years to come. Little did we realize that it was an investment that would pay great dividends in combat less than two years later. The assignment program must have received good reviews relatively quickly, because, early in 1990, when Military Intelligence was generally being criticized for poor performance at the National Training Center, senior members of the branch began encouraging other divisions to adopt the S2 assignment policy established by ∴ Taylor at this division.

In our first session, MG Taylor had also directed me to help train brigade and battalion S2s, with a priority to the

units next scheduled for NTC. He set his specific training goal in a letter entitled "Knowing the Threat" (Appendix A), which he personally addressed to the S2s, charging them to study their craft with an intensity expected of professionals.

My increased training responsibilities led not only to an intensive training program, but ultimately to the complete reorganization of the division intelligence system. As we studied our methods of providing intelligence, it became clear that the G2 and the S2s would have to function as a division-wide community, with each element supporting the others, if we were to succeed. Our Long-Range Intelligence Training Plan therefore aimed at training all of the division's intelligence elements to work as an interdependent team. We employed a complex program of individual training events, such as an Opposing Forces (OPFOR) leaders' course offered at NTC, a local security manager's course, and periodic MOS instruction for analysts taught at the G2 shop. Most of our training, however, aimed at developing the "crew", the S2 section. Over the period of a year, these training events included monthly G2-S2 conferences, quarterly intelligence CPX's (up to three days long in the field)[4], intelligence rehearsals prior to division CPX's, and a week-long automated intelligence exercise at Ft. Huachuca for seventy S2 and G2 personnel.

## Redesigning the G2 Organization

In our earliest division exercises, the Commanding General criticized both G2 and G3 for our failure to coordinate between ourselves, and our failure to provide him with a coordinated picture of the situation. He told the G3 and I to break down the "Great Wall" that seemed to separate our current operations sections.

The most obvious problem was that we were not organized in parallel. The G3 Operations Section managed the current battle, and the G3 Plans Section restricted itself to planning future operations. However, in the G2 staff, the Operations Section was nothing more than a small garrison training element. G2 Plans comprised most of the G2 Staff. In garrison, it worked only with G3 Plans, but in the field it worked with both G3 Plans and Operations. The G3 Operations Officer and the G2 Planner had never become counterparts; they acted independently, and we left the discrepancies in their products for the Commanding General to resolve (Figure 3).

In garrison and in the field, the G2 staff operated almost completely at the collateral security level, forsaking Special



G2 STAFF ORGANIZATION
24TH INFANTRY DIVISION

Fig 3 Organization in June 1989

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Compartmented Information (SCI) except in the preparation of
a daily command blackbook. In the field, there was no all-
source intelligence center (ASIC); the SCI Facility(SCIF)
consisted of one Special Security Officer (SSO) van where
incoming information was sanitized and brought out to the
command post. Analysts were forced to wait for sanitization
and then to work only with sanitized data. To me, it seemed
essential to conduct analysis at the SCI level.

Within three
months, we had
reorganized the
G2 Staff with a
strong G2 Opera-
tions Section to
focus on current
operations (Per-



G2 STAFF ORGANIZATION
24TH INFANTRY DIVISION

Fig. 4. Organization after October 1989

ception) and a smaller but equally influential G2 Plans Sec-
tion to deal exclusively with the future (Conception)
(Figure 4). I placed my most experienced major in charge of
G2-Operations, and our graduate of the School for Advanced
Military Studies (SAMS) in charge of G2 Plans. They each
had a minimal number of analysts, and they depended upon a
newly revived All Source Intelligence Center (ASIC) to do
the in-depth analysis and production for all of G2. These
two sections drove all G2 activities, often competing for
the same information and resources. It was my job to
prioritize our overall efforts toward Perception or

Conception based upon the situation. Following my priorities, the Collection Management and Dissemination Section (CM&D) directed ASIC production, tasked collectors, and requested support from above. CM&D was the central switchboard and clearinghouse for intelligence information in the division. However, because the G2 staff was manned at only 50% in majors (three out of the six authorized), I was forced to place a captain in charge of the challenging CM&D section.

In garrison, the ASIC included the Intelligence Production Section (IPS), the Terrain Analysis Detachment (Terrain Team), and an "Imagery Interpretation Section" that we had created with only one member initially. Each of these elements worked for the ASIC Chief. In the field, the ASIC expanded to include the Special Security Officer (SSO), CM&D, as well as its Stand Alone Communications Center (SACC), radio teletypes from Corps, the Counterintelligence Analysis Section (CIAS), and the Staff Weather Officer (SWO). I assigned an extrc ely strong CW4 as the ASIC chief. It was not until July 1990, six months after I had received the Commanding General's approval to reestablish the ASIC, that we had sufficient personnel cleared to operate the ASIC in the field at the SCI level.

The Intelligence Production Section of the ASIC analyzed all aspects of enemy combat, combat support, and combat service support except one, enemy intelligence, which was analyzed by the Counterintelligence Analysis Section. Although in some commands the CIAS controls the MI

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battalion's counterintelligence platoon, my experience led me to use them only in a true staff role. The battalion commander was fully responsible for executing CI operations. I placed a senior captain in charge of the CIAS.

My experience in the 82d Airborne Division had convinced me of the importance of the Staff Weather Officer, due to the serious effects of weather on airborne operations. In the early 1980's I had stood on a drop zone at the NTC when seven paratroopers were killed by the effects of a freak desert wind coming out of a small mountain range. However, I found less regard for the importance of weather at the 24th ID. Certainly history was marked by examples of the effects of weather on mechanized forces, but here we tended to view weather support as mostly an aviation issue. The Staff Weather Officer was stationed at Hunter Army Airfield, in Savannah, forty miles away, and this separation contributed to some lack of weather consciousness on the division's part. As the G2, and the staff proponent, I probably did too little to make weather support a visible part of the division's operations. Our brigades did not capitalize on the support of their weather teams at NTC, and we did not correct the underlying attitude that mechanized units are somewhat invulnerable to weather problems. This was a blind spot in my thinking that would have a consequence later in combat operations.

I viewed the Deputy's role as administrative manager of the ninety member G2 staff, taking care of personnel, office

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management, and Installation Directorate of Security (DSEC) functions. Therefore I assigned to this position a senior major who had relatively little tactical experience. In the field, the Operations Officer was preeminent among the G2 majors by virtue of his experience and the general importance of current operations. The deputy continued to function in an administrative role in the field.

The G2 Sergeant Major supervised the overall operation of the G2 "platoon", training the NCOs to take leadership and to care for the soldiers and families of G2. It was he and the non-commissioned officers of the G2 Staff who trained soldiers, saw to their welfare, and ensured their professional development. He also assisted the AG in managing the assignment of intelligence analysts throughout the division, just as I did for the officers.

## The G2 Automation Program.

I came to the job hoping to use automation where it could best assist us, and particularly in the processing of messages. In the mid-1970s, I had observed fixed-facility information management systems that permitted analysts and supervisors to share information on a local area net (LAN), interpreting incoming reports, viewing trends and patterns, and developing analytical products. These message management systems were relational databases that treated each incoming and outgoing message as an individual record, providing space in each record for analytical comments, supervisor

directions, and tasks for collection managers and reporters. Operators could search for specific subjects of interest, sort messages by various criteria, and communicate their findings to each other. My ultimate goal was to establish such a system in the G2 Staff as a means of aiding the commander's Perception. As a minimum, I hoped to define the kinds of data fields, screen designs, and functions needed in such a system, and then pass these findings on to systems development agencies.

We began drafting the database parameters in October 1989. In February 1990, we received a new 2LT with a degree in automation, and I put him on the task full time. With the help of the Division Automation Management Office (DAMO), our automation officer developed an experimental local area network. The DAMO sergeant major virtually joined the G2 Staff, and, with my automation officer, worked full time to put the message management system on a LAN. By May, we had a simple working model, and a borrowed, two-station local area net to run it. We soon recognized that the LAN had to be larger so that more elements could share the data and could share in inputting the data. We also discovered that we needed to receive and send information digitally to the other members of the Division Intelligence System. However, we were unable to increase beyond two computers on the LAN, or to link our computer to S2 computers during this period.

Although both team members were talented programmers, neither really understood the functions which they were

trying to automate. Progress on the message database languished. The automation team was, after all, a long term investment: one which would require nurturing and time. We reoriented on smaller, easier projects, and thereby built some sophistication and interest within the G2 staff.

## The G2 as Senior Analyst

In division training exercises, MG Taylor expected me to perform as the command's senior intelligence analyst. I personally briefed at the scheduled nightly briefings, presented through closed circuit TV to all elements of our dispersed command post. He expected me to know details of the enemy situation, equipment, and capabilities. He held me accountable for the accuracy of my information. He did not, however, demand deep, insightful predictions of the enemy's future actions or intentions. In fact, his desire for facts corresponded well to my own focus on aiding the commander's Perception, rather than his Conception. Nevertheless, this was a difficult task for me, as I suspect that it is for many G2s. I had spent most of my career as an operator rather than an analyst. In the previous nine years, I had been an S3, XO, student, and commander, with only one year as a planner/analyst. I was comfortable as an operator, and I preferred to concentrate my efforts on the process, rather than the product. During exercises, I worked on improving the organization, the layout of the G2 portion of the headquarters, communications issues, and procedures. One or

two hours prior to each evening brief, I would turn my attention to the enemy situation in order to prepare. At first, each evening was an anxiety-filled public quiz of the G2 by the Commanding General, who was a far more knowledgeable intelligence analyst than I. The briefings seemed to me to be contests between us. I felt compelled to answer each of his questions. I learned from him, however, that this was not a contest or a game, and that I must have the courage to say "I don't know, sir", not just once in a while, but rather each and every time that I didn't know. My lesson was that expertise may be highly desirable in a staff officer, but honesty is essential. It was natural, under circumstances of stress, to give the boss some kind of answer to each of his questions, whether it happened to be the right answer, the answer I thought that he wanted to hear, or the answer you I like to believe in myself. After some difficult early briefings, we worked hard as a G2 staff to give the right answers and to carefully qualify each response according to the confidence that we had in our information. I began bringing senior analysts to the G2 Operations van, where I presented my portions of the televised briefing. They prompted me with answers to tough questions from behind the scenes. We even taped current order of battle and battle damage assessment (BDA) tables on the ceiling of the van, so that when the CG asked a question on enemy strengths, I could look up for an answer.

In time, his confidence in us grew, and the evening sessions were less confrontational. In reality, though, I continued to resist this role of division senior analyst. Although I prepared carefully for the briefings, my creative juices continued to focus on managing the intelligence system. This dilemma of analyst or manager would present itself again under more critical circumstances during the Gulf Crisis.

### The Concept of a Division Intelligence System.

Although we had reorganized the G2 Staff, selected competent battalion S2s, and trained as a community, the division intelligence structure received more criticism than praise from our commanders during a CPX in November 1989. We were not making a difference in the outcome of the battle, because we were not aiding the commanders' Perception. We failed to recognize important information, or to disseminate it in time. The Commanding General believed, correctly, that the intelligence elements of the division were not working as a team. In the G2 Staff, we were attempting to analyze all information ourselves. To do so successfully would have required good communications with all collectors, lightening-quick information management procedures, and, most of all, sufficient numbers of senior analysts to judge all of the enemy's battlefield operating systems as well as terrain and weather. To solve the problem, we went looking for more analytical power, and we found it in the brigade and battal-

Fig. 5. Analysis Centers in the 24th Infantry Division Intelligence System

ion S2 sections. The majority of the division's analysts
worked below the division-staff level in the twenty or more
S2 sections at brigade and battalion level (Figure 5). Each
of these S2 sections was closer to certain collectors, more
knowledgeable in a portion of the battle, or more expert in
a functional area than anyone else in the division. In a
strategic environment, we might have consolidated all of
this talent at a single analysis center. But in this tacti-
cal world, we would have to construct a network of these
dispersed analysts, capitalizing on their unique information
and skills, and somehow minimizing the difficulties imposed
by distance and communications.

Between December and March, we chipped away at this
idea, finally producing a "Philosophy and Concept of Opera-
tion of the Division Intelligence System" (Appendix B),
which envisioned an interdependent relationship among the
division's intelligence sections, with each section support-
ing, and being supported by, many others. This concept paper
laid down a plan of complementary roles for all elements of
the system and a set of specific responsibilities and expec-
tations for each. Brigade S2 staffs owed the G2, as well as
their battalion S2s, a concise Perception of their situa-
tions every two hours. It would be the same current estimate
that they were always prepared to give to their own command-
ers without notice. In return, they would receive the same
kinds of assessments from their Division and Battalion

counterparts. At the division level, the estimates dumped into three intermediate nodes, which consolidated them and forwarded the consolidated estimates to the G2 Operations Staff, the single producer of the division's current intelligence estimate.

These messages were versions of the familiar intelligence estimate format, condensed to a single page to permit easy transmission by facsimile (Figure 6). All S2s sent a complete report of this type every twelve hours (Periodic Intelligence Report, PERINTREP), and sent updates in the same format every two hours (Situation Report, SITREP). If the situation took a sudden turn, the S2 or G2 would send an immediate change to the current estimate, again on the same simple form, at any time (An Intelligence Report, or IN-TREP). The addressees for these reports were always the intelligence staffs at the next higher and the next lower levels.

In addition to its simplicity, another great value in this program was its emphasis on accountability for information. The good S2 usually builds his estimates upon specific intelligence reports. We assigned unique serial numbers to all messages in the division, and required the S2 to cite the reports which he was using to develop his conclusions (Lines 3A, 1-10). These citations served as his elements of evidence. Because we qualified all messages on their validity, reliability, source identity, and the precision of their

DRAF 24 D N L O R L FORMAT CLASSFICATION:

| *LINE ALPHA, _____ * 2-INTREP, 4-SITREP, 5-PERINTREP | IN/OUT (I/O) ___ INTERNAL USE |
| *LINE BRAVO, _____:_____:_____* | INITIALS: RTO _____ OIC _____ |
| (24ID) UNIT JNL # | FROM: _____ |
| *LINE CHARLIE, _____* AS OF TIME (DTC) | TO: _____ |
| *LINE DELTA, ___* CLASSIFY CODE (U, C, S, T) | |

LINE 1. MISSION:

LINE 2A. WEATHER:

LINE 2B. TERRAIN:

| LINE 3A. DISPOSITIONS | | | ACTIVITY | LOCATION | DTC | SOURCE | EVAL | JRNL # |
|---|---|---|---|---|---|---|---|---|
| UNIT | | X | | | | | | |
| 1. | | | | | | | . | |
| 2. | . | | | | | | . | |
| 3. | | | | | | | . | |
| 4. | | | | | | | . | |
| 5. | | | | | | | . | |
| 6. | | | | | | | . | |
| 7. | | | | | | | . | |
| 8. | | | | | | | . | |
| 9. | | | | | | | . | |
| 0. | | | | | | | . | |

LINE 3B. COMPOSITION:

LINE 3C. COMMITTED:

LINE 3D. REINFORCING:

LINE 3E. ARTY/AIR:

LINE 3F. NBC:

LINE 3G. SIGNIF ACTIVITIES:

LINE 4. CAPABILITIES:

LINE 5. CONCLUSIONS:

LINE 6. REMARKS:

20 APR 90. CLASSIFICATION: DOWNGRADING:

locational information, the messages became "negotiable instruments", or legal tender, between intelligence staffs at all levels. That is, each reviewer could evaluate the quality of each report for himself, and could then judge the overall credibility of the estimate. Discussions between S2s and G2s could now center on elements of proof, or evidence, rather than merely on opinion. General estimates are not always negotiable between echelons because of a natural difference in perspective. A corps G2 may not be overly concerned that "The enemy is capable of conducting small probes", but a battalion S2 may look at those platoon and company size attacks as very important. Unlike generalized estimates, however, individual reports that are qualified as to their validity, source, reliability, and precision are negotiable or exchangeable. A platoon sighted by a national level collector of high reliability and precision can, if reported with its qualifiers, be of great value to the battalion S2. By including their elements of evidence in these SITREPS, different staffs could knowledgeably discuss their conclusions because they were in touch with the evidence they had used to build those conclusions. Because we serial numbered all messages, we would be able to discover circular and parallel reporting, occasions in which a single report loses its identity and reverberates through the intelligence system, being received through multiple channels and serving as its own confirmation. This approach to reporting

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encouraged S2s, and the G2, to look up from their mounds of data periodically and come to some conclusions, which was of great benefit to their commanders.

Our new concept of intelligence assigned new roles to the functional brigade and battalion S2s as division level producers. The Commanding General had often pointed out that his expert on enemy aircraft was not the G2, but rather the ADA Battalion commander. Consequently, we designated the ADA Battalion S2 as the division's expert staff officer on enemy air. In reality, his standard, battalion intelligence estimate was a better assessment of the air threat than any which my analysts could produce. He became the author of the air appendix to the division intelligence estimate. Likewise, the DIVARTY S2 took on responsibility for analyzing enemy artillery, the Aviation Brigade S2 took on enemy ADA, and the Engineer Battalion S2 assumed responsibility for the estimate of enemy engineer capabilities. The complete assignment of responsibilities is graphically displayed in Figure 7. Normally, these analytical responsibilities cost the subordinate commands no extra work. When required to produce a new appendix, they merely submitted the estimates which they had already developed for their own commanders. Likewise, their PERINTREPS, SITREPS, and INTREPS updated our estimate very effectively concerning their functional areas. The S2s gained from this relationship as well. In any planning activity, they became part of our new "Intelligence Battle Staff", which developed the intelligence estimate.

Thus, they were able to get a headstart on planning for their battalions and brigades. During operations, the G2 staff took special care to route all information of interest to them, because they were the division's intelligence producers in their functional areas. The G2 Staff had a vested interest in keeping these subordinate S2s informed. Everyone gained from the relationship. The S2s received more information from G2 than ever before, and were, therefore, better able to aid their own commanders' Perceptions.

We then realigned intelligence communications to support our analysis and reporting program. We restricted the use of the division intelligence FM net to our new "Close Operations Cell", which included the Division Tactical Command Post, the ground maneuver brigades, and the cavalry squadron. We added a second division intelligence FM net in order to permit the rest of the brigades and separate battalions to communicate with the CM&D section. This second net involved adding only one radio, and that was in CM&D. Each non-maneuver unit used its authorized radio to communicate on the alternate intelligence net. Figure 8 depicts the membership and central nodes of the intelligence production cells established in our concept paper.

ELEMENTS OF INTELLIGENCE WHICH
THE G2 NEEDS FROM THE ANALYSIS
CENTERS OF THE 24TH ID.

C2 ASIC — 124 MI TCAE

CONSOLIDATION AND ANALYSIS OF ESTIMATE COMPONENTS FROM SEPARATE BATTALIONS, NON-MANEUVER MSC'S, ESPECIALLY REAR, EN, AVN, DIVARTY, MI, CORPS. FORWARDING OF CONSOLIDATED INPUT TO C2 OPS. DMAIN. APPLICATION OF COMPARTMENTED INTELLIGENCE TO THE CURRENT ESTIMATE, CREATING AN ALL-SOURCE ESTIMATE.

IN DEPTH CURRENT ANALYSIS OF CRITICAL ISSUES.

IPB FOR FUTURE BATTLES THROUGH THE EVENT TEMPLATING. STEP.

LOCATIONS, ACTIVITY OF ENEMY ADA BASED ON RADAR LOCATIONS.

SINGLE SOURCE PRODUCT REPORTING AND ESTIMATING BASED UPON SIGINT FROM DIVISION AND ECHELONS ABOVE DIVISION LEVELS.

ESTIMATE OF ENEMY EW CAPABILITY.

C2 OPERATIONS DREAR

C2 OPERATIONS DMAIN

C2 OPS DTAC

CONSOLIDATION OF COMPONENTS OF THE DIVISION INTELLIGENCE ESTIMATE PRODUCED BY THE REAR MSC's.

FORWARDING COMPONENTS TO THE DMAIN. REAR AREA IPB INPUT FOR THE DIVISION ESTIMATE.

CONSOLIDATION OF ALL DIVISION LEVEL CURRENT INTELLIGENCE ESTIMATE COMPONENTS.

PRODUCTION OF THE DIVISION CURRENT INTELLIGENCE ESTIMATE.

DISSEMINATION OF THE ESTIMATE TO OTHER TOC's.

CONSOLIDATION OF CAVALRY & MANEUVER BDE CURRENT ESTIMATES.

PRODUCTION OF CLOSE OPERATIONS COMPONENT OF THE DIVISION CURRENT INTELLIGENCE ESTIMATE.

FORWARDING ESTIMATE TO C2 OPS AT DMAIN.

S2 1-5 ADA BN

S2 3 EN BN

BATTLE STAFF

DRAFTING THE ENEMY AIR APPENDIX AND THE AIR AVENUE OF APPROACH OVERLAY TO THE DIVISION INTELLIGENCE ESTIMATE.

ANALYSIS OF CURRENT ENEMY AIR INFORMATION AND PRODUCTION OF INTELLIGENCE REPORTS AND ESTIMATES ON ENEMY AIR.

ESTIMATE ENEMY CURRENT AND FUTURE MOBILITY, COUNTERMOB- LITY, AND SURVIVAB- LITY OPERATIONS.

PROVIDE THE CURRENT DIVISION OBSTACLE OVERLAY TO C2 ASIC.

UPDATE TERRAIN DATA. 7

LIAISON LINK WITH SEPARATE BATTALION S2'S.

EFLT'S FROM FSE.

AIR EARLY WARNING FROM ADADO.

FRIENDLY OBSTACLE OVERLAY FROM ADE.

INPUT TO PLANNING.

24TH DIVARTY

24TH CBT AV BDE

S2 124 MI BN

DIVISION LEVEL INTELLIGENCE ESTIMATE INPUT BASED ON TACFIRE DATA.

CURRENT EFLT FROM TACFIRE.

LOCATIONS OF ENEMY ARTY BATTALIONS, RAGS, DAGS, AND ARTY ACCOMPANYING FWD DETACHMENTS.

ENEMY BDA BASED UPON TACFIRE DATA.

ANALYSIS OF ENEMY ADA IN CONJUNCTION WITH ADA, AND C2 ASIC.

PLANNING OF THE FRIENDLY AIR AVENUES OF APPROACH OVERLAYS OVER FRIENDLY AND ENEMY TERRAIN.

AVIATION RISK ASSESSMENTS.

TACTICAL, OPERATIONAL LEVEL HUMINT LOCATIONS AND OPERATIONS.

DETAILED ORDER OF BATTLE DATA BASED ON POW AND DPRE INTERROGATION AND DOCUMENT EXPLOITATION.

Fig. 7. Elements of Intelligence which the G2 Needs from Analysis Centers

Fig. 8. Division-Level Intel Production Cells

CELLS

I: CLOSE OPNSINTEL
II: REAR OPNS INTEL
III: CURRENT OPNS INTEL
IV: INTEL PLANS
V: ALL-SOURCE INTEL
VI: SPECIAL INTEL CELL

I have included the concept paper and reporting SOP
(Appendix B) because I believe that they deserve consider-
ation by other intelligence staffs. The reader may note that
the papers do not provide all of the detail that one might
desire. There is more work to be done on this approach to
decentralized production, and streamlined communications.
However, no SOP can address every eventuality and still be
usable. This document was relatively theoretical and sketchy
in some respects because the program relied upon the devel-
opment of a "commonality of thinking", an unwritten culture
or tradition within the division's intelligence community.
S2s had to intuitively know what we needed, just as our dis-
seminators at CM&D had to know the needs of the subordinate
commands. These documents served as charters for our intel-
ligence community. From their precepts came our intelligence
training exercises whose primary objectives were to build
that culture: that commonality of thinking. Any one of many
systems might have been workable. The key to their success
would be in our training.

It was especially important to build such a commonality
of thinking within the G2 Staff. Among many techniques which
I used to do so, the most visible was an officer profession-
al development program. Each Tuesday, the G2 officers met
for a two-hour working lunch, during which we discussed sub-
jects on current doctrine, the Intelligence Preparation of
the Battlefield process, our SOP, as well as on professional

readings in military history, the Threat, and various Intelligence subjects. Our discussions brought all of our thoughts closer together, and helped to unify our efforts at work. More important, they deepened the thinking of our junior officers, and, hopefully, encouraged some of them to study their profession.

We trained all of the division's intelligence staffs on this new system during a three day Intelligence Exercise in April, and were happily surprised with the results. Some S2s were concerned that they could not keep up the two hour reporting requirement, but generally we felt that this was a workable approach. S2s were particularly gratified that their roles in the overall system were made clear. At the division level, I was impressed by the amount of cross-talk and cooperation that had materialized between various brigades and battalions. Our opinions were confirmed by virtually all of the commanders in the division in a division CPX in May 1990. During the after action review, virtually all of the commanders in the division, including MG Taylor, praised the new system and the intelligence support which they had received. Although there was much work to be done, especially the in area of communications, we felt that we were on the right track.


## The Division Rehearsal.

During our division CPX's, MG Taylor introduced the Division Rehearsal, a technique for synchronizing the battle

a day or two prior to the fight. The DTAC staff created a
huge terrain model, usually 100 to 200 feet across, contour-
ing sand into terrain features and using spray paint and en-
gineer tape to represent combat graphics. Brigade and
battalion commanders (and sometimes their S3's), and the di-
vision staff met at the mockup and stood along its edge. Af-
ter an introduction by the Commanding General, I briefed the
beginning of the intelligence estimate, to include current
enemy situation. The G3 briefed current friendly situation
and the situation at the start of the operation. The CG then
served as master of ceremonies, talking the group through
the battle phase by phase, with me presenting the chosen en-
emy course of action, the G3 presenting the friendly opera-
tion, and the commander emphasizing his intent and his key
concerns. With the introduction complete, all commanders
walked onto the terrain mockup at the points from which
their units would begin the battle. Under the Commanding
General's prompting, the commanders then described their
planned actions, and their coordinations with other command-
ers, walking across the mockup as their unit would move on
the battlefield. As this second phase was completed, and the
CG was satisfied that the basic plan was synchronized, he
would turn to me and I would begin posing "What-if?" situa-
tions, by repeatedly backing up my previous briefing to some
point in the expected course of events and changing the sce-
nario. The CG required the commanders to work out a plan for
each and every contingency that I presented. In my opinion,

the rehearsal was extremely valuable. It was a rare opportunity for the G2 to present to the entire command structure not only the most current Perception, but also a wide range of Conceptions of future enemy situations and courses of action. As the commanders worked out answers to each of these branches and sequels on the terrain models, I had an opportunity to aid their Decision as well. As a result, they were prepared for a variety of eventualities. They knew what their risks were, what the CG would want them to do, and how their fellow commanders would operate. This rehearsal prepared them to operate with minimal communications, even in unplanned circumstances.

On most occasions, we followed this event with a Division Intelligence Rehearsal. On the same mockup, the S2s and I would finalize our collection plans, our complimentary responsibilities to the overall intelligence network, and the specific ways in which two or more of us would provide support to each other. I was able to identify blank spots in the brigade collection plans and arrange for division or higher level coverage.

# CHAPTER 2

## PHASE 2. JUNE - JULY 1990

## ADAPTING TO A NEW COMMANDING GENERAL AND

## ORIENTING TOWARD MIDEAST OPERATIONS

### Tailoring Command and Control to the Commander

Early in June 1990, MG Barry R. McCaffrey took command of the division. Shortly after his arrival we set up the division command posts for his inspection. What we expected to be a cursory walk-through demonstrated to us that the staff exists to support the commander. Just as his predecessors had done, MG McCaffrey quickly tailored the command and control system to meet his personal needs. Pressed by an impending CENTCOM joint command post exercise called "INTERNAL LOOK", the new commander immediately consolidated the dispersed elements of the main command post, which he called "The DMAIN", and beefed up the capabilities of the Division Tactical Command Post (DTAC), as well as the Division Rear Command Post (DREAR). He directed changes to internal floor plans, to the arrangement of mapboards and their symbols, and to the use of television and briefing graphics. Although this was an abrupt and difficult transition for some staff members, the lesson was clear; the command post, and the staff itself, must be personalized for the commander. The

three days of adjustment to our new commander's desires reminded me that the staff has no standing of its own. It exists only to help the commander exercise command and control in a way which complements his style and his priorities. There is no best method to organize and use the staff. It must conform to the needs of the commander.

The new Commanding General demonstrated an intense interest in maps, regarding them as precise tools of command. He specified the finest details of map assembly, marking, and display. He was concerned about the thickness of the Plexiglass covering them, the selection of target reference points, the details of map accuracy. He wanted place names and roads highlighted, and he specified how unit symbols would be displayed. He wanted all maps standardized throughout all command posts. In practice, he often moved his eyes to a point within inches of the map, studying it in great detail and making key decisions based upon the information depicted upon it. We scrambled for days rebuilding our mapboards to meet his standard.

He was less than happy with the map coverage which we had posted for the inspection. It depicted Saudi Arabia, the area of an upcoming exercise, but several 1:50,000 scale map sheets were out of print, and our terrain team had hand drawn substitute maps using 1:250,000 maps as a base. They were unsatisfactory for small unit navigation, for artillery, or for a Commanding General who looked at maps as precise tools.

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The CG directed the staff to make a number of changes that we couldn't make in the field. He told me to get the ASIC a command post intercom, so that it could stay abreast of the tactical situation and quickly broadcast critical information throughout the DMAIN. He also told me to get pushbutton telephones in the ASIC, to speed our communications process. He directed me to obtain full coverage of the operational area in high quality Landsat photography for all division and brigade command posts. He seemed to believe very strongly in the value of imagery.

I ran into problems accomplishing all of these tasks. Higher level security authorities would not permit an intercom inside the SCIF, and strongly resisted the telephones, demanding that all our phones run through a manual switchboard in the ASIC. We resubmitted the request several times until we received authorization to get the pushbutton phones installed. The map and photo requests were a greater disappointment, and remained a disappointment for a long period of time. Initially, the XVIII Airborne Corps G2 Staff believed that it would be possible to get imagery and maps. The topographic engineer battalion had just received a new computer which could print copies of the photography, and could also build maps. As it turned out, the computer printer produced interesting color images, but images with far too little resolution to replace photos or maps. The photomaps could be printed to scale and marked with grid lines, but they provided no elevation data or contour lines, and

few symbols or textual remarks. As with most of the Landsat multispectral imagery, the colors were not true, and were misleading to the unschooled user. Furthermore, the prints were made on standard width computer paper, and required cutting and pasting to produce a map sheet. We applauded the topographic battalion's efforts, and we could see a future in the concept, but our technology did not yet meet our standards. Similarly, neither we nor Corps was able to obtain original Landsat photography. Although it was available on the commercial market, it was extremely expensive. We submitted our requests for military imagery, but nothing came of the request until after mobilization. Obtaining imagery for exercises had always been very difficult.

We of the General Staff were slow to execute some of the Commanding General's instructions. He had given us difficult tasks in a rapid-fire mode. We doubted our abilities to accomplish many of the missions; we saw some of the missions as being more form than substance, and we had our own priorities. We were, of course, exhibiting a traditional tendency of a staff to execute its own priorities rather than those of its commander. In time, and with his encouragement, we did come to realize the importance of meeting the commander's needs, and we discovered that most of his missions were achievable.

## The Commanding General's Emphasis on the Long Range

## Surveillance Detachment

The Division's Long Range Surveillance Detachment
(LRSD) was a fairly competent organization by the time of my
arrival in 1989. For some time, it had focused on training
at the National Training Center, making all of the divi-
sion's rotations there and providing some valuable informa-
tion to our units without being detected. Certain aspects of
its training were artificial. The detachment delivered ice
water to team hide sites occasionally, and, because it had
not received its HF radios, it communicated by FM radio over
ranges of less than ten kilometers. In garrison and in
training, the detachment was assigned to the Cavalry Squad-
ron, and in combat it would come under the G2's operational
control.

I brought my own experiences with Long Range Surveil-
lance to this assignment. I had served as S3 of the MI bat-
talion in the 82d Airborne Division when MG Lindsay
established that division's long range reconnaissance pla-
toon in the early 1980's. I had assisted in building and
training that unit before it deployed to Grenada. Then, from
1987 to 1989, I commanded the VII Corps MI battalion which
included the Corps 170 man LRS company. My experience told
me that our unit should be conservative in its approach, and
absolutely reliable in its product.

MG McCaffrey came to the division with some apparent
doubts as to the utility of the LRSD, but had no doubts

about where the organization belonged. He resubordinated it to the MI Battalion, its doctrinal parent unit. Then he called for a detachment demonstration. As he inspected the detachment headquarters, a base-radio station, and a team hide site, the CG was visibly impressed, especially with the professionalism and determination of the soldiers. He gathered the soldiers together, expressed great confidence in their abilities, and promised them the equipment they would need to do their job right. He told them, too, that they would be his most trusted intelligence source. To the battalion commander and myself, he directed a more aggressive and realistic training program and a strong effort to obtain needed equipment. From this first day in late June 1990, LRSD became a point of extraordinary emphasis for all of us.

Obtaining the equipment needed by the LRSD was a big job. The list included water purification filters, large commercial backpacks, communications equipment, silenced weapons, range finding equipment, and much more. The Army had not issued standardized base-radio stations, or the plans for their configuration. We therefore were forced to obtain needed equipment and construct the stations according to our own design. This process ran into many bureaucratic roadblocks along the way. The effort was made more difficult by the fact that doctrine and methods for the long range surveillance unit were evolving. Although the current doctrine prescribed long range missions using older, Special Forces HF radio equipment, the Infantry School, proponent

for LRS doctrine, was experimenting with short range missions and short range FM communications. The Commanding General adopted the tried and true, Special Forces techniques and equipment. We never strayed from that classical approach. It was only through command support, perseverance, and a clear vision of what he wanted that we kept on course in the months that followed.

## Joint Readiness Exercise INTERNAL LOOK

In July we deployed a large contingent to Ft Bragg to participate in JRX INTERNAL LOOK. By July, what had seemed in April to be nothing more than a Mideast exercise looked like a plausible future. Our new Commanding General had been most concerned about the defense of Saudi Arabia from the time he arrived in the division. The rising tensions between Iraq and Kuwait helped us to see the reason for his concern. Then, we were issued desert camoflage uniforms for the first time in any command post exercise. We therefore approached the exercise very seriously.

We gained a great deal from an intelligence perspective. We became familiar with Saudi Arabia, and, to a lesser extent, Iraq and Kuwait. Without realizing it at the time, our commanders and staffs rehearsed Operation Desert Shield. We got to know the organization of the Iraqi armed forces, and discovered that Iraq was not a Soviet look-alike. This basic discovery was important, because it prevented many

senior officers from assuming too much about our enemy later.

INTERNAL LOOK gave many of our commanders their first personal contact with the Commanding General. Serving as player-controllers, they heard his concerns and opinions about the scenario, and they witnessed his way of thinking about tactics. It was the Staff's first opportunity to operate the division command posts under his direction. The CG added to his previous guidance on the command and control system, and began to transform us into a team which could assist him in commanding and controlling the division. He also conducted his first division rehearsal during this exercise, and seemed to find some value in the rehearsal process. We all drew closer as a team.

Tensions continued to rise in the Gulf as we came back from INTERNAL LOOK. We were aware that this exercise could be followed by a real-world deployment. We returned to Ft. Stewart satisfied that we understood some of the CG's personalized methods, and somewhat comfortable for having rehearsed our plan. The CG chose the same scenario for our division Battle Command Training Program (BCTP), scheduled for autumn, and we therefore continued to push for missing intelligence, maps, and photographs, all the while hoping that we would not have to execute any operations in the desert of Saudi Arabia.

INTERNAL LOOK was a watershed event in the evolution of the G2 Staff. The field ASIC facility operated at the SCI

level for the first time; its personnel were finally cleared
after months of waiting. We had built procedures and rela-
tionships which would enable the ASIC to become a valuable
intelligence center.

CHAPTER 3


PHASE 3. AUGUST 90:

DEPLOYMENT INTELLIGENCE OPERATIONS


Although our deployment phase was just over a month
long, it comprised two distinct types of operations, the
"Predeployment Activities" and the "Postdeployment Activi-
ties". We did not suddenly switch from pre to postdeploy-
ment. We slowly transitioned from one phase to another,
beginning on the 21st of August, when our first combat ele-
ments deployed, until the 12th of September, when the last
equipment ships closed in Saudi Arabia. With each passing
day, we performed less and less in the predeployment mode,
and more and more in the postdeployment mode.


Phase 3a. Predeployment Activities

By the last of July, just as we completed recovery from
Exercise INTERNAL LOOK, the potential for a real world show-
down became clear. Approximately three days before the Iraqi
invasion of Kuwait, we in the G2 Staff began 24 hour opera-
tions. We made our most important progress in the collection
management arena. We had ordered basic imagery coverage of
the operational area as early as May, but had not received

it, so we followed up and resubmitted requests at this time. Thanks to INTERNAL LOOK, we knew our initial requirements, and redoubled our efforts to get them filled.

## The Map Problem Surfaces

Maps had been in short supply even in Exercise INTERNAL LOOK, despite the relatively small demand which it had imposed. After the exercise, with an eye on the deteriorating Mideast situation, we ordered a large quantity of maps, ostensibly for our November BCTP. On approximately 29 July, as the Mideast Crisis was reaching a climax, we ordered the full division set of maps in accordance with our published Wartime Stockage Requirements List[5]. Just after the invasion of Kuwait, we began making daily calls to the Crisis Action Center at the Defense Mapping Agency (DMA) to push our request through. Meanwhile, we gathered up enough INTERNAL LOOK maps to provide planning sets to each brigade and separate battalion.

The Commanding General was becoming increasingly concerned about maps. Even prior to the invasion, he emphasized the importance of obtaining sufficient maps, making them my top priority. When maps finally began arriving in large quantities, he refocused to other map related issues. He directed me to develop a map allocation scheme and a system for issuing maps as well. It was at a briefing several days after our alert, when he was quizzing me about the map issue, that I pointed out the DISCOM responsibility to issue

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maps. At that unhappy moment I discovered the basis of the CG's concern, and the true role of the G2 in all of this. The CG responded that, throughout the history of our Army, obtaining and issuing maps had never been done well. Units had always marched off to war without the maps they needed. He was determined to beat the odds and to get maps out in time, in the right numbers, and to the right people. For that reason, there could be only one "Map-Man" in the division, and he would be the G2.

Thus, although I was a staff officer, I had became fully responsible for executing a part of the command's Action. In reality, the Commanding General held himself and his subordinate commanders personally responsible for managing and deciding on every aspect of map supply and distribution. He wanted the executors to be the G2 and the S2s. As was so often the case, the commander had placed a very high priority on a matter which his staff could not fully appreciate.

I understood his reasoning. He regarded maps to be tools and sources of intelligence. Each sheet had great intrinsic value. Map management would require a patron, someone dedicated to spreading their information throughout the command. Only a patron would fight to obtain them, just as he would fight to obtain other critical intelligence. Only a patron would guard them zealously from theft, from weather, from dust, and from damage. Clearly, that patron should be the G2. Therefore, I was destined to become known as "Map-Man".

From my perspective, this was a huge responsibility. We in the G2 staff had never been manned to accomplish even the planning and management elements of mapping, let alone the storage, inventory, and issuance duties. I had previously given the task to the Collection Management and Dissemination Section (CM&D), knowing all the while that their primary duties were perhaps the most sophisticated and difficult in the G2 Staff. With all of the expertise in CM&D, I felt forced to give them the full load of map management and map distribution. This increased responsibility threw CM&D into a near chaos during this crisis period. The map effort fully absorbed an extremely able young officer and two of our best NCOs, leaving only seven soldiers to answer the great many incoming requests for information, to dispatch new requests, and to automatically reproduce and disseminate information from incoming messages. However, we came to realize that these maps directly improved the Perception of our soldiers, and that no one else could devote the time and talent needed to get the maps out. At that point, we accepted the duty fully, and took our rewards in doing the job as well as we could.

Once the division had been identified to deploy among the first, DMA opened its floodgates, earnestly attempting to fill our requirements. The maps began pouring in. We obtained a full sized gymnasium at Ft. Stewart and covered the floor with maps. Unfortunately, at our end, the supply process seemed totally chaotic. We received great quantities

of maps, but many of them covered areas well outside of our operational area, such as Egypt and the Red Sea. Other maps seemed to be sent totally at random, and covered areas as far away as the National Training Center in Southern California. On any given day, the DMA Crisis Action Center could tell us how many pounds of maps had been shipped to us in the past 24 hours, but not the sheet numbers. The maps came from warehouses all over the United States, and the central office did not seem to have visibility over the inventories. Within the shipments, the inventories were normally incorrect, either in sheet numbers or in their counts. Some pallet-loads were composed of boxes or bound stacks of a single sheet. Other loads were randomly organized without spacers separating one sheet number from another. Our first task with each new shipment was to conduct a complete, manual inventory and to separate maps into stacks by sheet number. Staff Sergeant Tony Nations and Sergeant Gary Baker, from CM&D, ran the map facility with a work force of approximately thirty volunteers which they had obtained from divisional units. They worked around the clock, sorting and inventorying.

The chief of CM&D, the Deputy G2, and I probably spent an average of ten hours a day, every day, during the two weeks before deploying on the 22d of August, fighting for maps, keeping everyone informed of the map status, and managing the distribution. As the stacks grew, we

continuously sent status messages with critical shortages back to Corps and DMA.

Developing a distribution scheme was a challenge as well. When I presented the CG with the allocation chart which we had developed in January, he tossed it back at me. The chart, developed to feed the FORSCOM War Stockage Requirements List, showed total requirements by brigade and battalion. He wasn't satisfied with a document which reflected the unconstrained desires of each command. He wanted a detailed spreadsheet that allocated maps in the right numbers and scales to individual recipients. Only then would he be ready to decide on the distribution of the relatively few sets that he expected to receive.

It was not until we prepared to make our first map distribution that I could finally see the Commanding General's reason for wanting a detailed map allocation chart. With only 1068 of a required 5519 sets of maps to issue, it would have been foolish to merely issue each unit a pro rata share based on their unconstrained desires. Some large map users, such as the ADA battalion, did not need a fair share at this early time. Others were able to use 1:250,000 sets. Decisions had to be made based upon specific individuals and echelons. The Commander wanted to know, for example, whether a given allocation plan would supply maps to the company commander level or to the platoon level. The spreadsheet was the key to evaluating our distribution plans.

Part of this process was deciding what constituted a "set" of maps. The G3 and I drew a boundary around our area of interest, which normally looked like the corps area of operations. The Commanding General reviewed the outline and adjusted it as he felt appropriate. He preferred to pad the size of the area well, given the typical uncertainty about where our operations would take place and the fast moving nature of mechanized forces. That area became the basis of issue within the division. Applying real inventories to this ideal area always resulted in difficulty, because the inventory quantities varied widely. For example, although we required approximately 5,000 sets of 1:50,000 maps in the division, we might have 100 copies of one map sheet, and 12,000 copies of the adjacent sheet. The CG was adamant, and for very good reason, that we would not issue maps in a piecemeal fashion. If we had done so, all accountability would have been lost. Therefore, we generally issued complete sets matching the boundaries of mapping approved by the CG. With this as a rule, we could count the total number of sets on-hand based upon the sheet which was present in the fewest copies. Reality dictated that we often had to issue incomplete sets. To eliminate confusion, we designated the incomplete sets with an identification letter, and we kept track of the type sent to each unit, so that later we could add "completer sets", as they could be assembled. We did not issue individual sheet numbers as they arrived. The confusion would have defeated us.

On this first occasion, we did not collate map sets. We counted out the sheets allocated to each unit, stacked them together in boxes, and issued them to the unit in bulk. At Ft. Stewart, units had time and space to collate their own sets.

The Commanding General required me to personally deliver the sets to the commander or the S2. Although this ceremony seemed a bit unwarranted initially, we learned that his approach was the right one. Maps were too important and too scarce to have them misplaced or slowly bled out of the brigade headquarters without the commander's knowledge. The system worked; the CG was able to knowledgeably allocate the limited quantities of maps on hand, and accountability was maintained. The collation and issuing process went amazingly fast, requiring less than 24 hours once we had enough maps to constitute reasonably sized sets.

We learned a few other map-related lessons worthy of note. The first is that a deploying unit should receive its maps before it deploys. During our preparation for deployment, DMA informed us that our maps would be waiting for us at a warehouse which they had established in Bahrain. This was absolutely unacceptable to the Commanding General for several reasons. We couldn't trust that they would be there in sufficient quantity or coverage (they weren't); our soldiers wouldn't have time to become familiar with the terrain before deployment; and the units would not be able to piece maps together and laminate them in combat acetate. Deploying

into a crisis area requires combat readiness, and maps are an essential part of that readiness. The unit needs its maps before it deploys. As an added benefit, once the maps are issued and stored on the individual or on unit equipment, they no longer require dedicated transport into the theater.

Because maps were so scarce, we were encouraged to break down incomplete sets, issuing the left half to the units in left sector, and the right half to the units in right sector. The most obvious fallacy in this approach is the supposition that we would fight where we had planned to fight. The second is the assumption that if units moved to unpredicted areas, we would have the opportunity to issue them the necessary additional maps. The third, and less obvious fallacy was in forgetting that the boundary areas would be common to both left and right units, and would limit the total number of sets to be issued. The commander chose a much more conservative approach. He required that I issue the entire area in each set; and he directed that I continuously build new sets along the fringes of the old to permit him flexibility in maneuver and fires.

Despite shortages in map totals, our initial map issue was a success. We had issued approximately 150 sets of planning maps to the various headquarters in the division soon after the alert. By the time we departed Ft. Stewart, we had issued 1068 complete and 748 incomplete sets of 1:50,000 maps against a requirement of 5517 sets. We had also issued 1636 complete and 1097 incomplete sets of 1:250,000 maps

against a requirement of 1481 sets. The overage of 1:250,000 sets helped to offset the shortage in the larger scale. Additionally, the extra sheets and maps of other areas in the region filled two-twenty foot MILVANs, which we brought along by ship. The chain of command down to platoon level had all received the maps they needed to fight upon arrival in theater or to prepare for a rapid transition to combat operations. Many special map needs were also filled. We had issued over 1200 rolls of combat acetate with the maps, and soldiers had been given an opportunity to prepare their maps for use. All operations centers had installed the division standard maps in their map boards, annotated all key points, and prepared themselves psychologically and physically for immediate operations.

## Predeployment Intelligence Support

The G2 staff's transition to crisis operations was a natural one, one which we had practiced five or six times during the preceding year. We switched to 24-hour operations in the ASIC about three days prior to the Iraqi invasion. The news media coverage of the Mideast situation would have justified our intensified schedule by itself, but, additionally, the CG had been concerned about possible hostilities in that region since his arrival. By the date of the invasion, 2 August, we were already briefing him twice a day and sending him the intelligence "blackbook", or reading file, daily. In accordance with our internal division readiness

procedures, we had begun to gather unclassified encyclopae-
dic information and build current fact books on the region
for printing and distribution in the division. We had put
up maps in the ASIC and in the Command Conference Room,
pinned over the layers of maps from previous exercises and
contingencies. Fortunately, INTERNAL LOOK had prepared us
with intelligence information and planning maps.

After the Iraqi Invasion, we were soon facing detailed
and urgent questions. On the date of the invasion, the divi-
sion sent a liaison team to XVIII Airborne Corps at Ft
Bragg. The G2 representative was CPT Les Halter, a senior
and tactically experienced officer, who immediately moved
into the Corps ASIC and began to dig for answers to our
questions and for imagery. His information and services were
invaluable. It is normal and understandable for a higher
headquarters to become so absorbed in supporting its com-
mander that it misses opportunities to support subordinate
commands. The liaison officer ensured that we were able to
make use of the information that corps was receiving without
disrupting the corps G2's internal priorities.

The Corps G2 staff, under COL Bill Walters, opened its
doors to CPT Halter, and he found the same professional sup-
port from LTC Steve Epkins, the new G2 of the 82d Airborne
Division on the other side of Ft. Bragg. Of course, it was
the issuance of an alert order on 8 August that energized
the national intelligence systems to support all of us.
Through the LNO and the kind mutual support of other G2s, we

were sure in these early days that we were sharing in whatever information was available.

It was during this predeployment period that we began to run afoul of the Commanding General in terms of the intelligence we were providing him. I relied heavily on ASIC personnel to assemble the current intelligence traffic, build the blackbook, and prepare briefings while I managed a broad range of operational issues. We were blessed with some very bright young soldiers and warrant officers who were more aware of the intelligence situation than I, so I arranged to have them brief the situation to the CG on several occasions. Each of them did a good job, but I could sense a dissatisfaction in the CG. I had noted a similar dissatisfaction in the previous CG as well. The Chief of Staff advised me to use only senior officers to do the briefings. Knowing the CG's great affinity for soldiers, the problem remained a mystery to me for a time. However, I noted that even field grade briefers did not always seem to satisfy him. I credited his dissatisfaction to a general anxiety about the mission that lay ahead, and the problem smouldered until after deployment.

Concerning the blackbook, however, the CG voiced his dissatisfaction early, telling me that it was written at too elementary a level, that it was nothing more than cut-and-paste from other sources, with a few shallow, unoriginal thoughts barely tying things together. He seemed to question our ability to decide what of the incoming message traffic

should be "left on the cutting room floor." Although I at-
tempted to fix the problem by proofing the book myself, I
was unable to understand his uneasiness or his needs. After
a week or two, he instructed me to simply send in the stan-
dard daily cables without cutting a word out. He did not
want our interpretation; he wanted to read the original
source. Although I felt that we had been serving a purpose
by picking and choosing from among the many reports, I of
course complied. I did not understand, as yet, that the CG
was guarding his Perception very carefully. He was protect-
ing it from his staff's Perception, which he suspected as
being too far from the truth. He wanted to get close to the
facts in the situation, and we were feeding him too many as-
sumptions based on too little fact. The problem would worsen
before we finally came to grips with it.

In terms of intelligence support to the division as a
whole, I felt that we did a fine job. In the sixteen days
between notification and deployment, the G2 Staff produced
an Iraqi-Saudi Arabian military identification guide, a
country information guide, a commander's handbook, An intel-
ligence estimate, a threat study, classification guidance,
and overlays of cross country mobility, lines of communica-
tion, and hydrology for all of eastern Saudi Arabia. We had
the handbooks printed and distributed as low as squad level,
in non-divisional as well as divisional units. We also ar-
ranged for several visits of expert teams offered to us by
the national intelligence community. The teams presented

classes throughout the division on enemy armor and aircraft, ADA and tactics, and the current views on how to defeat them. Their visits were extremely supportive both intellectually and morally. As a result of many G2 efforts, the division's soldiers and leaders had a great deal of background knowledge about the area and the enemy prior to deployment.

## The Demand for Imagery.

Our combat commanders had recognized the need for imagery of the potential deployment area even before Exercise INTERNAL LOOK. After the Iraqi invasion, their desire for imagery became an urgent demand. Nevertheless, the demand was not satisfactorily filled. MG McCaffrey wanted basic imagery of the terrain, supplemented with photography of enemy positions. Having worked in high level staffs, he was accustomed to receiving 16 X 20 inch, high resolution prints of installations and tactical formations. He and I knew that the capability existed to produce them, and that security requirements did not prevent their distribution to the division and below. We made many requests and follow-ups during this predeployment period. With the assistance of our LNO, Corps G2 forwarded some good quality copies of annotated national level photos of enemy emplacements in Kuwait. However, we did not receive any photos which we could use for terrain appreciation of the initial deployment area. Furthermore, Corps was still unable to provide civilian Landsat imagery.

I was pleased to receive even a few prints, having been conditioned to expect little from the system. I took them into the CG proudly, but he remained unmoved. The prints were too few, covered too little area, and were not in the large format and high resolution which would have permitted him to develop a perspective on the battlefield or the initial deployment area. My CG and others began to regard this lack of imagery as a significant failure, in that the intelligence community apparently could not, or would not, provide the support which commanders demanded. During this period, I spoke to many senior intelligence officers in an attempt to obtain imagery. Most of them earnestly wanted to help us obtain the desired prints, but some of them contended that we did not need the photos at all, that commanders should not expect to get all the "happy snaps" that they wanted, and even that it was the combat arms officers serving in influential positions who had previously cut the photo-producing systems out of the budget, years before. The Commanding General and others seemed aware that such an attitude existed, because they criticized the intelligence community for not committing itself to this valid mission. We G2s paid the immediate price for their dissatisfaction.

I am convinced that photos are absolutely essential for commanders, because they aid so much in Perception. The CG's mind was always greatly challenged. He alone had to own the accurate perception of the current situation. To develop that accurate perception, his mind had to integrate

different kinds of information from a great many sources into one true picture. It was natural for him to guard against introducing false information into his thinking process, and he was therefore skeptical of all information he received. He always tried to be as close to the evidence as possible. The evidence which led to much of our intelligence was photography. What better raw material for building a mental picture than a picture itself?

Prior to deployment, no intelligence issue was more urgent to the CG than this lack of imagery. No issue created the friction that this did. In speaking to my fellow G2s at division and corps level, I learned that all of us were under the gun for the same problem. On 12 August, when prompted by the Division Chief of Staff to submit issues for the Secretary of Defense visit of the 14th, I gave him only one problem needing high level action, and it was the lack of aerial photography. My bullet comments were:

-o-  COMMANDERS AT ALL LEVELS NEED AND WANT IMAGERY, IT IS VITAL WHERE MAPS ARE OUTDATED OR UNAVAILABLE.

-o-  IN WORLD WAR II, THE THIRD ARMY RECEIVED AS MANY AS ONE MILLION PHOTOS PER MONTH FOR ITS TACTICAL COMMANDERS. WE CANNOT DO THAT TODAY. OUR COMMANDERS WILL NEED THEM.

-o-  DA ASSISTANCE OR DIRECTION: YES

RECOMMEND A CAPABILITY TO PRODUCE LARGE NUMBERS OF TIMELY, DETAILED PHOTOS AT CORPS AND DIVISION.

Finally, after we had been alerted to deploy, and funds had been made available, we ordered our own sets of high quality, large format Landsat imagery of the entire area of

operations, from the port of Ad Dammam north to the Euphrates River. They did not arrive before we deployed. Our resorting to commercial suppliers did nothing to reassure my commander that the military imagery system was working.

## Security During Predeployment

Security was a real concern during this period. Many of our habitual functions, such as information security and physical security, simply became more intense. Other responsibilities, such as OPSEC support, took on a new tone, a very practical tone that had been difficult to simulate in training.

Access to SCI information could have been a serious problem, but it was quickly addressed by the national intelligence community. In peacetime and in previous crises, SCI access had been limited to those personnel occupying authorized billets and possessing completed Special Background Investigations. On this occasion, however, we received almost immediate authorization from Department of the Army to locally grant temporary access to SCI information for the duration of the operation. We did not have to wait for a completed background investigation or limit our numbers to the authorized billets. The requirements for local files checks and interviews were most reasonable. This DA action was a little-known success of the intelligence community that represented maturity, and a desire to support the tactical commander. I would not have expected such an

adjustment to procedures. Without it, however, personnel security might have become as sore a subject as was the lack of imagery. We were careful not to violate the spirit of this authority, keeping close track on those who were indoctrinated, conducting required interviews, and removing soldiers from access as soon as possible. We were selective, too, in authorizing access. The security community deserves our thanks for this authorization.

## The Counterintelligence Effort

I brought many biases concerning counterintelligence when I came to the Division. As a battalion commander, my Counterintelligence/Interrogation company had taught me a great deal about the potential of counterintelligence. I had prepared a study of tactical counterintelligence for the Deputy Chief of Staff, Intelligence of U.S. Army Europe (DCSINT, USAREUR) to determine how the theater's counterintelligence assets could best be employed. Through that study, I had concluded that the role of tactical counterintelligence is to identify, locate, and assist in the neutralization of those enemy's intelligence capabilities which most threatened the commander's Essential Elements of Friendly Information (EEFI). The counterintelligence elements constitute a scarce resource, a tool in the commander's effort to blind the enemy or to mislead him. I believed that each commander down to the division level requires his own supporting counterintelligence resource, to help protect

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his unique EEFI. Counterintelligence operations must be focused on only those enemy intelligence capabilities most threatening to expose the commander's prized secrets. Because they are a part of the command's overall effort to blind, mislead, and surprise the enemy, counterintelligence operations must be coordinated with deception, OPSEC and PSYOPS activities.

I came to the job convinced that counterintelligence agents should not be attached to the G2, as was so often the practice, but that they and their mission should be the responsibility of the MI battalion commander. Our job in G2 was to direct collection on enemy intelligence, analyze the information collected, identify hostile intelligence elements, and establish the role of counterintelligence in neutralizing enemy intelligence elements. We provided that direction in the form of orders, approved and levied on the MI Battalion by the G3. We had developed the view that the entire OPSEC effort should be directed by the commander's Essential Elements of Friendly Information (EEFI). For the deployment, our most essential element of friendly information was the timetable and routing of our deploying equipment, and we used the MI Battalion's counterintelligence agents to identify and reduce intelligence and terrorist threats along that route. They did their work primarily by tying together the efforts of other federal, state and local agencies through liaison. The G2 Counterintelligence Analysis Section used information from the CI agents to

draft an OPSEC estimate and a port security study, which
identified facilities in the port area, such as chemical
storage sites, which could be attacked, rendering the port
unusable or disabling our ships. The division's OPSEC activ-
ities aimed largely at preventing sabotage to military mate-
riel at or near the port, and law enforcement agencies
concentrated their efforts at securing the critical points
identified by the counterintelligence effort.

Some CI agents opposed these concepts of employment.
They saw themselves as strategic operatives who happened to
be assigned to the tactical level. As operatives, they had
been trained to perform "missions" which were closer to
techniques. They tended to look at liaison, or counterintel-
ligence investigations, or background investigations, for
example, as missions, or "ends", in themselves. I believe
that we should school-train Counterintelligence Analysts or
Managers to translate a larger CI mission, such as "Prevent
enemy intelligence from detecting the location of the divi-
sion reserve", into a set of specific counterintelligence
tasks. I have repeatedly found that training CI agents to
make this translation is difficult, because their formal
training and their psychology is so task oriented.

Nevertheless, with time, our agents became flexible and
innovative, putting away some of the strategic skills which
did not apply, and developing fresh, new ways to negate ene-
my intelligence. It was during this predeployment period, as
we poised ourselves for deployment, that we began to

recognize the CI agents' ability to mobilize much larger forces than themselves to protect the command. Through a set of informal arrangements, they enlisted the aid of CID, MPs, Coast Guard, FBI, Customs, and Immigration, as well as state, county, and city agencies to secure vital information and to avert terrorist acts. They conducted a rehearsal with many of these agencies before our deployment began, identifying responsibilities and courses of action should a threat materialize. They reviewed current intelligence within the limits of statutory authorizations. In short, our few CI warrant officers and sergeants tied together a sizable interagency operation aimed at protecting the command with little cost to the division.

I strongly believed that there is a need for counterintelligence agents to remain at the division level and to be properly equipped to do their job. Our agents began proving their value even before we began to deploy the division to the port, and they continued to do so throughout the crisis. Just as agents of the Counter Intelligence Corps did in World War II, we found that our imaginations were the key to unleashing the versatility of counterintelligence at the tactical level. We had to be careful that we didn't limit the value of counterintelligence assets based only upon the lessons of past wars.

## The G2 Organization

As the time for deployment approached, the division

gained a great many soldiers, filling to well over 100% strength. The intelligence system gained some personnel as well, but remained sorely deficient in certain key intelligence areas throughout the entire war. Our most significant shortage was in senior leaders. The division staff deployed with only three of its authorized eight MI Majors. Of those three, only one had recent tactical experience. Our program for filling brigades and battalions with advance course graduate captains had left the G2 Staff with only four fully qualified captains, that is, advance course graduates with any MI experience, to fill seven positions in G2. Although we had a group of superb promotable lieutenants and recent branch transfer captains, they understandably lacked the experience required to knowledgeably guide their sections. The G2 staff had none of its four authorized master sergeants, and only two of its eight authorized sergeants first class. We had worked on these issues for months through personnel channels, but, despite our relatively high priority as a division, we could not improve upon these figures. In these early days, the lack of senior personnel cost us in our ability to see things as the Commanding General saw them. It fell heavily on the few of us with experience to translate his needs to extremely specific taskings, and then to continuously monitor in order to steer the workers back on course. A deep commonality of understanding based upon years of experience was simply not possible.

Probably the most frustrating shortage was at the field grade level. With enough experienced majors, many other problems could have been resolved. In my earlier discussions with MI branch, I had learned that a division could not be filled to more than 50% of its authorized majors because of a heavy requirement in joint assignments. Such assignments were all nominative, and therefore absorbed many tactically proficient officers. Career managers gave me that argument time and time again. Nevertheless, I am convinced that they did not understand the costs involved. Our serving battalion, brigade, and division commanders are destined to lead the Army. Their experience with talented MI officers prepares them to use intelligence correctly. Conversely, their negative experience with unqualified MI officers denies them an opportunity to develop their skills in integrating intelligence into the overall effort. I believe that the lessons which these commanders learn stay with them, and influence their abilities to employ intelligence as senior Army leaders. Our tactical positions must be filled, and filled with competent MI officers, as an investment in the development of our senior leaders.

To obtain personnel we needed, my deputy and the G2 sergeant major spent a great deal of time working with the G1. Likewise, I discussed the matter with chiefs of both officer and enlisted branches. The shortages, of course, existed throughout the tactical Army. and therefore little changed in our numbers before or after deployment.

In order to counteract the ill effects of these short-
ages, I moved one of my three majors to the ASIC, leaving
two strong, promotable first lieutenants in G2 Plans to face
off against a bevy of CGSC and SAMS graduate majors in G3
plans. We shifted our most experienced personnel into key
positions as best we could, and we made do. My solution was
less than ideal. At a later date, when he realized how thin
we were in the G2 Staff, the Commanding General would criti-
cize me for providing too much talent to the battalions and
brigades at division expense.

By the beginning of Operation Desert Storm, we had
weathered a difficult period of training and growth, and we
were able to produce a good intelligence and counterintelli-
gence product. I would like to have seen the kind of product
that a fully manned G2 Staff could have given the consumers
of the division.

## Equipment Changes

The division's alert order opened up many opportunities
to gain equipment. We immediately obtained six Zenith Lap-
tops and two desktops with all associated equipment, giving
us at last a reasonable amount of automation. We also re-
quested the new FAISS (FORSCOM Automated Intelligence Sup-
port System, an automated analytical tool), and several
GoldWing HF teletype radios. XVIII Airborne Corps and
FORSCOM worked quickly to obtain these items for us and for

the other deploying divisions. We received them and under-
went training in less than two weeks.

Several other systems were offered to G2 and to the MI
battalion in the following days. Before we departed CONUS,
the MI battalion had received and been trained on the TRAIL-
BLAZER system (VHF Intercept - Direction Finding System),
and the TCAC-D (Technical Control and Analysis Center - Di-
vision).

## Phase 3b: Postdeployment Activities

On 21 August, 1990, the division began to deploy its
personnel to Saudi Arabia. On that date, the Commanding Gen-
eral flew to Dhahran by C141. The G3 and I, as well as about
fifteen other members of the staff, accompanied him on that
aircraft.

## Postdeployment Intelligence Support

As our shipping approached, we moved to a large ware-
house at the port of Dammam, from which we operated until
the division's equipment had arrived at the port on approxi-
mately 13 September. The heat and high humidity at the port
were oppressive, and we were stuffed into the warehouse,
with as many as two thousand soldiers living and sleeping on
cots barely three feet apart.

Upon our arrival, we operated the command post from a
room within the XVIII Airborne Corps Headquarters for
several days.

Initially, the G2 staff consisted of three personnel. Although the staff was small, we were able to provide a good amount of intelligence because we were collocated with the established corps headquarters. The corps G2 staff was extremely helpful in supporting us. Each day brought us new arrivals, who carried the latest intelligence products from CONUS. Within four or five days, our numbers grew to fifteen or twenty personnel, and we became somewhat mission effective.

Despite uncomfortable living conditions, the work had to go on. The primary vehicle for putting out intelligence information was the evening briefing. Each night, I presented the current intelligence estimate, to include the enemy's capability to attack and to conduct unconventional warfare operations against the division during the next 24 hours.

Our most immediate threat at the port seemed to be the possible sabotage of the large ammunition storage site located next to our warehouse-barracks on the dock. We estimated that a detonation of the ammunition in that site would destroy an area 5 kilometer in diameter. There were many intelligence indicators of a guerrilla attack on the site. Our counterintelligence elements worked closely with the Provost Marshal, CID, and local authorities to secure the port, but I pointed out to the CG that there was no guarantee of protection short of marching all of our soldiers out into the desert and away from the ammunition. The CG chose to

maintain a high state of vigilance at the port, a vigilance which included armed guard mounts under direct control of NCOs. We stayed put. On one occasion, we received warning that the Iraqi's would conduct an all out invasion that night. We made plans for the dismounted defense of the urban area, and held our positions. None of the threats materialized. In fact, I was surprised at the enemy's lack of unconventional warfare initiatives, a lost opportunity which I have never understood.

Our magnificent Landsat imagery arrived while we were at the port. The large prints were rectified (corrected to eliminate distortion) at the 1:250,000 scale, which made them especially valuable; they matched our 1:250,000 maps exactly. The scale was so large, however, that, when assembled, they formed a mosaic 5 X 10 feet in size; too large for any tent or van mapboard. We therefore assembled two mosaics from each set, and mounted them on 1/2" plywood backings with screw-on Plexiglass covers to protect them from sand and weather. We issued them, per the CG's instructions, to the brigades and to some of the separate battalions, maintaining sets as well for the CG's van, the briefing tent, and the ASIC. The resolution of Landsat photography is barely good enough to discern objects 20 meters across, so the photos could not provide detailed information on the terrain. They did, however, provide an incomparable, unifying picture of the geography throughout the area of operations. They gave commanders an important tool for

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looking at all of the battlefield, including areas for which we had no maps. The photos were particularly important to the G2 analysts, who used them to index all incoming large scale photos, and to extrapolate an understanding of remote terrain based upon its similarity to known ground. The photos helped us to update maps with new boundaries of sand dunes, urban areas, and roads.

## SSO Communications Difficulties

Soon after we moved the division headquarters to the port of Dammam, we screened off an area in our warehouse and set up a SCIF. In trying to operate from the port, we immediately began having trouble with SSO communications; we were not receiving the normal flow of national level intelligence, and the Commanding General's "Eyes Only" messages were too often delayed, lost, or garbled in transmission.

The CG depended heavily on the SSO communications system for his intelligence information and for his means of informally coordinating with other general officers through privacy communications. He required us to provide him with copies of all DIA summary cables, and he expected the privacy traffic which he sent to be received verbatim, within a reasonable time. We were unable to accomplish either of these tasks reliably.

Sending "Eyes Only" traffic posed the greatest difficulty. On a typical night, the Commanding General's aide brought the SSO a message to send at around 0100 hours. Our

MISSING PAGES WILL BE INSERTED AT AN LATER DATE
AS ERRATA(S)

# CHAPTER 4

## PHASE 4. SEPTEMBER - NOVEMBER 90:

## LONG TERM DEFENSIVE INTELLIGENCE OPERATIONS IN THE DESERT

As soon as he was able, by about the middle of September, the Commanding General moved the division into the desert, approximately two hundred kilometers west of Dammam, and south of the village of Hanidh. During the next two months, we prepared to defend the western U.S. sector, we acclimatized, and we trained. The staff officers assumed the CG's prescribed field lifestyle; with three hours of sleep per night, at least one full meal and one successful trip to the latrine each day, he assured us, we would be able to go on indefinitely. Life in the desert was by far preferable to life at the port. The dry heat was bearable, and the desert itself was often beautiful, especially at dawn and dusk. Soldiers were soon challenging themselves with physical training, and morale was high. Although the division was planning and preparing a defense, by late October, we also began to conceptualize offensive operations into Kuwait.

The greatest challenge facing the G2 Staff during this phase was to provide not only the Commanding General, but also the commanders of the subordinate units, the intelligence they needed to plan, prepare for, and fight the

defensive battle against a large armored force. Our role was to aid the commanders' Perceptions of terrain, weather, and enemy; to aid the commanders in building their Conceptions of the full range of enemy and friendly options; and to aid their Decisions as well. Our aid to their Actions included gathering and distributing maps and preparing the Long range Surveillance Detachment for combat operations.

## The Division Main Command Post

Our primary facility for accomplishing these duties was the DMAIN, which was little changed from the CG's design that we used in INTERNAL LOOK (Figure 9). Initially it sat in a shallow, bowl-like valley, with the ASIC and all DMAIN antennas on the side of a twenty meter high butte approximately two hundred meters away. Later, when the division had moved into forward defensive positions, the entire facility occupied a larger mesa, which we called "The Citadel". The ASIC remained approximately 150 meters away from the Operations Center.

The only G2 facilities within the Operations Center fence were the G2 Operations Van and the sleeping tent which my Operations Officer and I shared. The CG had billeted the G3 and his Operations and Plans Officers within the fence, and had placed his own sleeping van there, as well. This was an outstanding arrangement. At any time, day or night, we were immediately accessible by our staffs.

24th INFANTRY DIVISION

DIVISION MAIN COMMAND POST

ALL SOURCE INTELLIGENCE CENTER

Fig. 9.  DMAIN Configuration in Phase 4

The LNO tent gave all liaison officers a home, a telephone for calling their units, and a workplace. The CG taught us to use these LNOs quite effectively, and, at the same time, to treat them as members of our own organization.

The G2 Operations Officer and approximately half of his twenty-three personnel worked in the Operations Van inside the Operations Center. His remaining soldiers operated similar staff sections at the DTAC and DREAR, and continued to provide a two-person G2 liaison team to Corps Headquarters. The G2 Plans Officer and her two assistants moved from an initial position in the ASIC to a more responsive location in the G2/G3 Plans van.

At about the same time, I recognized that I needed a workplace of my own. I had occupied a place in the CM&D van since our deployment, but this situation was unsatisfactory for all concerned. I could get very little work done, and I was giving them altogether too much direction. I therefore took an empty message center van from CM&D's Stand Alone Communications Center (SACC). Although the communications chief was a bit upset at the loss of the van, his supervisor, the Chief of CM&D, seemed to think that it was a fair exchange for the return of his own section to his control. Although the MTOE does not provide for such a G2 office van, I became convinced that the G2 needs such a work area.

Within the ASIC, each section worked eight to twelve hour shifts initially. All of them changed to twelve hour shifts as the war neared. Several sections had used eight

hour shifts because there was not enough floor space for half of the assigned personnel at once, and because in the beginning there were many exterior details to be accomplished. Later, however, as the available intelligence and our missions grew, we added work tents and gained space and brought more soldiers on duty.

We linked together the vans belonging to the Intelligence Production Section (IPS), the Collection Management and Dissemination Section (CM&D), and the Staff Weather Officer (SWO) vans, and placed the Counterintelligence Analysis Section (CIAS) in the SWO van. The first section to find itself without workspace was our Imagery Interpretation Section. After two months of trying to spread their photos out in the IPS van, they moved to a tent. We discovered that the ASIC always required at least one GP medium tent for accomplishing its frequent major projects and to house the Imagery Interpretation Section. Also occupying tents were planners from the Long Range Surveillance Detachment and the Deception Cell.

The Deputy G2, the Sergeant Major, and the Platoon Sergeant operated from tents outside the ASIC wire. They provided for the welfare of all G2 soldiers. They also planned and supervised all non-intelligence related missions of this, the largest platoon in the Division Headquarters Company, and by far the largest source of junior enlisted soldiers. Sergeant Major Steven Webber took personal responsibility for our quality of life, and for ensuring

that fairness prevailed in all relationships with the company. He did this primarily by being a team player, taking the initiative, and shouldering company missions for the simple reason that they needed to be done. He built such a good reputation with the company command structure that the leadership treated the staff section with respect and fairness at all times. His standards were very high, but as a result, our soldiers lived better, and healthier. He was not an analyst by trade, but rather a surveillance operator. He and I had, therefore, agreed that he would not supervise the analytical effort. He did a superb job cementing together all section leaders of the G2 Staff, and integrating the sometimes conflicting needs of intelligence analysis and unit readiness. I believe that, while each section leader is responsible for everything his section does, it is wise to dedicate some senior leadership to the company, the physical plant, readiness, and unified staff section missions. Sergeant Major Webber excelled with all of that mission. His Platoon Sergeant, SFC Campbell, likewise a surveillance sergeant, provided the direct leadership over soldiers and sergeants. Between the two of them, they trained and developed the NCOs and counseled soldiers with inumerable, and inevitable personal matters. They professionalized several technically oriented intelligence sergeants who had little leadership experience, and they took care of the soldiers.

Likewise, the Deputy G2 provided the administrative and managerial supervision needed to run this large operation.

While we were deployed, he continued to handle personnel matters, such as evaluation reports. Much of his time was taken as a purchasing officer. He and the platoon sergeant were the two-man team that travelled to Dhahran to obtain administrative supplies and computer equipment to feed our automation project.

## The Planning Process

It was during this phase that the division went through its first extensive planning effort with MG McCaffrey. His planning method differed from the doctrinal technique and was a change to the division staff. Rather than using the staff to develop a corporate Perception and Conception through a staff estimate process, the CG preferred to center on his own Perception and Conception, and to use the staff to proof his thoughts. He was clearly the author of the plan. He developed the commander's estimate with his advisors' verbal input, and in a conversational, give-and-take manner. From the staff he demanded aids to his accurate Perception, and help in developing or evaluating his Conception of possibilities.

He approached planning as an iterative activity, to be revisited as we gained information. We relooked the plan very often, almost daily, and every relook ended in a commander's decision, either to retain the previous concept, or to alter it to conform to current information. These iterative planning sessions normally began at around 2000

hours, and involved a relatively small group of officers: the CG, the Chief of Staff, the G3, the G4, and myself, and a couple of G3 (and sometimes G2) planners. If they were available, the Assistant Division Commanders would often sit in as well.

We began each session with the most recently developed planring overlay posted on the map, and a clean piece of acetate covering it. The CG reviewed the information that he had received during the day. The rest of us added any information th he had missed. He then evaluated the standing concept or operation to determine whether it required adjustment. This was a time for each of us to help him improve his Perception by expressing the tactical significance of this new information, by reminding him of other elements of the situation, or by offering new conclusions. The discussion was a group struggle to understand reality. It was also an opportunity to widen the commander's Conception of future weather, enemy or friendly possibilities. These were intellectually demanding sessions requiring quick thought and knowledge of background information. My orientation toward process left me wanting detailed answers on many occasions, but I found this CG to be patient with the "I don't know" answer, just as the previous commander had been. Despite his patience, I was strongly encouraged to know the answers, because I began to see that each unanswered question was a lost opportunity that might never come again. It was important to answer the question when the commander was

actively integrating information on that subject, not later, when his thoughts were elsewhere.

We observed this Commanding General going about his duties in a way that fitted him, and we continued to adapt as a staff to meet his needs. I was reminded again that the staff has no standing of its own, or any authority to bend the commander's will to fit its own vision of its role. The staff must personalize itself to fit the commander's needs. The staff officer must be professionally capable of changing his own style, and of operating under a wide variety of charters. His precise role can be determined only in conjunction with the commander's needs. Here was a commander who pushed his G2 primarily to aid in his Perception. Only during private planning sessions did this commander solicit the G2's opinions as aids to his Conception process.

The G2 staff was slower to adapt to these new roles than some other staff sections were. I believe that there was something in our culture as intelligence personnel that caused our resistance to change. Although the following paragraphs describe our many initiatives to provide the commander with needed intelligence, the reader may also detect a pattern within our behavior which led to the commander's continued dissatisfaction with our support. I will address that pattern toward the end of this section.

## Automating SSO Communications

The raw material which fueled the commander's

Perception was current intelligence. We continued to have difficulty obtaining and presenting all of the intelligence that he needed, but we did make progress, mainly with communications and automation. After moving to the desert, the signal battalion increased the reliability of its multichannel communications. Our SCI communications center operated more continuously than it had at the port. During the same period, we replaced our UGC-74 teletype terminals with desktop computers using a teletype emulation program called "Above Board 4" (Figure 10). This system allowed the CG's personal staff to pass the SSO an outgoing "Eyes Only" message on a diskette. The teletype operator could send the message directly



INTELLIGENCE AUTOMATION SYSTEM
24TII INFANTRY DIVISION

COMM CTR

COLL MGMT
& DISSEM SEC

GOLD WING

INTEL ANALYSIS
SEC

FIG 10. AUTOMATED COMMUNICATIONS

from the diskette file with no additional typing. The message went out quickly and correctly.

The impact on intelligence was also great. We could now receive all of our incoming intelligence message traffic through the computer, transfer it by diskette, and process it on our ASIC computers. This was a major breakthrough. Our analysts were able to quickly print out summaries of higher level intelligence for our blackbook by cutting-and-pasting from incoming reports. They could easily make copies of

messages without using an undependable copying machine. Of course, we all immediately wanted to establish electronic linkages with our brigades, and do away with some of our enormous copy and printing requirements. We put our automation team to work on the problem. This first step toward automating our communications made a quantum difference in our ability to handle information.

## The GoldWing Radio

During this phase, we received a GoldWing HF radio teletype team from corps. The GoldWing is a modern, lightweight system consisting of a GRC-193 Improved HF Radio (IHFR), a laptop computer, a modem, secure device, and antenna. It is a relatively dependable HF teletype. Prior to deployment, we had requested and received six of the systems from FORSCOM. The MI battalion tied itself together with five of them, and I communicated with the battalion on the sixth. The newly arrived corps GoldWing team linked us, as well, to the Corps Collection Management and Dissemination Section, giving us an alternative channel to corps and to our adjacent divisions for short, printed messages. The GoldWing offered us a bit of interoperability, because it accepted the same diskette ASCI files as did our communications center computers. Therefore, we were able to prepare messages for Corps and for the MI Battalion off-line on any one of our computers, dump the messages to a

diskette, and send the messages over GoldWing. An information management architecture was beginning to develop.

Despite these gains in our ability to communicate record traffic, we still could not provide the commander with "Eyes Only" message service and DIA intelligence cables on a reliable basis. The links seemed to go down at division and corps at just the wrong times. Our operators made mistakes, and we supervisors did not give this process the attention that it deserved. There was little room for error here, because the errors quickly came back to haunt me. Probably my most serious mistake was in giving the SSO responsibility to the same CW4 who served as the ASIC Chief. When we came to Saudi Arabia, the assigned SSO could not deploy, and I chose the warrant officer to fill in because his vast experience and talent were rare in an organization missing so many senior leaders. He was highly dedicated and capable, but he was overtaxed. Throughout the seven-month deployment, he rarely left the ASIC, preferring to catch catnaps in the work area rather than leave the site. In retrospect, I realize that I should have separated him from analytical duties and assigned him strictly as the SSO. His knowledge as a field SSO was even harder to come by than his talents as an analyst. Unfortunately, I did not recognize this problem until he began to wear down several months later.

### The G2 Automation Program

The automation program was taking many forms during

this period. Most significantly, our local area net became operational. This was a three station Novell Ethernet which connected the CM&D section and the Intelligence Production Section of the ASIC with the G2 Operations Section at the Operations Center 100 feet away (Figure 11).



FIG. 11. INTELLIGENCE LOCAL AREA NETWORK

This humble network bridged the gulf between ASIC and Operations which had always plagued G2 sections. No longer would the Operations Officer wait for a courier to bring the latest traffic every hour. He would be able to see the messages almost as soon as the ASIC could. He would have access to the bulk of messages being used by the ASIC analysts, and could make comments and requests to the ASIC very quickly. Of course, we first had to ensure that security would be maintained. Our Stand Alone Communications Center received and transmitted SCI information, material which could not leave the ASIC area. The LAN had to be totally isolated from any computers handling SCI, and all materials introduced into the LAN had to be sanitized and checked by the SSO. Our automation team wrote a program which identified compartmented messages, so that the SSO could sanitize them or isolate them from further distribution. The SSO was the first person

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to review all diskettes coming from the communications center, and the only person to authorize adding new messages to the LAN files. Our message-handling program also stripped off the redundant headings on multi-part messages, saving a great deal of paper, reading effort, and storage room. Once we had established and formalized the security processes to ensure that SCI information would not leave the ASIC, we were able to quickly pass messages from the ASIC to the G2 Operations and Plans Officers on the LAN. Within a matter of days, we established an even broader diskette distribution system, by which the brigade and battalion liaison officers took diskettes of the day's intelligence message traffic directly to their own S2s. Commanders and S2s praised the new system; they were able for the first time to read the daily traffic and to process a large quantity of intelligence on their own computers. None of them ever complained that they were being left out of the intelligence picture, or that they were getting too much traffic. Our only problems arose when the circuits were down, which was still too frequent an occurrence. They quickly became accustomed to having access to a lot of information. In short order, this became an invaluable tool for keeping the DMAIN and the Commanding General up on the current situation and for tasking the ASIC. For the first time, a G2 and his commander received almost instantaneous messages which originated with the national intelligence agencies in Washington. The G2 Operations Officer also used the LAN to identify information to go by

diskette to our S2s, and made the necessary diskettes in his section.

Our automation team also developed an Order of Battle Data Base which could be used by all S2s in common. We shipped our order of battle file updates directly to the S2s on diskette. The database was extremely user friendly and useful to the entire division intelligence community.

By this time, our computers had proven themselves reliable under very unpleasant conditions of heat and dust. When they broke down, their parts were available on the economy because they were standard, commercially available systems. Prior to hostilities, the Deputy G2 got equipment repaired or replaced in a few days by taking it to commercial firms in Dhahran.

## Intelligence Support to the Defense

Although it may be true that the commander needs only a few items of information once the battle is joined, there is a great call for information in preparing for that battle. The G2 Staff answered a division's worth of questions every day for the two month duration of this phase. In addition to supplying information about the general enemy situation, we found ourselves driven by the functionally oriented brigades and separate battalions to serve their special areas of interest. Thus, the Engineer Battalion demanded highly detailed information on enemy mines. The Aviation Brigade required similarly detailed data on enemy radars and ADA

systems. The other special units also had their unique needs. Despite its shortage of personnel due to the map program, CM&D was fully committed to obtain and disseminate this technical information to those commands. With the help of our standardized dissemination criteria and the good section leadership, our dissemination specialists became very competent at identifying correct recipients. A great deal of training and practice were required to equip these junior enlisted soldiers to intuitively understand the intelligence needs of all divisional and attached commands. I concluded that even our aggressive peacetime training program had not fully prepare us for this function. The training of a CM&D in peacetime will require a break from the garrison methods, and a closer daily approach to the wartime methods and chains of command. I did not develop, and yet have not developed, a clear picture of an effective peacetime training program for CM&D, but I did gain a healthy respect for the difficulty of that training mission.

### Developing an Estimate to Support the Defense

We prepared the intelligence estimate to describe the commander's Perception of the current situation, and to provide food for his Conception process. The estimate offered three or four very distinct courses of action which appeared open to the enemy. It discussed the enemy's capabilities to adopt each of them, and it outlined potential consequences of each. We used many of the IPB modeling processes in

developing and portraying our views, culminating in an Event Template, which displayed the full range of major enemy capabilities without ordering them as to probability of adoption. In conjunction with the G3, we frequently developed decision support templates (DST) as a means of integrating our Conceptions of friendly and enemy capabilities. In so doing, we assisted the CG in his integration process.

The CG was comfortable with these devices as means of modeling and of expressing our staff officer Conceptions. Using his own personal style, he considered all of the possible enemy courses of action, but he based his planning on his own objectives, rather than assumed enemy objectives. He focused his combat power on dictating his agenda to the enemy, but he also assured himself a good line of action against potential misfortunes, or unexpected good fortunes. When he "figured the odds", he did it himself, preferring to make use of the great variety of information at his disposal, rather than to place too much weight upon the advice of a narrow, functionally-focused staff officer. He handled the risks that he had discovered with reserves, redundancies, additional forces from corps, and other techniques, developing informal plans around the basic concept. He correctly avoided committing himself to a set-piece plan, and did not grant authority to his staff officers to execute operations directly from the DST. All combat decisions had to go through a senior officer for approval. Although we sometimes referred to the DST as we conducted a training exercise, the

DST never assumed more influence than a model should. As the time for actual combat operations approached, the CG relied more and more heavily upon decentralized action based upon a commonality of understanding with his subordinate commanders (built through long discussion and rehearsal). For his own decisions, he preferred to seek the facts rather objectively, using the aids to Perception which he had carefully tailored over the months of preparation. He made decisions as they were needed, based upon his own, well-developed skills of Conception. In his command, he had built the agility needed to respond to changing conditions and short-notice orders.

### The Division Intelligence System Idling in Neutral

Although our planning process worked well during this period, we were not adequately preparing the division intelligence system to operate in combat. We were primarily consumers of national and theater level intelligence, and were unable to execute the tactical intelligence cycle. Several factors prevented our development. Higher headquarters prohibited us from moving the division's intelligence collectors to the Kuwaiti border area in order to collect. We had received very little of the technical data needed by some collection disciplines, and we were unable to collect the information ourselves because we were too far from the border. Our collectors performed their crew drills, but, without access to their real targets, their training was

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insufficient. With no collection assets to manage, the CM&D

Section missed its great opportunity to rehearse the ex-

tremely difficult collection management mission. The lack of

information coming in from our collectors prevented CM&D

from envisioning its role in directing analysis and in re-

distributing the division's reports. Our analytical sections

dealt only with previously analyzed national and theater in-

telligence, and did not face the challenge of collating

large quantities of tactical reporting to produce an analy-

sis relevant to the division's battle. Perhaps worst of all,

our communications and reporting systems were not realisti-

cally tested or developed. We at division toyed with our re-

porting SOP, sending periodic SITREPs, PERINTREPs and

INTREPs down to our units. However the units had very little

traffic to send back. The reporting system was not greased,

because there was nothing to say. This period was counter-

productive in preparing the intelligence community of the

division to begin combat operations. The division intelli-

gence structure was idling in neutral and losing a critical

opportunity to prepare itself. We recognized that there was

a problem, but did not realize its seriousness. I accepted

it as being unavoidable, and we tried in vain to make up for

this lost opportunity with sterile training activities, such

as pitting our collectors against friendly units.


### Our Counterproductive Attempts at Analysis

Challenged by all commanders to provide national and

theater level intelligence reports, we may have mistaken our

hectic work schedule for combat training. This lack of an

active role in the intelligence production process led, I

believe, to counterproductive behaviors that sat badly with

the Commanding General, especially the practice of "re-ana-

lyzing" reports from higher headquarters. In reviewing in-

coming messages, our analysts often perceived discrepancies

between the reports from various agencies. We considered it

our duty to resolve such disagreements at our level, and to

present to our consumers our best estimate of the truth. The

Commanding General objected to this enterprise. He pointed

out that the DIA analyst was looking at the evidence, evi-

dence unavailable to us, when he wrote his report. Unless we

had some evidence not available to the DIA analyst, we had

no basis from which to disagree with his position. He wanted

the verbatim report from DIA and other high level agencies.

He was, in effect, attempting to keep his Perception, and

ours, as pure as possible. On the other hand, our analysts

had been trained to fearlessly draw conclusions from avail-

able information. From their points of view, they had the

benefit of the reports of several agencies, they were on the

ground, and they understood the commander's perspective and

resolution requirements better than did DIA. We therefore

persisted in interpreting the situation for the commander,

picking out pieces of the picture from several intelligence

products and combining them into our own unique estimates.

Although we understood his guidance, we felt compelled by

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our intelligence culture to reject it. Time after time the CG criticized us for straying from the DIA position without hard evidence, and yet we persisted, as if we were serving a higher cause.

I suspect that we in the tactical intelligence field share a very subtle cultural bias. To some degree, we seem to believe that we know what the command needs better than the commander does, that we must protect the command from the ignorance of the commander, and that we somehow serve a higher purpose than merely fulfilling the commander's stated requirements. This hypothetical characteristic of the intelligence community may have caused us to be at odds with the commander's direction on several occasions, and nearly to fall from his confidence altogether. There may be a reason for such detachment in some national level agencies which serve not only the Executive Branch, but the Legislative as well. However, in an Army field command, if the staff is merely an extension of the commander, then it must operate within his intent. Some writers have stated that this separatist view of the intelligence professional has led to serious breakdowr. in tactical command and control throughout history[6].

There are commanders who would have desired a greater amount of interpretation and assumption than did MG McCaffrey. Their intelligence officers would have, therefore, owed them such analysis, properly qualified as something less than fact. In this case, however, the CG had expressly

directed that he did not want such interpretation and assumption. We were operating outside of the restrictions imposed by our commander. We were not working for him, but rather against him. We were failing to personalize ourselves to his specific needs.

## The "CPX Mentality"

Our cultural inheritance seemed also to show itself in what the Commanding General called a "CPX Mentality". It is a common tendency to respond to a difficult question with an answer calculated to satisfy the person who asked, rather than to be accurate. It is the form of face-saving which I had attempted earlier with MG Taylor as a means of self-preservation. MG McCaffrey believed that the source of this technique is the CPX, where form and process sometimes transcend substance in their apparent importance. This problem is not unique to intelligence personnel, but the intelligence analyst is particularly vulnerable. He can often rationalize even a totally fabricated answer as being the best guess of a trained analyst. Ego plays a large role, sometimes too large a role, in the behavior and motivation of intelligence analysts. It is probably ego that drives the briefer to cover up his error or ignorance with a guess.

This problem occurred most often at the evening briefing, which was a daily update to the command group and to liaison officers from all subordinate and adjacent commands and corps. Our G2 briefer presented current intelligence, to

include significant events, enemy locations ar.. strengths, and courses of action open to the enemy. The Ccmmanding General normally used this as a time to sharpen his Perception of the present. It was a challenge for the briefer, who viewed it as a contest, just as I had previously. Although the CG normally received our briefings well, there were nights when he sensed a CPX mentality in the briefing officer. On those occasions, he was quick to challenge the briefer, or to bring the problem to my attention. A briefer so challenged immediately lost a measure of credibility. If we could correct the behavior within a reasonable time, he or she could regain that credibility. However, when the commander continued to lose trust in the officer over a longer period of time, it was necessary to remove the officer from key briefing or production responsibilities. There are many lessons which I have yet to distill from these experiences, but it is already clear that at the business-end of tactical intelligence is an Intelligence Officer providing a Commander with information which influences the outcome of events. This passing of information is largely a psychological affair, and a result of a personal relationship. The interchange of information is effective only in an atmosphere of mutual confidence, respect, and compatible communications skills. An intelligence officer who has lost the confidence of his leader has lost much of his value.[7] This problem will not always be obvious, since some commanders will keep such officers in positio.. and work around them, especially in

peacetime. I believe that the G2 must watch for such incompatibilities between the CG and those who pass intelligence directly to him. It may be necessary to change briefers, in order that, the commander is able to accept and use G2 information. This can often be done at no expense to the junior officer if it is done early enough. Due to our shortages in experienced personnel, and my own misjudgements, I did not act to alleviate the problem as I should have. I did find that in this matter, as in all other matters concerning the Commanding General, my best counsel came from the Chief of Staff, and I recommend using him as the best sounding board concerning the CG's unspoken concerns and preferences.

The CPX mentality may be too common among our breed. I have read very little about the ethics of intelligence or about the characteristics of personality, character, training, and experience required of the intelligence officer. This conflict was merely a glimpse into some of those personal requirements. We should investigate these issues as a professional body in the future.

## The Problem of Urgency in the ASIC

Another cultural characteristic became obvious to me during this defensive phase. For some reason, we seemed to lack an appropriate sense of urgency in the ASIC. This was not a new problem, nor was it unique to the ASIC, but it was becoming a serious problem, nevertheless.

It seemed to me that an urgency had gradually developed through the rest of the division staff in a wave-like motion, starting at the top and working down. Even before we had departed from Ft. Stewart, the Commanding General had become a man possessed. Some of his most senior subordinates could not understand the change in his personality: his driving intensity. But the reason should have been clear. He had gone to war ahead of the rest of us; he was already fighting the first battle. Within the month that followed our alert, most officers and senior NCOs joined him in that battle, some brought on board by his concensus-building; "Come and walk with me on this matter", or "We must come together as a band of brothers and sisters...". But weeks, and even months after the deployment, we were still dragging some officers and enlisted soldiers along. They were doubtful spectators, soldiers who had not lost their peacetime mentality, or who saw this as just another exercise. We seemed to have more than our share in the ASIC, and it appeared that ASIC activities were too relaxed, too comfortable. I believed that, as an organization, the ASIC could not understand that we were at war even before the bullets began to fly. Their error seriously degraded their performance. I credited the ASIC's isolation from its primary consumer, the Commanding General, as the reason that it had not developed a sense of urgency. The ASIC leadership and I worked to energize the section, and to develop in it an appreciation of the CG's needs. We briefed all members

frequently on the status of theater-wide preparations. I emphasized as early as September that we would indeed fight a war, contrary to some common opinions. I attempted to demonstrate by my own urgent pace that time was of the essence. Yet, as an institution, the ASIC was firing up, trimming down, and developing its wartime procedures too slowly.

I saw this "lack of urgency" as a leadership problem. Clearly, the ASIC needed strong, tactically oriented leaders throughout its organization. It was here that we suffered by having so few majors, MI experienced captains, and senior NCO's in the division, and especially in the G2 staff. I had attempted to economize here, charging a senior SIGINT technician to "command" this company-sized organization, to host several other agencies within his facility, to serve as the resident senior analyst, and to function as the SSO. Recognizing my error, I brought in a senior captain who was a very able leader to serve as the ASIC chief. He soon won the respect of all of his soldiers. Their spirits improved, and they seemed to be working harder. Our young captain helped his soldiers to become more dedicated, to the success of the ASIC. Yet, there was no immediate or dramatic satisfaction of the CG's desires that resulted from his efforts.

Eventually, I realized that the problem was more than a simple lack of leadership. The section did not have a tradition or an SOP to rely on. Its members didn't know exactly what was needed, or how best to produce it. We were learning together, but our learning was taking valuable time. The

intelligence process was so complex that no one could fully understand the interrelationships of all the ASIC's actions. Even my tactically proficient captain was learning this on the job. Many of the junior soldiers, having faced new and conflicting guidance continuously, had begun to look at their positions as merely jobs. Because of their specialization by duty and by shift, some soldiers lacked a sense of responsibility for the outcome of their efforts. Their previous training in the G2 Staff and at their schools had been task-oriented. If they accomplished their tasks, some soldiers felt that they had lived up to their commitment. Beyond their responsibility to work their shifts, they owed their allegiance to the ASIC, not to the infantry battalion commander who needed their information in combat. BG S.L.A. Marshall pointed out that the soldier identifies with his immediate unit[8]. Such a narrow identification is just as natural for junior soldiers in the G2 staff as it is in a rifle company, but the effects are more pervasive at division staff level.

Other difficulties should have been more obvious. The ASIC was a shoestring operation which had recently been resurrected in the division. It enjoyed no tradition of influence within the division staff. In fact, there was an aversion to reestablishing an ASIC, evidently because of its OPSEC signature. Only six months before this deployment, the concept of an SCI All Source Intelligence Center was so foreign to the division staff that I had felt it necessary

to seek permission from the Commanding General before even establishing it in the field. It was a new organization in the process of developing its own procedures. Its senior personnel were generally not intelligence analysts, because we had few senior analysts in the division. Its soldiers had not operated a sensitive compartmented information facility (SCIF) or an SCI communications center until a month before we deployed to the Gulf. We were just rebuilding the ASIC in the division when the war "interrupted" us. In this context, the speed with which the ASIC became a contributor is understandable, if not impressive.

I had added to the problem by emphasizing support to the subordinate commands, believing strongly that the battle would be won or lost there. The Commanding General and even the Chief of Staff saw little of that contribution, but it competed with the ASIC's first mission of meeting the needs of the division headquarters. We knew that support to subordinate units was the right thing to do, but it was not without its price.

Despite the confusion among the leaders about what the commander needed, the men and women of the ASIC worked on. The soldiers received much more negative feedback than positive, as we all strove to identify their role. Nevertheless, the soldiers attacked each of the day's tasks, and produced a great deal of intelligence for all levels of the division. Subordinate units were most appreciative. Much of the ASIC product was not of the quality needed at the division level,

and no excuse for less than a satisfactory product could be acceptable in combat. This realization made all ASIC members uneasy and somewhat dissatisfied with themselves. It threatened morale in its own way and added to the aura of failure. But, the soldiers and their leaders slogged through all of this, day by day. As I came to understand the ASIC mission, and the need to take personal control of the analytical process, I found the soldiers ready and eager to take on new responsibilities. During this process of growth, however, the CG saw too little improvement, and he continued to lose confidence in the ASIC.

Ultimately the ASIC came of age when three conditions were met; I became the chief G2 analyst; I selected a senior major with extensive analytical experience to run the ASIC, and the organization had enough time to become "output oriented". Like the Collection Management and Dissemination Section, the entire ASIC is a complex operation whose wartime duties are very different than those in peacetime. Somehow, the peacetime G2 must fully conceptualize what the ASIC will and will not do in combat. Then he must truly organize and operate his peacetime ASIC just as it will go to war. He cannot leave this process to a subordinate. The ASIC must become exactly the tool that he and the CG need. The ASIC requires senior leadership that is tactically and technically qualified, especially in its chief. Otherwise the entire climate of that isolated body may not lead toward the output which the CG needs.

## Terrain Intelligence for the Defense

The G2 staff supported the defense with a wide variety of intelligence products. Initially, the terrain team seemed capable of producing only a set of three standard overlays for lines of communication, hydrology, and cross-country mobility. However, with a bit of coaxing, the analysts began using their imaginations and producing a wide variety of important products. The Saudi oil and gas pipelines which criss-crossed our sector posed a significant risk, because they were vital to the stability of our host nation, and were vulnerable to our tracked vehicles. The Commanding General specified that we were not to damage any pipelines. By aggressively gathering information from civilian and government sources and by conducting their own reconnaissance patrols, the terrain analysis team produced a set of accurate pipeline overlays which was essential for all movement in the area. The team also produced water resource overlays for Saudi Arabia.

Anticipating future offensive operations in Kuwait, the team also assembled 1:50,000 overlays of the developing obstacle belts in the occupied country, as well as lines of communication and cross country mobility overlays. With the assistance of our automation team, they developed a database of all obstacles reported in the country.

The terrain analysts became real celebrities within the division staff. Their work was clear and accurate. Their

ability to describe terrain and its effects gained them great respect from the CG and all others who used their product.

Their efforts were greatly enhanced by their integration into the ASIC and the support they received from the imagery interpreters, order of battle analysts, and the Staff Weather Officer.

We learned early that their overlays were most valuable when distributed on acetate or mylar, rather than paper. Eventually we produced almost all G2 overlays on acetate, using the Terrain Team's diazo machine. Acetate overlays saved S2s many man-hours of copying at brigade and battalion level.

## Approaching All-Source Fusion with a Shortage of Analysts

From the beginning of the crisis, we had been assembling information on Iraqi forces and defenses in Kuwait. By late September, our situation maps were covered with data, and the challenge became how to organize all of the information and how to draw the tactical meanings out of it. I was convinced that we needed two things; a careful accounting for all information, and a way of fusing the information into some simple, clear pictures. Our young analysts fumbled with this task for weeks but were unable to develop any such methods. I therefore specified that we would organize our information on a set of overlays, each one depicting an enemy battlefield operating system (BOS). We would therefore

produce separate 1:250,000 Kuwait overlays for Enemy Maneuver, Fire Support, Intelligence, Air Defense, Aviation, Mobility/Countermobility, and Combat Service Support. I also specified that each entry on each overlay would be coded to represent its source, and reliability, date-time -group, precision (in meters), and validity of the information. Our analysts were to keep a record of the movements of each enemy element and a list of those enemy elements which were unlocated. In short, I prescribed a method of organizing and accounting for information, and a visual technique for integrating it.

The Intelligence Production Section never fully accomplished these tasks, however we made some progress in building the fusion overlays. Our ASIC Chief, CPT Larry Sadd, organized his personnel into functionally oriented teams and coached them through the production of three or four of the overlays, but when he was reassigned to beef up the DTAC, the effort languished. I saw the problem as being a lack of understanding and training rather than lack of desire. Even when our analysts worked on the project, the kinds of errors that they made told me that they did not understand the need to account for our evidence. Having studied World War II intelligence, I knew that we had lost an appreciation for the simple organizational processes that used to form the basis of intelligence analysis. Fifty years ago, the G2 staffs used their junior members as "clerks". The clerks recorded and organizeed incoming information intó card files and

order-of-battle workbooks. They were the careful accountants upon which Perceptions and Conceptions were built. Their work was routine and dull, but vital. In our modern G2 organization, there were no clerks, either by organization[9], training, or inclination. Even the most junior 96B's were "analysts". They were taught to conceptualize, to estimate, to speculate on the "big picture", but they were not taught to organize and record facts, to look for and resolve discrepancies. They read the latest traffic and posted maps, but they did not proceed methodically enough to hold the system accountable for each piece of information received. On one occasion, for example, I found that our analysts had dutifully, and very precisely, posted enemy minefield locations on 1:50,000 scale maps. However, they had failed to notice that the reported locations were given in degrees and minutes only, and were therefore accurate to seven nautical miles at best. Instead of focusing on the quality of the information, they had busied themselves with more elegant activities. They had lost track of the quality of their information. Aside from our few warrant officers, these junior personnel were practically the only soldiers who considered themselves to be analysts. Most of our senior NCOs and officers saw themselves as managers rather than analysts. The problem, I believe was partially due to my own failure to train the section differently, and partially due to our lack of senior leaders. However, I also believe that our doctrine, formal schooling, and even the culture of

tactical intelligence need adjustment. We have yet to stan-
dardize routine techniques and procedures by which individu-
al soldiers contribute to an intelligence product. We have
dissuaded some officers and NCOs from functioning as ana-
lysts. There is a cultural aversion to mundane accounting
practices, one that prevented us from getting a hold on the
facts, and even from seeing the need to do so. I did not
fully recognize the seriousness of the problem at the time,
although I routine ᵧ ran afoul of the Commanding General for
not being able to ᴸend a G2 pronouncement with evidence.
Not only had we losᴜ the clerical aspect of intelligence
analysis, but we had expected junior soldiers and officers
to understand the complex viewpoints and neᴜis of a general
officer, one whom they rarely saw. We needed our junior ana-
lysts to organize our information and find discrepancies. We
needed our NCO's and more senior officers to direct the pro-
cess and to apply their mature tactical judgement to every
analytical task and conclusion. Ultimately, though, the com-
mander had employed me, as the most experienced intelligence
officer in the command, to apply my intellect to the analyt-
ical effort. He afforded me a good deal of his personal time
and attention, so that I would understand his needs and de-
velop the ability to communicate effectively with him. Ulti-
mately I would have to serve as his intelligence advisor.
More time would pass before I would fully understand that
fact.

## The Demand for Imagery Continues

At this point, all of our efforts to obtain imagery began to pay off. Although we had little ability to obtain specific imagery on demand, we did receive hundreds of prints of enemy forces and terrain in Kuwait and Iraq. The prints usually came in one copy only, which prevented us from distributing below division level. These photos were especially valuable to the G2 Staff. Our imagery interpreters and terrain analysts could gain important information from a photo that they simply couldn't gain from any written report.

However, most of the photos were not of the resolution, clarity, scale, or size desired by the CG for his use. He was already dissatisfied with imagery support, and these photos did little to change that opinion. I did forward the good shots to him in his evening briefing folder, and he was often appreciative of them. They played a role in aiding his Perception. Although he asked for imagery of Saudi Arabia to assist in planning the defense, we were denied that request, evidently because assets were dedicated north of the border.

During this phase, we began to receive "secondary imagery", which were thermal printings of digital imagery available from in-country ground stations. The commander was completely unimpressed with these, and I stopped taking them to him unless the subject was really worth his seeing. For the most part, this secondary imagery was of such a large scale that it was little more than a grainy, high contrast

close-up of an item of equipment. The commander was looking for more context in his photos. He wanted to see the configuration of the surrounding terrain as well as an enemy position. Secondary imagery lacked the resolution for such broad views.

During this time, too, we outfitted the brigades and our own ASIC with the special video playback decks needed to review tapes made by the gun camera of the AH-64 Apache helicopter. We began planning to use the Apache as a reconnaissance platform in combat, however we did not practice the technique.

It was early in this phase that BG John Stewart, the commander on the U.S. Army Intelligence Agency in Washington, came to determine how he could help our effort. He responded to our urgent request for large quantities of imagery by telling us that the community didn't have the system necessary to produce the imagery we needed. He asked whether we could get by with highly detailed overlays showing the locations of individual firing positions. We G2s felt that the overlays would go a long way in solving the problem. He promised to do his best. Within a few weeks, we began to receive those overlays at the 1:50,000 scale, and they were helpful. However, we received them at the rate of perhaps one enemy division every two weeks, and we were concerned that they would become outdated before the attick began. We made good use of them, and passed them down to subordinate units as well. But they could not replace the

photo in terms of currency, nor in terms of the confidence
that photos provided.

## The Counterintelligence Effort

Although we had moved out of the port, our counterin-
telligence assets continued to focus on Anti-Terrorism, with
their priorities dictated by our OPSEC plan and the EEFI.
There were many terrorist alarms across the theater in these
early days, but almost all of them were false. The MI bat-
talion commander coordinated his operations with the Mili-
tary Police, and in some cases the two elements integrated
their efforts. CI teams established contacts with local au-
thorities and inhabitants, as well as with unit S2s. Through
an aggressive liaison effort, they became very aware of un-
usual activities in the area. On one occasion, they played a
major role in discovering an agent who was based in the lo-
cal town of As Sarrar and was reporting our troop movements.
They notified the MP's and the local authorities, who appre-
hended the individual. We were later told by the Saudi po-
lice that he was positively identified as an Iraqi agent.
Our CI agents also evaluated the security postures of our
subordinate commands and recommended improvements.

## Counterintelligence Analysis

During this static period, our CI Analysis Section and
the newly arrived Deception Cell produced a superb analysis
of the enemy intelligence collection threat to the division.

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The deception cell had developed a detailed database of the collection capabilities using all-source information. Together, the two sections were able to estimate our major vulnerabilities and to help design an OPSEC program which protected only that key information which was vulnerable. They depicted the estimate on maps and charts, that graphically identified the geographic areas and the units needing security, and the types of enemy collection that could be brought to bear against them. We were able to minimize our expenditure of security resources by focusing our security effort accurately. The biggest problem we faced was no surprise; our CI teams were not equipped with transportation or communications to properly perform their mission. They were constantly borrowing to continue operating. This is a doctrinal shortcoming which needs correction in our authorization documents.

## The Map Problem in Phase 4

By mid-October, we had received sufficient maps to justify another issue. In addition to the two MILVANs full of maps that we had brought with us, maps had trickled into the division from the warehouse in Bahrain since our arrival. However, we could not find a facility for laying the maps down, organizing them, and breaking them out for distribution. At the same time, the 3d Armored Cavalry Regiment, just arriving in country at the Port of Al Jubayl, was being attached to the division. It had deployed having been issued

300 sets of 1:50,000 scale maps, against a stated require-
ment of 1200 sets. With the Regiment's agreement, we assumed
responsibility for issuing their maps as well as our own. We
pooled our resources, cross-leveling our stocks. The Regi-
ment gave us the needed warehouse space, and added their
soldiers to our workforce of 20 personnel. We required over
two weeks to organize our holdings, identify the mapped area
which we could issue, and break the maps down into unit
sets. Because of severe shortages in some sheets, we issued
more of the basic sets that we had issued in the U.S., and
then we issued completer sets, which extended the area cov-
ered, in smaller numbers.

The map distribution scheme was a complex one. I devel-
oped an unconstrained distribution schedule with a great
deal of input from all units. The plan was approved by the
Commanding General personally, and only after many itera-
tions. He then approved each actual distribution authoriza-
tion, which trimmed the ideal back to the numbers of sets
available. The CG made his decisions qualitatively. He was
not concerned with the number of sets going to a unit, but
with the level of command receiving maps. His goal was that
virtually all officers, and every other leader down to squad
level, would have complete sets of maps. Reduced numbers
meant that we would decide to issue to the platoon leaders
and above, or company commanders and above. Each unit also
had its special cases which had to be considered ahead of
some elements of the chain of command. To manage such a

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complex distribution logic, we developed a spreadsheet which laid out the unconstrained distribution plan to all of map recipients in every assigned and attached unit in the division. The sheet automatically totalled the maps required. With that spreadsheet, I could quickly cut back on the unconstrained numbers, lopping off maps from the least important echelons first, until I had trimmed the ideal to our realities. A copy of the spreadsheet is included at Appendix C. With each issuance of maps, it became necessary to track the numbers of sets already issued to each subordinate command. To do this, we developed a map account spreadsheet. A copy of that spreadsheet is included at Appendix D. I am not underwriting the precise numbers of maps shown in the sheets as the correct numbers for a type unit. The numbers shown on the spreadsheets are well below our requirements, and merely reflect the numbers of sets of Iraqi maps that we were able to assemble prior to our attack in January 1991.

We had spent two weeks in December looking for a clean facility in which to break down our maps. It was clear that the brigade S2s would face the same lack of clean floor space, with no hope of finding such an area. We therefore delivered stacks of uncollated maps directly to each battalion S2, believing that they could manage their limited numbers. The delivery went well. Back at the warehouse in Jubayl, we als~ installed wooden shelves in three twenty foot MILVAN's,  1 order to organize and store the remaining maps. If necessary, we would be able to assemble sets inside

the vans in the desert. Although the map distribution process was physically and mentally difficult, it was accomplished successfully, and our units were prepared to fight the defense, with maps in their hands, down to platoon level.

## The Commanding General's Emphasis
## on the Long Range Surveillance Detachment

The Commanding General was determined to employ the LRSD in combat if the risks seemed reasonable. He had developed great confidence in his six teams. Just as MG Lindsay (82 Abn Div) and LTG Watts (VII Corps) had, in my previous experience, MG McCaffrey considered this unit to be his most reliable source of intelligence, and he was fully prepared to make important combat decisions based upon a single LRSD report. Our goal was to make them ready to perform their task. The LRSD had the promise of a fledgling eagle, but, in the same way, it also posed extreme demands upon its parents. The MI battalion commander and I were responsible for building and shaping the LRSD capability under the CG's guidance, and the CG probably provided more explicit guidance about this unit than about any other under his command. During this defensive period, we were to solidify LRSD operating procedures, obtain or construct needed equipment, develop a staff support structure, and finish two years of unit training.

The first issue was command and control of the unit. By doctrine, in combat the G2 takes operational control, and the battalion commander provides support. Our preference was to have the battalion commander retain command and control, while I developed missions and coordinated division level support through the G3. The Commanding General retained authority to approve all LRSD missions himself, and required that the detachment headquarters be located near the DMAIN, to permit quick receipt of team intelligence reports.

Immediately upon arrival in country, as members of our detachment began speaking with others and with special operations forces, they came to us loaded down with "better ideas": new and more esoteric ways of accomplishing the mission. Whereas the doctrine places a long range surveillance team in a static, hide-site, overwatching a line of communications, the new ideas mostly involved mobile, vehicle-borne reconnaissance. I had seen this fascination with new methods in all of my previous LRS related assignments, and I believed, as did the battalion commander, that we should stick to the tried and true method. Years earlier, MG Lindsey had directed that <u>his</u> long range surveillance unit would learn to perform only one simple mission, but that it would do that mission perfectly. I carried that advice to MG McCaffrey, and he agreed. In short order, we put aside all experimentation with unit procedures, and we concentrated on perfecting the classical long range surveillance mission.

When the time came, our teams would at least be comfortable with their methods, their equipment, and each other.

Just as it was normal for LRSD soldiers to embrace new techniques, it was likewise normal for them to hunger for new and exotic equipment. In this case, however, the Commanding General was quite liberal, and we actively sought a wide variety of equipment. The unit gained trucks for administrative movement, a number of weapons, and a great deal of other hardware. However, as a result of their own aggressive training program, and our constant focus on mission, the unit itself culled out all but the most essential gear in favor of lightening their loads. The only unresolved equipment challenge was in obtaining radios. I believed strongly that each team needed two long range radios, but, try as we may, we were unable to add HF or TACSAT radios to the single HF sets provided by MTOE. The lack of redundant reporting radios is the Achilles heel of the current LRS organization. This kind of operation is too difficult to gamble on the successful operation of a single, fragile, and maintenance-intensive HF radio and digital message device. It was equally difficult to obtain our authorized numbers of base station radios, GRC 193 and 213. We were forced to redistribute those radios from within the division. Because there is no type-classified base station, the battalion had to build three such stations in the field using less-than-standard engineering techniques.

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Training was very demanding, but it built confidence as well as skills. Our unit l..arned how to survive buried for five or more days in the middle of an extremely hot and featureless desert. They learned the concealment value of even the smallest fold on the ground, and they determined that valley floors were the worst possibl places to hide. Their communications skills developed well, despite occasional bad days. Conducting the same mission over and over built in them an important degree of self-assurance, and tolerance for boredom, which is an inevitable part of the mission. Their positions for the defensive plan were well forward, and they therefore based themselves at the Division Tactical CP, training on terrain similar to their final objectives. To a lesser extent, this was also training for the helicopter crews and the division staff. The helicopters had been dedicated to inserting teams in the offense, but, in the defense, we expected to use trucks. Nevertheless, the teams and aircrews flew a few training missions together during this phase, and those missions helped to establish a sound relationship that would be very important in the attack a few months later. The division staff marched along a bit slowly at first in fleshing out its responsibilities. This defensive mission was relatively easy, being a surface insertion on friendly ground just prior to enemy arrival. Nevertheless, we knew that the staff's responsibilities were very complex, and were not being fully addressed. We had no formal procedure for planning and coordinating LRS missions.

Therefore, when the LRSD changed its commanders, I gained the former commander as the division's first LRS Staff Officer. He served as the focal point and catalyst for planning and procedures.

## The Linguist Problem

During this period, the most frustrating issue I faced as the Intelligence system manager was the linguist redistribution problem. For many years, U.S. Army Forces Command had allocated its few Arabic intelligence linguists to our division and to the 101st Airborne. All other divisions held different languages. It was now, after deployment, that Corps and higher headquarters began planning to redistribute our linguists in order to give all units a share. Both the battalion commander and I opposed this move, because it would mean dismantling his well-formed teams and units and putting a collection of soldiers from all other divisions in their places. At such a critical time, the battalion and company commanders would face a complete reorganization and retraining mission when they should be collecting intelligence. The battalion was manned at only 60% of its authorized linguists; there were precious few highly qualified linguists to share. We saw this plan as spreading a minimal force with little potential gain. This issue absorbed a great deal of time and generated considerable stomach acid, but was not resolved until later.

While the intelligence elements of ARCENT were debating whether to transfer these soldiers, the division chain of command had already pulled them from their intelligence collection positions and was using them as interpreters for commanders and MP teams. In that ARCENT or higher headquarters had prohibited us from moving our collectors to the border, these interpreter duties did, at least, give our specialists an opportunity to sharpen their language skills. But they did not help to develop team or unit capabilities. The Battalion Commander a⌐ . knew that we would later be forced to collect without preparation, and that such a standing start would be difficult. There is no question that interpreters were needed throughout the division. There has always been such a need. In World War II, this need was filled by Military Intelligence Interpreters, soldiers who were dedicated to this task. Post war organizations did away with these positions, but nothing could do away with the requirement. Our commanders were forced to use intelligence collectors in this way. I concluded by the end of our operations that the requirement for translators still exists, and should probably be authorized in the Reserves. Without such dedicated interpreters, we must expect to lose some intelligence specialists to interpreter duties during hostilities.

## The Loss of Brigade Weather Teams

We deployed from CONUS with USAF weather teams at brigade and division levels. During this defensive phase,

the USAF Weather Wing command structure transferred all our brigade teams to support other commands. I was anxious about this decision. It seemed to me that the existence of the teams had been justified for years based upon the wartime needs of the divisions, and now they were being pulled just as war was about to commence. I believed strongly that desert weather could play a large role in our operations and I therefore fought to retain the teams. I lost the battle, and the teams departed. Unfortunately, I believe, my concerns were justified by later events.

# CHAPTER 5

PHASE 5. 14 NOVEMBER 90 - 15 JANUARY 91:

PREPARING FOR OFFENSIVE OPERATIONS.

On 14 November, the Commanding General returned from a commanders' conference and gathered his plans group to tell us that the defensive planning effort was over. In February, we would attack from positions along the Iraqi border as part of a four corps, combined offensive to regain Kuwait, and to destroy the Republican Guards Divisions. During the next two months, we maintained our defensive readiness, and prepared for the eventual move forward to our tactical assembly areas along the border. We prepared two operations plans; we conducted three division exercises across terrain similar to that used in the attack. It was a busy and stressful time.

## The Planning Process

The planning process now took the center-stage at the division headquarters. The CG authored the plan, with subordinate commanders and staff officers injecting information to assist him in his Perception and Conception. As before, he began with a fairly good concept, and refined it into a great plan through many iterations.

On that first night of 14 November, the CG was able to reorient himself and us from a defensive mindset to a daring offensive plan within five hours of thinking, discussing, and sketching on map overlays. Each passing night usually put us back into the plans van for about three hours, and each night produced another refinement.

At each session, a major from G3 Plans took notes on a pad of butcher paper. After the meeting, the plans officers of the various staffs captured the results of the meeting and prepared any documents which were called for.

The CG continued to personally identify the planning participants, and it was clear that he was under a tension in doing so. On the one hand, he wanted a wide representation of expertise, but on the other, he tried to keep the group small and informal. There seemed to be a limit of about ten participants, above which the session tended to become a lecture, or even a performance, inhibiting the creativity needed for Conception. Too many thoughts were thrown on the table, and a host of group dynamics impeded progress. Below that limit, however, the participants felt free to disagree with the CG, and to make themselves vulnerable by offering the "dumb idea".

It is easy now to understand and appreciate the CG's selectivity. He was straining to develop his Perception, Conception, and Decision. As that process unfolded, we were resources for him one minute, and then obstacles the next.

When our usefulness was over, it was vital to the process that we not negate our contribution by getting in the way.

Many staff officers were, therefore, excluded from the planning group. Most of these senior staff officers gritted their teeth and went about their business as if nothing had happened. Although I was usually a member of these particular planning meetings, there were many times when I was excluded from gatherings in the command post, and such an exclusion could be a humbling experience. Clearly, the exclusivity of the planning group extracted a price in our sense of unity. The CG seemed to make conscious effort to reassure those officers in other ways.

I had noticed the same issues about group size under MG Taylor a year earlier. His chief of staff often trimmed group sizes, even minutes before meetings began, in order to prevent a workshop from losing its spontaneity and openness. I learned, too, that it was important to consider such things as group size when determining which information I could provide, and how to provide it. Group size and membership greatly influenced the CG's receptivity.

On Sunday evenings, the commander continued bringing in his subordinate commanders for dinner and conference, as he had since we deployed. The main subject, however, was now an update on our planning progress.

### The Psychology of Intelligence Consumption

Prior to this job, I had incorrectly discounted the psychological dimension of intelligence. I had not

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recognized that psychological issues play a _major_ role in the commander's acceptance of the intelligence provided by his G2. I had always disdained the use of fancy briefing materials, preferring to scratch out my briefings on butcher paper myself. I believed that our commanders were not impressed by appearances. Now I was beginning to learn, however, that it was my job to get information across in a manner that made it useful. If the commander did not learn, then I had not taught. If the commander failed to integrate a piece of intelligence information into his Perception, then I probably had presented it incorrectly.

I discovered that delivery means a great deal, because, no matter how bright and objective the commander is, his mind is heavily occupied. At the lower end of his critical consciousness, he is struggling to comprehend the many pieces of information that he has received and to determine the truth of each. At a somewhat higher level, the commander must determine the relevance and significance of each piece of information to the situation at hand. At a still higher level, he must integrate information, combining, comparing, and contrasting the individual pieces, building hypotheses, and testing them with other information.

I helped the CG with those lower intellectual activities when my information was clear, concise, and understandable, with its qualifiers (source, reliability, DTG, precision, validity) visible. The key qualifiers, "confirmed or unconfirmed", were best depicted by color or symbol, and

briefed separately, in order to help the commander keep track of his facts. Clear, simple graphics were very important in aiding his quick understanding.

We helped the commander with his determination of relevance and significance, first by choosing relevant information for briefings, and feeding him broader, background information in his read file. Because I did attempt to provide information at the proper time, I found myself, on occasion, filling him in on an item which I had not given him previously, and which had suddenly become relevant to a meeting or work session. Timing information must be done with great care, and I often found myself agonizing over whether the time was right to interrupt a conversation or a train of thought to provide information.

At the mid level, I used intelligence analysis to determine for myself the relevance and significance of information. I then had to format the information in a way that permitted the CG to quickl appreciate its relevance, significance, and my analytical assumptions. I did this verbally, but I am convinced that, if I had been schooled in communicative techniques, I could have transmitted the analysis more efficiently.

At the higher intellectual level, it was very difficult to package our enemy, weather, and terrain information in a way that would help the commander to integrate it with incoming friendly information and wit the integrated picture already present in his mind. I believe that this step is

particularly important. The commander can best identify the risks, or imbalances on the battlefield if he can somehow compare enemy and friendly information while considering the effects of the environment. We uncovered little more than a few clues on how to help him do that.

It seems to make sense that enemy and friendly information should be presented in similar, or complementary formats, in order to simplify comparison. If the G4 briefs friendly ammunition "Days of Supply", then the G2 should brief enemy ammunition "Days of Supply". If the Aviation Staff Officer briefs the planned air assault on the map, then the G2 should brief enemy air and ground defenses on the same map. The formats should also highlight information that has changed since the last briefing. To the degree that our charts, symbols, and formats relate to each other, we will assist any commander in his integration process. Of course, this standardization of informational materials is done best by an integrated staff action, but the G2 can, on his own, adapt his briefing charts and formats to match or complement those of the other staff sections. Our combined efforts as a staff should enable the commander to determine the limits of our knowledge, weigh enemy and friendly imbalances, and determine risks.

Ideally, the approach to information presentation should be customized to the commander. Both of my Commanding Generals in the 24th Infantry Division specified many of their preferences in information formatting. MG Taylor, for

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example, gave us a set of briefing formats that he wanted available, filled in, on his computer at all times. MG McCaffrey wanted supply stockages briefed by weight and volume, rather than by days of supply. He specified several elements of information that should always be on the map boards. He directed that each officer in each command post carry a briefing notebook with certain standard briefing charts, ready to brief on short notice. I failed to appreciate the value of these insights into the thought processes of the commander. If given another opportunity, I would take time to consciously design an executive information strategy, perhaps in conjunction with the Chief of Staff, and certainly to be approved by the CG. It would identify the kinds of information the CG commonly needs, the vehicle though which each item would normally be given to him and to the other members of the command group (read file, blackbook, evening brief, note card), and would show model formats. I would use automation where it made sense to do so. This requirement to portray information is so sophisticated and important that I believe we must train ourselves further in certain communicative arts. As MI officers, we should be equipped with a wide range of communications skills that we can adapt to the audience. We should add literature on this subject to our professional reading lists.

My life began to revolve around three burning questions
(Figure 12).

What information does my commander need?

How do I get the information my commander needs?

How do I give my commander the information he

needs?



Fig. 12. The G2's Three Burning Questions

Although there is certainly a technical component to
these questions, their answers are largely psychological. I
was discovering that it was difficult to be sure that I un-
derstood what was needed and its relative importance.

## OPSEC for Offensive Planning

This was an operation that demanded a sound Operational
Security (OPSEC) program. The CINC had made this fact clear
in his first briefings to his major commanders, and had even

issued warnings that the penalties for breaking security would be significant. His plan to envelop the enemy's right flank and to quickly cover 250 km of desert in order to sever the enemy's lines of communication depended on surprise. A hasty defense thrown up on that flank could bog down the attack, and take away the possibility of a quick victory.

From the very beginnings of our planning on the 14th of November, OPSEC was a commander's program. In most of my previous experience, OPSEC had not enjoyed command interest. The G2 would often find himself in the driver's seat, and would have to push the effort, with as much success as pushing a wet noodle. I had spent hundreds of hours devising EEFI and OPSEC plans which G3s would never read, and CGs would merely nod at. If the commander does not believe in the need for OPSEC so strongly that he will build it into his concept and pay for it with combat power, there is little that the G2 can do.

On the other hand, I had also discovered in our preparation for Grenada[10] that strong command emphasis which did not fully appreciate the costs of OPSEC could hinder operational effectiveness too greatly. The commander must be both enthused and enlightened.

MG McCaffrey wove the threads of the Operational Security program into the operational fabric. All members of the planning group played a part in his creative process, offering him facts and assumptions to aid his Perception, projections and schemes to aid his Conception, criticisms

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and concerns to aid his Decision. But he was the integrator. He balanced OPSEC with the many other elements of his operational design. The Baron de Jomini, in his The Art of War, saw the essence of war as building the right combinations[11]. That operational design required the proper combination of the four elements of combat power, maneuver, firepower, protection, and leadership[12], with OPSEC serving as a major component of the third.

MG McCaffrey built his OPSEC program upon a clear set of goals, which were his Essential Elements of Friendly Information (EEFI). As stated previously, Expensive force protection measures could be justified only by the value of the object they were protecting, and his force protection program began with a clear definition of its ends. His goal was to protect the division's combat elements from the losses they would incur by having to attack a deliberate defense. This goal was primarily a matter of preventing the enemy from discovering where we would attack, and secondarily preventing the enemy from discovering when we would attack. These vital secrets became his Essential Elements of Friendly Information. Although a security expert might have broken these ends down into a number of classified, technical tasks, the commander and his subordinates recognized the value of simplicity. He was able to announce to all our soldiers that we must, at all costs, keep the enemy from discovering when and where we would attack. This was a theme that simultaneously fueled a complex security program and

guided even those soldiers who were not privy to any sensitive aspect of the operation. Each of us could judge our actions, our writings, our answers to newsmen, eve.  .1e content of our phone calls home, based upon whether we might be helping the enemy to determine when and where we would attack. It was the right set of EEFI. I cannot recall whether I had any influence in focusing the command on this simple, visible set of EEFI. It is probably in the nature of the staff officer's job and the group planning effort that I cannot pick out any specific contribution that I ever made to a concept or plan. Nevertheless, I recall being gratified that the command was approaching the OPSEC issue from the right starting point, a clear set of ends.

To achieve the EEFI, the commander combined complementary plans for Information Security, Tactical Cover, and Deception.

The basis of information security was a formal and restrictive compartmentation program. The program aimed at preventing the compromise of operational information by limiting the number of knowledgeable personnel, and by placing them under pressure to secure the information. Every member of the command was a potential leak in the system because of our unprecedented access to commercial telephones and to representatives of the media. Early in our deployment, there had been several warning signs that soldiers were passing operational information through commercial telephones and private mail. Young soldiers had been boasting to their

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friends and relatives with inflated stories of danger, hard-
ship, or the imminence of hostilities. For example, one
wrote that he was stationed "within spitting distance of the
Kuwaiti border", though we were hundreds of kilometers away.
Another told friends that he had to drink water so hot that
it "burned your lips". We could envision the stories that
might go home if those soldiers knew the operational plan
well in advance. We had even investigated accusations that a
field grade officer had shared classified information with
his spouse over the telephone. Unlike World War II, we had
no censorship authority over the mail or the telephone. We
were less concerned that Iraq could intercept these communi-
cations than we were that a family member or friend at home
might provide this information to the press. In a way, we
were attempting to prevent the EEFI to be leaked to the ene-
my through the friendly media.

The price of the compartmentation program was consider-
able. The CG personally developed a general schedule for
reading-on all personnel in the division. The read-ons would
be phased, generally with the brigade and separate battalion
commanders read-on immediately, the senior planning staff
read-on by 1 Dec, the other battalion commanders, division
and brigade main coordinating staffs read-on by 1 January,
and subordinate staffs and company commanders read-on by 1
February.

The Commanding General specifically authorized the
inbriefing of each individual by name until 15 January. He

then specifically authorized read-ons by position. It wasn't until 15 February that he authorized subordinate commanders to read-on at their discretion. The compartmentation program remained in effect until 20 February, when commanders were at last authorized to brief their soldiers, and soldiers were no longer free to go to the public telephones. The compartmentation program, which became affectionally known by those on the inside as well as many on the outside as "Secret Squirrel", remained centrally controlled throughout the period. The CG prohibited subordinate commanders from placing even unannotated maps on their walls until 8 January. As late as 6 January, ten days before the air war began, battalion S2s had not yet been brought in on the plan. Company commanders were authorized to know on cne day after the air war began, 17 January.

General physical security was gradually tightened during the period as well, with units that had become lax in light discipline renewing their efforts, and helping to make the enemy's intelligence collection effort more difficult without knowing any details of the plan.

Out of almost one hundred G2 personnel, I was initially permitted to in-brief only six, the G2 Operations Officer, the G2 Plans Officer, two intelligence analysts, and two terrain analysts. It was the Commanding General, of course, who restricted the ASIC membership so severely. I believe that he did so for several reasons. First, the ASIC employed the majority of junior enlisted soldiers at the main command

post, and he preferred to place his trust in more senior personnel during this period. Second, I think that he believed we could get the needed products from the ASIC without telling them the specific location, mission, or timing of our attack. He was unimpressed with many ASIC products produced for him, such as the blackbook. The ASIC's support to subordinate commands was difficult to quantify or to demonstrate to him, and he was somewhat unaware of that support. I sensed still that, even though he was a strong believer in intelligence, he questioned the effectiveness of the intelligence staff serving him. It seemed clear that he did not believe that the risk taken to inform the ASIC personnel would likely be justified by the product received. This meant that I faced two problems; the lack of the commander's confidence in the ASIC, and the lack of personnel to work on the planning effort.

The CG gradually permitted me to read on members of G2 on a case by case basis. Finally, on 7 January, he authorized me to bring in most of the ASIC. I had been very concerned with my inability to bring the ASIC into the planning process earlier. This situation was a far cry from the problem we had at the 82d Airborne just prior to Grenada, when, the Division was given only a day or two to plan, and yet it brought in no members of the ASIC.

It is the G2's responsibility to advise the commanding general on the involvement of the ASIC in planning activities. There seems always to be a tendency to exclude

the enormous G2 analytical staff in crises or sensitive situations. There is good reason for limiting access, and the G2 must be prudent in his advice. The best argument for including G2 personnel in a sensitive project is the argument advanced by the commander to himself: an argument which must be based on his confidence in the ASIC. That confidence should be built in peacetime. All work would be done in a compartmented work area at the DMAIN, specifically authorized by the Division Commander. Initially, that work area was the expandable five ton van used by G2/G3 Plans. Within a week or two, the G3 had a thirty foot semi-trailer brought up to the DMAIN and refitted inside as a plans van (Figure 13). One side wall was floor to ceiling map boards, while the other was a line of writing desks twenty feet long. He had wall cabinets built over the tables, providing staff sections and subordinate commanders a place to work and to store their planning materials. At the forward section of the trailer, the G3 installed more cabinets and a high speed computer with a graphics capability. During the day, this was the planning van. In the evening, it was for the exclusive use of the CG and his small plans group. On each of the doors to the vans, we maintained current rosters of all those cleared to enter.

Main Command Post

All Source Intelligence Center

Fig. 13. Final DMAIN Configuration

I moved my 2 1/2 ton van up from the ASIC to a spot
next to the large plans trailer, and it became the G2 ana-
lytical van for support to the planning effort. It would
have been a bad idea to attempt analysis in the large plans
trailer. There was too much talk and too many interruptions.
The two cleared terrain analysts worked in their terrain
van, at the ASIC, as the night shift. They folded up all of
their work and stored it in my van during the day, when the
terrain van was used by the rest of the terrain detachment.
Later, as more analysts were read-on, we moved their work to
a large tent, to keep the operation out of the ASIC.

Until early January, work and paper were authorized
only at the division main command post. No paper concerning
the plan could leave that work area without the permission
of the Commanding General. All discussion of the plan was
confined to the work area; we could not discuss the plan
over the telephone or radio. Senior commanders were per-
mitted to keep one, unmarked 1:250,000 map covering not only
the operational area, but also Kuwait and adjoining sections
of Saudi Arabia. G2 personnel assembled the map sets. All
materials were stamped with the Code Words "Compartmented
Leyte Victory", the division codeword for the project.

## Cover and Deception Activities

During the first few weeks of our planning effort, we
began to build tactical cover and deception activities which

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protected our EEFI and which were complementary to the theater-wide deception program. All of the compartmentation efforts drew the attention of our uninitiated soldiers. Initially, we covered the planning as being a continuation of a sensitive Kuwait attack planning exercise which we had previously conducted. With a cover story that we were planning the direct assault of the Iraqi defenses in Kuwait, our outward position was to strongly emphasize the necessity for soldiers to keep all of their activities quiet, and to refrain from speculating on the purpose of the new compartmented planning sessions. Thus, we had nestled the true and very sensitive plan beneath another sensitive, but misleading one. We then protected both of them with the "Loose Lips Sink Ships" argument. We were careful to broaden our requests for intelligence and other operational support to cover the whole Kuwaiti theater, and thereby to give no clue as to the actual objective.

Because we were to begin moving supplies to logistics bases behind our eventual attack positions, the CG directed the establishment of "Site Omega", a sterile location near the convoy start point where drivers were thoroughly briefed, given a cover story stating that they were running supplies for VII Corps, which had already begun moving into an area just to the east, and cleared of any identifying marks, such as bumper markings and unit symbols. Suspecting that enemy agents might be working on the route or in the area of the forward logistics sites, we sent a

counterintelligence team to the north to observe for such agents and to report on them. Our intense interest in security impacted directly on operational decisions. Security prevented the CG from sending the Division Tactical Command Post (DTAC) forward to the border until 31 December, and it kept us from beginning the buildup at our forward logistics bases until 3 January.

The Deception Cell might have been a useful tool in the development of the plan, but it had been pulled from the division earlier. All deception cells were consolidated to perform a large theater level deception. Originally, it had been the CG's strong support that had gained us the deception cell after our deployment notification in August. He had come to the division believing that the Deception Detachment was capable of putting up enough realistic mockups to portray a force of battalion or larger size. However, when he had a chance to see the few three-dimensional mockups, in October, he was sadly disappointed in their numbers and quality. He dismissed the organization's potential for having much effect in conducting a deception. I believe that the real value of the Cell was as a staff element, able to interpret the enemy's intelligence capability. Their young sergeants were superb analysts of enemy intelligence, perhaps the best that I had ever met. They could also advise on the use of deception. The cell had some real potential, just as the OPSEC Management and Analysis Section had in the early 1980's. If it had remained under division control, we

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may have learned to employ the detachment well. Coming to us after deployment, however, the Cell was probably too sophisticated for the G3 and I to employ without training time. We did little to make it succeed in the Division. I would like to see its training courses offered to members of G2's Counterintelligence Analysis Section. That course would equip those CI agents and Counter-SIGINT analysts to focus on enemy intelligence systems.

## The Counterintelligence Effort

The counterintelligence platoon had been concentrating on finding and neutralizing enemy agents, but it seemed that there were few to find. Ninety percent of all agents found thus far had been discovered in Dhahran. Their effort to prevent enemy agents from observing our preparations and the direction of our movement continued.

The Counterintelligence Analysis Section looked beyond the threat of human agents and attempted to identify all enemy intelligence threats that could be discovered at any level of classification. They, like the agents, supported this plan from the outside, because they were not briefed into the plan until relatively late. Much of their work could be accomplished without access to the details of the plan.

## Getting Intelligence

The call for intelligence support reached a new plateau during this phase. Commanders were most concerned about the terrain over which we would attack. The terrain team produced a great deal of usable information. To support our MAPEXs (Division rehearsals) they assembled 1:50,000 and 1:100,000 maps twenty and thirty feet across for use as playing tables. They hand-drew maps where sheets were missing. They annotated map boards with terrain analysis graphics, indicating surface materials, drainage, lines of communication, and fortifications. They got their information from maps of other scales, imagery, current reports, and data bases provided by intelligence and engineer communities.

## The Value of Higher Level Intelligence

National level intelligence remained our best source of information, and the higher level intelligence cables were our best vehicles for getting intelligence to the CG. National and theater reports came to us through our G2 Stand Alone Communications Center (SACC). That facility gave us not only the six to ten daily summary cables, but also a total of 500 to 1000 messages a day for our analysts. The message traffic kept us extremely busy. Some reports were general political assessments. Others were specific imagery readouts straight from a DIA analyst. We absorbed this intelligence ourselves, and sent much of it down to

subordinate elements, who received it gratefully. The national, theater, and corps agencies were very supportive, and deserve great credit for the information which they provided.

## Getting and Using the Imagery

Our communications centers could not help us to get imagery. Each picture continued to be "worth a thousand words" or more, serving as a volume in the veritable "terrain encyclopedia", and often several chapters in the "Enemy Encyclopedia" as well. In these days when automation is turning more and more toward graphic portrayals of information, surely it will soon become clear that imagery saves words, and that it provides the viewer with a level of confidence which words often cannot. Yet the argument lives on that field commanders do not need imagery, and our doctrine does little to help us obtain or use this resource.

We did continue receiving useful imagery throughout this phase, but it was not well-aimed at our needs. To the best of my knowledge, very little imagery ever came to Corps addressed to the division. It seemed that Corps was sending us whatever they could spare, rather than what we had requested. There seemed to be no accountability at echelons above corps for the requests that we had generated.

During this phase, I began to realize that part of our problem was our corporate ignorance concerning the uses of the imagery, and the kinds of imagery that would suit our

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needs. Those needs were becoming very specific; we needed imagery of each of our objectives, of unique terrain features along the way, and of critical points in the plan or on the route. Using maps and the Landsat photos, we picked the areas requiring imagery, and made our requests. Although photos came in a steady stream from corps, the critical points and objectives weren't among them. For example, we could not get a good medium to large scale print of Tallil Airbase, one of the division objectives. In the end, the G3 got a very nice (and mass produced) mosaic of about 4 X 4 feet in size through the G3 of the 101st Airborne Division, who had reportedly scrounged it from the Special Operations community. I was the person on the spot to answer the obvious question of why we, as the division ordered to attack the airbase, had not been able to obtain a copy of that photo.

Our inability to get photos on "The Great Dismal Bog", was even more distressing. In the initial plan, we would attack to the Euphrates River Valley at the city of As Samawah and sever the main highway from Baghdad to An Nasiriyah. We would then turn east and attack along the river to Basrah. We urgently requested information about trafficability across the low ground south of the river. We received no imagery, only analytical comments stating that trafficability was good.

Fig. 14. The As Samawah Vicinity, 1:500,000 scale

While rummaging through terrain materials at Corps G2, I found an escape and evasion map which defined that ground as being "Ar Rahab", terrain subject to inundation, and untrafficable to most vehicles. (Figure 14). It was the only such information I had seen, and the corps analysts had missed it. I brought this potential problem up to the Corps G2 as well as to my CG. With some searching at Corps, we found a small scale print covering some of the Ar Rahab area. With only one such print on hand, the G2 could only lend it to me. Upon careful study of this one inadequate photograph, we had to conclude that the area was relatively impassible for mechanized forces. The issue became central to the division's planning effort. If our analysis was correct, then the division would have to seize As Samawah by crossing a single, narrow causeway. The CG dubbed the area "The Great Dismal Bog". Analysts at corps and division disagreed about how trafficable the area was, but we were all forced to argue from positions of relative ignorance, because we could not obtain a high resolution medium to large scale photo that would help us to make the final call. A great deal hinged on this ground, and we expended great energy identifying potential crossing sites, planning a crossing operation to get into the valley, and developing a reconnaissance plan to provide information which should have been available to us through imagery. Despite the importance of the terrain, we were never able to obtain complete imagery of the bog area of a resolution that would permit a confident

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analysis of trafficability. For lack of a piece of information which was certainly available in file imagery, the division would risk miring, or at least stalling itself in a column of 7,000 vehicles and 30,000 soldiers just 20 km south of our objective. It was a frustrating experience for a G2, and for his commanding general. The CG finally just assumed the worst about the area. Later events showed that he had been wise to do so.

Despite our inability to steer the imagery machine, we did receive coverage of a large part of the division zone. The material varied greatly in scale, resolution and contrast, but it was useful nevertheless. We received long strings of oblique prints of the border taken by RF4C aircraft, and high resolution, large scale photos of defensive positions showing communications cables and individual fighting positions. Some of it was dated, and some was current. Some prints were copies of annotated photography originally prepared for higher level headquarters. Other prints were totally devoid of any marks except a center of mass location. We received imagery in prints that ranged in size from 4 X 4 inches to of 20 X24 inches. We received large mosaics, and we also received negative and duplicate positive imagery. It was all useful, but for various purposes. Of course, the large scale, large format, high resolution overhead prints were especially desirable, because they could most easily be used by commanders and staff officers without a great deal of technical training. However, even the

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smallest print with poor resolution was valuable to the Imagery Interpreter if it was the only photo available on a given area.

It was most helpful for imagery to include an annotated geographical point, a north arrow, a date-time of imaging, and a nominal scale, although we willingly accepted prints without these notations. We generally did not request further annotation, for fear that the work involved would limit the number of photos received. Our analysts were experienced with national level products from previous assignments, and were therefore quite capable of working with a wide range of images. For the most part, we were looking for file coverage of terrain, because we believed that it would be the easiest to obtain. Annotation was needed on images of enemy fighting positions which had been discernible on the DIA copy, or through enhancement techniques, but were visible only as dots on our second or third generation prints. Because we almost never got stereo pairs, any annotation of elevation change would also have been invaluable to us. One of our most significant errors in terrain analysis was caused by our inability to determine vertical relief on single prints. Our imagery interpreters constantly attempted to build mosaics as well, in order to envision more of the terrain at one time.

Organizing our imagery was very important. We serial numbered all photos, keyed them to a 1:250000 map overlay and filed them methodically by brigade zone. Organizing

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photos in this way is an essential step. Otherwise, each person needing information must go through hundreds of photos, attempting to match each to a map, merely to find a needed image. We employed one of our three imagery interpreters full time cataloging photography.

I had encouraged the I/I Section to serve both the intelligence analysts and the terrain analysts. It was only now, during this deployment, that the analysts of G2 came to realize the value of this section. The imagery interpreters were becoming heroes. They and the terrain analysts were influencing the division's plan to an unexpected degree. But their greatest challenges lay ahead.

## The Human Source at the Division Level

Gaining Human Intelligence is an art. Like gold, "HUMINT is where you find it". It was available for the asking from the pilot who had just flown by an area of concern. It could be obtained from the mayor (emir) of a local town. It was personified in the young sergeant in the Division Artillery who was born and brought up in Saudi Arabia. However, discovering the source and connecting that source to the intelligence community was a difficult process, largely based upon good luck. One of our responsibilities in the G2 staff was to seek out such informal sources and to follow up on leads. The Commanding General frequently tipped me off concerning U.S. officers or soldiers who had valuable information to share. The counterintelligence agents and

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interrogators of the MI battalion did a very good job in discovering and obtaining information from other sources as well.

One of the CG's leads was a senior U.S. officer working in Ryadh who had recently been stationed in Iraq. At the CG's direction, I travelled to Riyadh and spent several hours interviewing this officer on details of the terrain, weather, culture, and the military. He had driven through the zone of our planned attack, and was able to add some colorful strokes to the picture that we were gradually painting. He was even more valuable in helping me to understand the psychology of the people and the nature of the military subculture. I am confident that there were many persons available who could have enriched our understanding, but we were not organized to manage a HUMINT effort or to use incoming HUMINT information within the Division G2 Staff. I recognized this shortcoming later, and took some steps to be more proactive, but with only limited success.

## Leader Reconnaissances

The Commanding General permitted two reconnaissances to the vicinity of our future Tactical Assembly Areas. One, headed by the ADC-M, Brigadier General James Scott, traveled north and west along our route of march, while the other, headed by the ADC-S, BG Frazar, traveled by way of Riyadh. They both took terrain analysts with them, and returned with detailed reports on terrain features throughout the region.

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Their information helped us to understand the specific meaning of various notations on our maps, such as "stoney" and "rocky", and to infer much more about the terrain north of the border.

The ADC-M took the Division Tactical Command Post forward into a tactical assembly area in Early January. The long range surveillance teams accompanied the DTAC, and were soon inserted into hide sites from which they could observe the Iraqi border posts. The LRS teams began immediate reporting, not only to watch enemy surveillance activities, but also to gain confidence under the most realistic of training scenarios. Although they had experienced difficulties in communications just prior to this move forward, they regained solid communications with their base station several hundred kilometers away, as soon as they got into position south of the Iraqi border. Their information helped to build a baseline picture of normal activity at the posts, against which we could judge the impact of the division's arrival a few weeks later.

## Missing the Interrogation Reports

I came to this job a strong believer in the value of tactical interrogation of prisoners of war (IPW). In studying intelligence in World War II, I had found that after-action reports at all levels cited Interrogation and Document Exploitation as the two most valuable sources of intelligence[13]. Since our arrival in Saudi Arabia, there had

been a growing stream of Iraqi soldiers crossing over the border and seeking asylum. These soldiers were generally taken into custody by Saudi authorities and interrogated by them. Rarely did we receive the derived intelligence at the Division level. This was one of several limitations and constraints placed upon tactical intelligence elements, and it was an unfortunate one. We missed a very valuable understanding of the situation by being excluded from the several hundred interrogations that were conducted. In some way, this restriction seemed similar to another which denied our SIGINT collectors access to the Kuwait border early in the deployment. I was concerned about our lost intelligence, and I fought hard to place our collectors up forward, We were finally permitted to do some collection along the coast, but it was a very limited operation, and our collection managers and analysts did not play a part. We lost a critical opportunity to collect against an enemy we had never collected against before, and to build a data base which could not be adequately supplied from higher level sources.

Our Division Intelligence System went to war on the day that I activated the G2 staff for 24 hour operations. There had been no pauses to train up. We were forced by the nature of our business to train while fighting our form of warfare. Restrictions placed on our collection, analysis, and management may have been necessary, but they were nevertheless onerous. I suspect that no agency needs more intelligence to do its work than the intelligence agency itself. To a great

extent, it must collect its own operational data. The G2 must fight to give the intelligence system a fair chance by the late hour when the alert is called. It was my job as the G2 to overcome what I suspected were arbitrary and uninformed restrictions. Although I appreciated this duty intellectually, I did not apply enough force to overcome the obstacles or at least to be told by higher authority to cease my campaign.

"Media Intelligence"

We received a great deal of intelligence from the media. In fact, the Commanding General directed a concerted effort to obtain this information for his use. Soon after we deployed, the CG directed the logisticians to obtain commercial short wave radio receivers for each battalion and larger formation. He also required copies of the daily local newspapers. A month after our arrival in theater, he had us obtain a television dish for receiving the Cable News Network (CNN). Each of these efforts was unconventional, and therefore resisted by the staff. Through persistent emphasis, he compelled us to bring each of these about. I was responsible at the DMAIN for monitoring Radio Baghdad, Saudi and Kuwaiti stations, and preparing daily news summaries from each for his review. I was also responsible for translating notable stories from the newspapers. The MI battalion provided the linguist support to the effort.

Again, this was an extraordinary requirement, and one which competed for our limited talents. There were very few linguists in the MI battalion who were technically competent to transcribe these broadcasts or translate the newspaper articles in a language acceptable to the CG. There were even fewer who were mature enough to understand which CNN reports were worthy of the CG's interest. We were missing our experienced analysts, and the few senior personnel that we had were fully engaged in trying to make the intelligence system work. As a result, the CG was often dissatisfied with our media intelligence products. I simply wasn't putting enough qualified people on this job.

What I failed to notice was that he was not committed to my organizational structure or to my vision of a G2's responsibilities. He was committed to what he wanted, and he was trying to teach me what those things were. A different commander would have wanted something different, and would have sent me signals accordingly. It was my job to watch for those signals, and, if I disagreed with his priorities, to clearly state to the commander the costs or risks involved in doing his projects. When I did not present the commander with such options, but made the decisions for him, then I had to accept his dissatisfaction, and I also had to ask myself whether I was serving as an extension of his person. We continued to work as hard as we could with relatively junior personnel to give the CG what he needed, without ceasing our other duties. In time, I gave more and more resources to

this effort, but we never achieved the standard which the CG had set.

The concept of media intelligence is a good one. By monitoring the media, the division staff developed a much deeper view of the political context of this conflict and the domestic support that we had garnered than we would otherwise have known. We observed our senior military and civilian leaders express themselves concerning our operations. We remained aware of worldwide developments, as they occurred, even though we were isolated in the desert. From the foreign press, we were able to sense the directions in which the governments of Iraq and Saudi Arabia were taking their people, and the themes which they were expressing. I am convinced that division and corps G2 staffs should perform similar functions in the future, though I cannot envision another way to pay the bill than by using intelligence personnel.

## Giving Intelligence

During this phase, we continued to enhance our ability to give the commander the information he needed, in the form he needed. We employed several vehicles to convey our information.

## The Morning Briefing File

The CG wanted his reading material first thing in the morning. Therefore, the night shift in G2 Operations put the

file together for the Operations Officer's early review. The file included the last 24 hours' Division PERINTREPS, SITREPS, and INTREPS, the DIA, CENTCOM, ARCENT, and Corps intelligence summaries, and the imagery, special reports, and internal products sent forward by the ASIC chief. It also included the various media reports. There were shortcomings in many of these products, but, on the average day, the commander seemed satisfied with the file. In fact, he often returned it with specific laudatory comments, which we circulated to any analysts who were involved. His positive comments were well-timed, and took the edge off the discomfort that came with growing. The read file was the right vehicle for this commander. However I handled one aspect of it wrong. I did not read it faithfully myself. Being process oriented did not excuse me of that duty. In the final analysis, every item of intelligence information which goes to the Commanding General from the G2 staff is the G2's personal product, whether he authors it, reviews it, or ignores it. Time was extremely short. We were all down to roughly three hours of sleep per day, and I had to prioritize. I continued to prioritize in favor of process, in favor of team building and coaching, rather than devoting my efforts to personally understanding the enemy or quality controlling every product prior to distribution. In retrospect, this may have been the best of two bad alternatives. I sensed that, at some time before the battle was joined, I would have to forsake running the operation, and become the senior

analyst, devoting my intellect to helping the commander win his battle. For now, though, I would continue to make capital investments in the system. I was uncomfortable with this dilemma.


## Automated Distribution to Subordinate Units

During this period, we advanced our distribution of intelligence to subordinate S2s by downloading computer message files through a modem over tactical telephone (Figure 15). S2s called and verbally requested the download, then the parties at both ends configured their computers using "PROCOMM"[14] software, and the files downloaded at a data rate of 1200 baud. We compacted all files using "PK-Zip"[15] software to permit rapid communications. Although there was much that could be done to improve our message handling and throughput to subordinate units, we were extremely satisfied with this new found ability. We could rapidly forward sizable quantities of intelligence from national level all the way to our brigades and battalions. It was one of our real successes with automation.



FIG. 15. DIAL-UP MODEM INTELLIGENCE

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## The Evening Briefing

As the war approached, the CG became less satisfied with the evening brief, perceiving that the briefer had retained his "CPX Mentality", and was making up answers rather than admitting that he could not answer a question. Although I was working closely with the officer to correct the problem, the CG had lost confidence in this briefer. One evening, he counseled the officer and me on the absolute importance of identifying the information that he was sure of, and separating it clearly from speculation. He charged the briefer to be quick to admit that he didn't know answers to questions. The officer gamely attempted to correct the problem. There was no moving the officer from his position as briefer. He rightly chose to try again. For his part, the CG lamented the situation, but pointed out that he must have absolute confidence in the officer who would likely pass him intelligence during the battle. The situation at the evening briefs remained somewhat strained during the remainder of this period, but all parties attempted to give the arrangement another try.

## Conflicts in Current Intelligence

At least part of the briefing difficulty was due to the inevitable conflicts in higher level reporting. It was common for DIA, CENTCOM, and Corps to disagree in their estimates. When the Commanding General was aware of the discrepancy, he usually accepted it. However, our analysts

were not so comfortable. They continued to take a stand on each area of disagreement, creating a Division opinion. For each evening brief, we produced our own estimate of the enemy dispositions. When the CG forced us to defend it, we might have no further justification than to quote one of the divergent reports. Our own understanding of our role drove us to these uncomfortable positions.

Our briefer also found himself in difficult positions because he attempted to defend bad information sent from higher agencies. The most typical example was the problem of unit identification. DIA and other agencies were quick to tentatively identify enemy units soon after they appeared in the area of interest. Of course, the appearance of these units was big news, and we briefed it immediately. When these tentative identifications changed, as they often did, the senior commanders in the division noted the sudden appearance of a new unit, or the rearrangement of divisions overnight, somewhat sarcastically complementing the enemy for his ability to displace quickly. It was difficult to distinguish between intelligence errors and units that were moving, and we felt that our credibility was threatened. On some occasions, the flustered G2 briefer attempted to rationalize or speculate on how such a rapid unit movement could have occurred. The CG was quick to identify probable intelligence misjudgments, and even quicker to disarm the briefer who had not caught the misjudgments himself. In all, the intelligence community too often failed to keep track of its

facts and its assumptions, and found itself backing out of a prior claim. At the national level, this might have required nothing more than a corrected report. At the division level, though, it seemed to require a defense of the entire intelligence system, and that defense usually foundered. Defending intelligence errors was, in itself, an error. Perhaps we should have merely noted the discrepancies, and informed our senior officers that we had requested clarification. Much of this problem could have been resolved, however, if reporting agencies would have qualified their information, indicating source (when feasible), reliability, date-time group of information, precision of location, and validity of information. These qualifiers would have made higher level information negotiable at all levels, and would have helped all levels to identify their outstanding intelligence gaps. My briefer suffered, not because of his desire to resolve this problem, but because of his decision to rely upon own native analytical ability to judge higher level reports when their information qualifiers were missing.

Perhaps the best example of this problem came from our briefings on the developing obstacle belt north of the Saudi border in Kuwait. As mentioned previously, our analysts charted the obstacle locations based upon imprecise reports. Although we hadn't discovered the imprecision at the time, we did note that the obstacle belts had no logic to them, that they seemed to run helter-skelter all over the border area. When we superimposed enemy unit locations over the

obstacle symbols on the briefing map, our product showed en-
emy units defending in front of their own obstacle belts. It
required the Commanding General to recognize that such a
disposition was unlikely. When he challenged the briefer, he
received a weak rationalization for why the enemy would
place his own forces in front of their obstacles. Long after
the commander had dismissed the whole notion as ridiculous,
we continued to carry this disposition on the briefing map.
This kind of a discrepancy, which seems so clearly absurd in
retrospect, was an uncertainty at the time. Was the enemy
doing the ridiculous? Did we not understand his logic? Or
was our information wrong? Unable to get in touch with the
precision or accuracy of our information, we had no way to
defend or revise our position on an issue. We were trapped
by higher level intelligence, and also by our own attempts
to apply precision where it was not warranted. We were actu-
ally powerless to aid the commander in his Perception, be-
cause we were not aware of our unknowns.

Another contributor to the briefer's problem was our
manner of presentation. The G2's third burning question,
"How do I give the commander the information he needs?" Is
the toughest of the three. We had experimented with visual
and briefing techniques, but had not come across the right
presentations for our commander. On our briefing map, we
used standard combat graphics, and added date-time group of
the information below the symbol. We grouped all units
believed to be of a single division by drawing a circle

around them. However, for the sake of simplicity, our brief-
ing map did not depict our relative confidence in the infor-
mation, the sources of the information, or the agencies
reporting the information. We often did not visually sepa-
rate confirmed from unconfirmed information, because we
didn't know what information was confirmed and what was un-
confirmed. We were almost totally dependant on higher level
agencies, which didn't report validity. The commander had
all that he could do to memorize the enemy unit locations,
and then, from night to night, to attempt to identify the
things that had changed. Our shortcomings in presentation of
information persisted.

## Presentation of Light Data

We made some progress around the edges of the presenta-
tion problem. One example was in our light data briefing
chart. After sitting through interminable briefings with the
Staff Weather Officer (SWO) quickly rattling off the light
data for the next day, and no one apparently comprehending
its meaning, I realized that there had to be a better way to
help the decision maker incorporate light data information
into his thinking. I challenged the SWO to come up with
something visual, something relating to the commander's vi-
sion of the next day. His chart (Figure 16) depicts the
amount of light available on a 24 hour timeline. It high-
lights periods of low visibility. I believe that it was a
useful tool for the CG and other commanders. We exported it

to subordinate
units via facsim-
ile. There are
similar ways to
graphically de-
pict other intel-
ligence that
could help the



Fig. 16. Light Data Chart

commander assimilate it. It is the G2's job to find them.


## Answering the Mail

It seems almost too obvious that the G2 must answer the
commander's questions quickly. I certainly received that
guidance from my predecessor before he left. "When the Old
Man asks you a question, or asks you to do something, do it
very quickly." Despite the good advice, I violated that rule
on several occasions, and always at my peril. At times, I
found myself delaying an answer because I was waiting for
better information, and, I reasoned, he was too busy for in-
numerable updates. At other times, I forgot about a require-
ment or a question. Perhaps there was a bit of that cultural
influence involved; I was "serving a higher calling", busy
with more important work. If it is the essence of the job
that the G2 is merely an extension of the commander, then he
must serve the CG's stated requirements first. I relearned
that lesson in working on this paper. In my notes, I found
early guidance from the CG which, if implemented, would have

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greatly increased the service of the entire G2 Staff to the commander. There is probably some value in having a senior subordinate review your notes daily or periodically, in order to catch the details of guidance or the tasks which otherwise would be lost.

## "Be Output, not Process Oriented"

In the CG's various dissatisfactions, a theme started to develop; a theme which he began announcing to me late in this phase. He saw the G2 Staff as a bureaucracy which was more concerned with its own internal process than with its product. He began telling me that we had to become output, rather than process oriented. He wanted me to more completely align our efforts with his information needs.

Although I was not as yet sure of how to be more output oriented, I got a hint at Corps, where the G2's Corps TOC Support Element (CTOCSE) conducted a daily "Skunk Works Meeting". At that meeting, analysts from each section briefed the CTOCSE Chief on the key events of the past day, and the current situation as they best knew it. When they had finished, the chief asked questions and summarized. In this way, all of the analysts and supervisors on shift understood the situation as it was portrayed. I considered how to make use of such a system to fuse information within the division G2 staff.

I knew that the CG was dissatisfied with some of our efforts, but I knew, as well, that we were producing a great

deal of intelligence. Our production was continuous, and as rapid as our constrained workforce could make it.

By 9 December, twenty-five days after our notification, we had provided the brigade commanders;

Assembled and laminated sets of 1:250,000 maps,

An Analysis of the Area of Operations,

A River Crossing Study done by corps engineers,

A Counterintelligence Estimate,

Imagery of As Salman and As Samawah,

Lines of Communication Overlays at 1:250,000 scale,

A Survey of Critical Facilities throughout the zone,

and A List of Potential Targets.

### The Commander as Senior Intelligence Officer

Army doctrine states that, within the division, the G2 is the senior intelligence officer. The purpose of this dictum, I believe, is to settle any potential disputes between the G2 and the MI battalion commander. However, in my opinion the doctrine is wrong. It is the commander who is the senior intelligence officer in any command, and it is with the commander that the G2 can most easily have a conflict. At least it seemed so to me during this preparation phase. By November, our general estimate of the Iraqi Army was well established. We knew that it was a large, highly mechanized army. Its commanders were combat experienced, having

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maneuvered corps sized units on the battlefield, having taken sizable casualties, and having used chemical weapons in combat. We knew that the Iraqis had us greatly outnumbered, and yet _we_ were to be the attackers. We knew that the enemy had established multidimensional defenses in depth, with formidable flame trenches and minefields containing millions of mines as obstacles. We intelligence officers had every reason to present a somber estimate of the enemy's defenses. I ensured that the CG's Perception was fueled with every significant aspect of the enemy's capabilities.

And yet, when I presented my early offensive estimate to subordinate commanders, the CG dismissed it as being overly pessimistic. He presented his own view of the enemy. He told his commanders that the enemy couldn't fight, he dismissed the flame trenches as being more psychological than physical in their effect. Although he did expect that the enemy would use chemical weapons, and he respected their artillery, he told his commanders that we would easily and quickly defeat the enemy.

This led me to a serious ethical question. What were my responsibilities to the commander, and to the command, if my view of the enemy differed significantly from his? Should I be loyal to the commander, or did I have some responsibility to some higher calling? After considerable agonizing on this

issue, I resolved my dilemma when I recalled three dictums by E.C. Townsend;

- IN ANY COMMAND, THERE SHOULD BE ONLY ONE
    ESTIMATE--THE COMMANDER'S ESTIMATE.

- THE INTELLIGENCE OFFICER SHOULD NOT BE PERMITTED
    TO PUBLISH HIS PERSONAL OPINIONS TO A COMMAND.

- THERE IS A DIFFERENCE BETWEEN BEING THE
    INTELLIGENCE OFFICER OF THE COMMAND AND THE
    OLD MAN'S (COMMANDER'S) INTELLIGENCE OFFICER.[16]

It was my duty, as the "Old Man's Intelligence Officer" to give him my counsel. My courage would be tested not in my willingness to disagree with the commander in public, but in private.

However, once the commander had adopted an estimate, a Conception from which he would make his Decision, that estimate became the foundation for all planning and operations. It was a tool for achieving unity of command. A divergent G2 estimate could only dissipate that unity. Thus, after being told to "sit down" on one or two occasions during a briefing, by a commanding general who did not agree with my estimate, I realized that, when I briefed the assembled subordinate commanders on a plan or order, I was acting as the "Intelligence Officer of the Command". I must then brief the command estimate, the CG's operative opinion, rather

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than my own. My responsibility was to accept the CG's estimate as the operative hypothesis, to continue to objectively seek the truth, and to keep the CG informed with any information that tended to prove or to disprove his estimate. My sense of loyalty to a higher calling had been, in fact, a dedication to the truth. But the CG and I had not differed in our knowledge of the truth. We had differed in our opinions, our Conceptions. I was entitled to my own opinion, but there could be only one Conception directing the division's effort, and that would have to be the Commanding General's.

Through this experience, I learned that I was not the senior intelligence officer of the command. The commander was the only person able to incorporate knowledge of the enemy with all other knowledge, and to form a complete Conception, or estimate. All intelligence that would impact on a decision must reside between the ears of that commander. It was Sun Tsu who named the senior intelligence officer when he wrote; "The General who knows neither his enemy nor himself is a fool, and is destined to lose every battle.[17]

There was no mention of a G2 in that writing. It is the commander who must know the enemy. Only that information which he has absorbed and had integrated with other operational matters has any bearing on the decision. Only the information which he uses in his decision-making completes its function as intelligence.

It is somewhat humbling to note that, in almost every case, my commanding general's understanding of the strengths

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and weaknesses of the enemy was more accurate than mine. His estimate of the enemy was closer to the truth. Humbling though it may have been, it was understandable:

The commander had access to more information than I did.

He was senior to me in training and experience.

He had a more integrated Perception than I, because he had considered, and could understand, the intricate balances between enemy, friendly and environment.

And, finally, he had authored the Conception. He understood best how friendly actions would effect and change the enemy's capabilities.

If he had limited his thinking to my estimate, he would have been unnecessarily conservative. It was GEN Omar Bradley who remarked on his relationship to intelligence when he wrote this about one of his subordinate G2s; "Monk Dickson was as brilliant and skilled a G2 as served in the American Army...But like most G2s he was often a pessimist and an alarmist. Had I gone on guard every time Dickson, or any other G2, called 'Wolf!', we would never have taken many of riskier moves that hastened the end of the war."[18]

His greater accuracy as a senior intelligence officer did not reduce his need for a G2. My role had not been to lead him to my conclusions. It was not my responsibility to integrate enemy, friendly, and environment. My duty was to aid him in his Perception of the current situation, the enemy's present capability, thus far uneffected by our planned

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attack. It was my job to give him good ingredients for the production of an integrated Conception that could only be his.

## Directing the Intelligence Effort

In addition to all of his guidance concerning our current intelligence duties, the commander consistently gave me his Priority Intelligence Requirements (PIR). During this phase, he began with a simple statement. He was most concerned with the enemy artillery. They possessed almost 4000 artillery pieces, and had 250,000 tons of ammunition for them. He believed that the most important fight for the division would probably be counterbattery, and that I would find the artillery. His PIR were:

1.  Location and strength of enemy artillery battalions and fire control centers which can influence the Division zone.

2.  Location and strength of enemy armor and mechanized battalions within 24 hours of the Division zone.

3.  Location and strength of enemy division and brigade forward and main command posts within 50 kilometers of the Division zone.

4.  Location and strength of enemy deliberate defenses in the Division zone.

5.  Location and condition of routes capable of supporting heavy wheeled vehicles in the Division zone - specifically 5,000 gallon tankers.

6.    Condition of crossing points across the sebkhas
(desert wetlands - the "dismal bog") at the approaches
to the Euphrates River Valley.

7.    The location of civilian and military fuel stock-
piles in the Division zone.

Obviously, these were not written in the classical
"When, Where, and in What strength..." format so common in
PIR's. These requirements were dictated by the commander
himself, and therefore truly reflected his most critical un-
certainties. My only influence was in focusing our efforts
on what I considered to be the two elements of information
generally needed about the enemy; his locations and his
strengths. With nothing more than that information, my study
indicated that the commander could determine the enemy's ca-
pabilities, and his own risks.[19] These PIR were typically a
commander's, because they were addressable and understand-
able.


## Our Collection Plan

The CG was able to integrate and prioritize all of the
apparently competing lists of priorities (PIR, targeting
priorities, NAI's) into one coherent and prioritized set.
His priorities were simple, clear, and attainable. They
could best be answered by facts, rather than by speculation.
In the confusion and friction of combat, these priorities
gave the entire division intelligence system the direction

it needed in order to succeed. Our collection plan was relatively easy to write based on these PIR.

## Support to MAPEX 1

On 30 December, we conducted our first major Map Exercise (MAPEX) at the division headquarters. All brigade and separate battalion commanders attended. During this three day rehearsal, commanders got their first real opportunity to study terrain and enemy. Because their subordinates were not yet read on, the G2 planning element served as the division and brigade intelligence staff. By the time of the exercise, we were able to provide;

A 1:50,000 horizontal map board, fully annotated concerning terrain and enemy dispositions. The board was twenty or more feet on a side.

A hand-drawn 1:12.500 map of the city of As Samawah, suitable in scale for planning operations in an urban area.

Files of photographic prints covering much of the division zone, including our objectives at As Salman and Tallil Airbase, and most of the objective at As Samawah.

Databases and overlays of installations, facilities, lines of communication, potable water, POL storage, building materials, and other resources.

A study of the Ar Rahab (Great Dismal Bog) region south of As Samawah.

The MAPEX was a great opportunity to make sure that all commanders had understood what I considered to be the critical information about enemy, weather, and terrain. We had their undivided attention. Because they would each brief their own tentative plans, they were working hard to absorb information. Like previous division rehearsals, The MAPEX was also an opportunity to pose the "What-if" questions, and thereby to usher the decision-makers through the process of planning for eventualities which they might otherwise have ignored. As I brought out each discomforting issue and it was planned for, I felt better that, whatever the future would hold, we would be prepared. It was a challenge to use this MAPEX to convey the most important intelligence to the assembled commanders, and to convey that intelligence with only as much confidence as it deserved. This required careful preparation. Because credibility was very important at these sessions, I presented the briefings myself. However, the G2 planners were present at all times to cover technical issues.

### The Attack Plan Changes

Early in January, the CG came to a planning meeting with the notice of a major change. Our axis of attack had been moved 100 km to the east, and our initial objective became an area southeast of Tallil Airbase. The previous plan had been a bit too demanding for the comfort of the logisticians, and it had taken the corps through As Samawah,

an urban area. The altered attack still had the spirit of bold envelopment that should morally defeat the enemy, and it avoided urban areas as well as most of the Great Dismal Bog.

### Support to MAPEX 2

Because our attack zone and objectives had changed significantly, the CG ordered a second MAPEX, which we held from 14-16 January. To this session we brought all battalion and higher commanders. We provided them with revisions of the products mentioned above, and with greater quantities of imagery. All of these exercises produced many questions, which helped to fuel our collection managers. Lasting for three, long days, the MAPEX was mentally exhausting, but it served its purpose. It distributed our latest and best information, it examined the commander's plan, it surfaced a wide variety of criticisms and concerns, and it aided the synchronization effort. Subordinate commanders shared the information which made up the division commander's Perception. They examined his Conception as well as his Decision with him, and brought about some important adjustments to both. They worked out the intricate and interdependent ways in which they would carry out the Action which he had directed.

In that tent, I sensed history in the making. My memories of the exercise are marked by many powerful scenes of commanders, tightly grouped and leaning over the map, brows knitted in thought and eyes focused out at a distance,

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intent on listening to the speaker and thinking, relating his words to their own plans. I saw them as men who had worked and studied for twenty or more years, suffered and sacrificed, along with their families, on a path that had brought them to this tent and this war. The sense of camaraderie and spirit was strong, but so was the sense of prudence borne of experiences in past wars and in demanding training environments. My feeling was a mixed one of awe at the immensity of our undertaking, pride in our obvious capability and will, and anxiety as well: anxiety concerning the G2 contribution. What lay undone? What information was incorrect? How should the last days be used? It was a rare experience; this consciousness of history in the making. Throughout the period and the time that followed, I felt a great weight of responsibility for future events. There was a sense of frustration, too, that no matter how hard we worked, there would be important work left undone. In this contest, there would be no credit given for merely trying hard. We had to be better than the enemy. I believe that my fellow officers were propelled by the same feelings. Their seriousness and businesslike manner further increased my confidence. Never did I witness the false bravado or over-confidence seen in wars of the past. We were psychologically prepared for immediate success or for early reverses.

## Production vs Dissemination

The intelligence cycle makes a relatively clear distinction between production of intelligence and dissemination. By this point in our deployment, though, I began to see this as a dangerous distinction. The two efforts can better be looked at as one. The process of production is not complete until the intelligence is expressed in a way that the consumer assimilates. It is the producer, or analyst, who understands his information. It must be he who conveys it. This activity answers the third of the G2's three burning questions, "How do I give my commander the intelligence he needs?". I had learned that presentation is vital, although we did not make great progress in our presentation techniques.

There is also a place for mechanical dissemination. Our Collection Management and Dissemination Section routinely distributed incoming intelligence, and our own products, based upon a set of dissemination criteria (Appendix B, page C-1). Even the Commanding General received some information from the dissemination channel, such as the DIA daily cables. The dissemination specialists were not intelligence analysts; I did not have enough analysts to use them in CM&D. The disseminators were smart soldiers who became experts on the questions being asked, and on the sources of good answers. They were a switchboard, sending information which had been processed by others to elements of the division needing it.

So then, both the producer and the disseminator must supply information to the consumer, and the success of our operation rested on how well these two specialists did their complementary jobs. We failed when we lost track of the personal relationship between the analyst and the commander, and attempted to route important thoughts through a mechanical dissemination system.

## Finding the Combat Trails

When our zone of attack moved to the east in early January, the division lost the developed trails and the road north which would have permitted the rapid movement of our wheeled vehicles. The CG directed that we find two or three routes through the trackless desert which showed the most promise to be rapidly improved into "combat trails". Our imagery interpreters and terrain analysts worked superbly together as a team, in coordination with the Engineer Brigade staff, to identify three such potential trails (Routes WHISKEY, XRAY, AND YANKEE), each one up to 250 kilometers long. Piecing together information from a great quantity and variety of imagery, databases, and maps, the group carefully mapped out these routes, describing surface materials, choke points (to include minimum passage width in rocky areas), and landmarks. They published their trails as "TripTiks" (Appendix C), similar to the stripmaps produced by the American Automobile Association. These TripTiks were published to aid truck drivers who would be driving the trails without

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escort. The team carefully annotated precise coordinates of checkpoints, and azimuths and distances between checkpoints for use with NAVSTAR equipment or compasses. The TripTiks were well received by the units.

In producing our TripTiks and other terrain products, we couldn't determine terrain relief because of a lack of stereo pair photography. Throughout our zone were circular rocky areas that appeared to be hills. We noted by studying vehicle tracks that few vehicles passed through these circular areas. We suspected that they were hills, but, without stereo photos, and with our maps having 85 foot contour intervals, we could only make that assumption, and call them slow go areas. As it turned out, most of them were flat, and covered with small rocks that did not impede traffic. The stereo photograph, while it may be inconvenient to produce with modern imaging systems, is invaluable in many cases. Even the oldest file photography, off-the-shelf, would have helped us with our analysis if we could nave obtained it. We will need stereo imagery again, and should maintain some capability to obtain it.

## Support to the Targeting Process

During this phase, the CG established the division targeting process. The target cell met each night to review the CG's priorities, identify the targets which intelligence had located with enough precision to attack, schedule such attacks, and determine future collection requirements. To do

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this job right, I assigned a bright young officer to the duty full time. She was free to go anywhere in the division staff to seek out target locations and descriptions. She also requested collection or confirmation of possible targets through CM&D. She worked closely with the Field Artillery Intelligence Officer (FAIO), who spent much of his time in the ASIC as well. The key to our targeting success was a clear set of target priorities provided by the CG. Whenever the situation warranted, he changed those priorities and made the new priorities very visible. Under the tutelage of a lieutenant colonel, and coordinating its efforts with the G3, this cell was the most effective targeting effort that I had ever seen. I am convinced that an active targeting program deserves a dedicated intelligence officer working full time to uncover potential targets.

## G2 Organization

### Configuration of G2 at the DMAIN

Based upon the compartmented planning requirements, we had moved many G2 functions into the Operations Center area, and the DMAIN resembled the layout in Figures 13, 17, and 18. The DMAIN Operations Center (Figure 17) and the All Source Intelligence Center (Figure 18) were over one hundred feet apart until the command post displaced forward to the area of the border, then they collocated as shown. This collocation meant improved mutual support. In order to

supervise the efforts at both sites, I had spent a great deal of my time in walking back and forth. Many other staff officers had rarely gone to the ASIC. When we collocated, the visits and personal communications increased dramatically. The collocation was influential, as well, in reducing the psychological distance between soldiers in the two facilities. Being nearer to the flagpole improved morale, refined direction, and heightened the sense of urgency in the ASIC. Analysts, who typically ignore the cosmetic condition of their physical plant in favor of studying, were encouraged to keep the facility in order. This not only improved the quality of work, but also improved the image of the ASIC in the eyes of its customers. It is truly important, if the ASIC is to serve the Commanding General and the command post, that it locate immediately next to the Operations Center.

# DIVISION MAIN COMMAND POST

STORAGE TRAILER

CG SLEEP VAN

DISCIPLINE COMMANDER

AIDE SLEEP TENT

ADSO VAN (ASST DIV SIG OFFICER)

TV AND INTERCOM VAN

G2 VAN

G2 SLEEP TENT

G4 PLANS G3 & CA OFFICERS

G1 & G4 STAFF OFFICERS

ADA, EN CHEM OFFICERS

FSO, ALO AVN STAFF OFFICERS

G2/G3 PLANS

G2 OPERATIONS

G3 OPERATIONS

CG VAN

G3 SLEEP TENT

PLANS GROUP VAN

BRIEFING TENT

CHIEF OF STAFF TRAILER (SGS AND IG)

ENTRANCE TENT

FIG. 17. THE DMAIN OPERATIONS CENTER

ALL SOURCE INTELLIGENCE CENTER

FIG. 18.

3 STATION LOCAL AREA NET

ENTRANCE TENT

COLLECTION MANAGEMENT AND DISSEMINATION VAN

SWO VAN

RADIO TELETYPE

TERRAIN VAN

STAND-ALONE COMMUNICATIONS CENTER

GOLDWING HF TELETYPE VAN

LANDLINE TELETYPE VAN

IMAGERY WORK TENT AND FUSION TENT

SSO TELETYPE
AUTODIN ACCESS
MULTICHANNEL TACSAT
SCI AND COLLATERAL

LEGEND

TACTICAL TELEPHONE
TACTICAL RADIO
TACTICAL FACSIMILE
COMPUTER
PRINTER
DISKETTE DISTRIBUTION

COMMUNICATIONS BY WIRE, CABLE, LAN

## The Continuing Problem of Personnel Shortages

Our divisional MI officer and enlisted strengths did not rise during this final period, with the exception of captains. We received a number of recent advanced course graduates and volunteers in the last weeks before the ground war, putting the G2 Staff at three captains overstrength when the war began. These new members adapted fast and were extremely important to us by adding to our depth at a time of many new responsibilities and long working hours. One of the volunteers was a highly experienced captain who greatly advanced our CM&D section as its chief. Despite his short tenure when the ground war began, he helped to fill a field grade slot that had been empty from the start. This use of "fillers" was very important, and a sound move by the Army. That these officers ever reached us in the middle of the desert is a tribute as well to our higher headquarters intelligence staffs, which could have skimmed them off for other purposes. We could easily have used 110% of our authorized personnel during this time, and, in fact, many combat and combat support slots seemed to be filled to that degree.

Unfortunately, it is easier to come up with officers than enlisted soldiers in this kind of situation. We remained seriously short in senior intelligence NCO's, analysts, and linguists throughout the operation.

Our organizational doctrine was at fault for our shortage of imagery interpreters. By this time, we had

amassed a sizable quantity of imagery, but with only three authorized I/I's (imagery interpreters), there was no way to extract all of the desirable information from the materials available. These soldiers were working extremely long hours, sometimes for several days without a break, until they were ordered to rest. Whatever photos we sent to the subordinate commands went without interpretation. Commanders and their staffs were only too willing to interpret the photos them-selves. Unfortunately, imagery interpretation is a difficult skill that looks easy. The commanders confidently drew some wrong conclusions about the terrain which could have been corrected  I had been able to send an I/I around to give assistance.

The linguist dilemma was resolved in January by the CG, when he told me to provide ten of our linguists to Corps in exchange for ten Kuwaiti volunteers. I had been against the exchange, or any other loss of our soldiers, but the CG was adamant. Our soldiers did not have the language skills of the Kuwaitis. I arranged the exchange with the Corps G2, and this matter was closed.

## G2 Procedures

We continued our monthly G2 conferences, as did the Corps G2. All of these served well as opportunities to discuss procedures and to share our views of the enemy and terrain, to plan for intelligence collection, and to address organizational issues. The G2s were a close-knit

group, all old friends or at least men with much in common. In fact, the success that our young MI Branch has had in developing a common culture was evident among us. We spoke the same technical language and shared viewpoints. These visits were refreshing, and always helped me to solve some division related problems.

We cooperated well together. We cross-levelled maps, imagery, and intelligence, frequently. There is much more that we can do to support each other across division lines, but we can be proud as a branch for the team effort that we achieved.

I credit the MI leadership of the Corps for the positive atmosphere across all divisions. The Corps G2, COL Marlin Burckhardt, strove to keep us all "User-friendly and friendly-users". He set the example by opening his doors, his files, and his analysts to us. He listened to my pleadings and my ravings, and he took action to get me out of the tight spots. COL Ross Goode, the Commander of the 525th MI Brigade, was equally professional in his support of the Corps G2 and the divisions.

This group of senior MI Officers not only solved some difficult problems for us, but they also helped me to maintain my perspective. The community was particularly important during the most stressful times.

## Information Management

The automation effort was progressing well. Many of the

S2s were using the modem downlink capability to obtain current national, theater, and divisional intelligence. By this time, the division had gained several major units in attachment or direct support, particularly an engineer group, a support group, and an artillery brigade. We treated their S2s as part of the division, and gave them full support. Some of them were also receiving message traffic by disk or download.

During this period, we obtained Terrabase[20] software from LTC Pete Petosky, the G2 of the 101st Airborne Division (AASSLT). This tool, which presents relief information in graphic form, was of some assistance in envisioning the terrain in the objective area. It was particularly valuable for estimating line of sight from proposed LRSD surveillance sites to their targets. Although it was limited in its resolution, it was a very useful tool.

We had also obtained a program developed at West Point which converted between UTM Coordinates and degrees, minutes and seconds of latitude and longitude. Because most national level intelligence is reported in Lat/Long coordinates, this was a great time saver in all of the G2 sections.

I worked on a collection management database to assist in organizing requirements, assigning them logically to collectors, and balancing taskings across the organization. Unfortunately, we did not have sufficient time to devote to its full development or testing.

## Lessons in Automation

By this time, we had learned a good many lessons in automation. First, it was clear that the Army's G2s had not yet benefitted very much by automation. We had very little to help us with the job. I understood that, as an institution, the Army was waiting for the fielding of ASAS (The All-Source Analysis System). Nevertheless, we could all have gained a great deal with some common software systems that would run on our desktop computers. Message handling, for example, would have been a relatively simple function for our institution to automate. We even managed to develop such a system ourselves while in the desert. But there is no reason why every Division G2 should have to develop these items himself, and no way that he can do it as well as an organization with true expertise. Unfortunately, we were left to our own devices in automation, with the exception of the FORSCOM Automated Intelligence Support System (FAISS). We had two of those systems within the ASIC, and they were very helpful. Separate from that small number of specialized, analytical tools, however, we had a great many commercial computers, devices that could be used at battalion through division level. All that we lacked was software. If our order of battle data bases had been common throughout the tactical units, and capable of running on a laptop or a 286 desktop, all S2s in the theater could conceivably have worked off of the same sheet of music. The cost of developing such software applications would be low. This is

one area where the Intelligence Community may be able to make a quick and important contribution to the G2s and S2s. If nothing else, we should, as a branch, sponsor a very aggressive software exchange program through which G2s and S2s can share their software developments, and some packages can be standardized and passed to all commands. Each time that I devoted some precious time to develop a database or spreadsheet, I suspected that it had been done many times before.

We also confirmed that there is still great resistance to automation within the average organization, and considerable misunderstanding as to what automation should accomplish. Too many of us have attempted to attack difficult processes, instead of automating in bite sized pieces. For example, I began trying to develop a complex, relational database for message handling. We would have done better, sooner, if we had first automated our teletype terminals, established the LAN, and used simple E-Mail and textfile transfers to send information, giving up the ability to organize the information into databases.

It seems to take more time and effort to determine what discrete tasks will be automated than it does to write the software. The automation specialist understands this fact. However, the manager responsible for accomplishing the task, the expert on the job, rarely understands this essential step in automation, a step which only he can perform well. Our Intelligence officers must learn how to bridge the gap between the duties of the manager and the duties of the

automator. If they do not, then the automators will design the systems, and we will often end up with a system which does not accomplish our mission. I also learned that the junior analysts at the bottom of the process are not the experts. They should have input into an automation scheme, but the G2 and his senior subordinates must take the driver's seat. Otherwise, we tend to develop systems which serve minor needs of analysts, without contributing enough to the larger G2 mission.

The computer did not seem to help us with many of our conceptual processes. In working with order of battle files, collection planning databases, and visual situation maps (on the FAISS computer), I felt very constrained in my thinking by the small computer screen. I knew that the information I needed was inside the box, in well organized pieces, but viewing it on the screen was like looking at a large room through a keyhole. There was no way to see enough of it at once, close up, to put together a complete picture. Changing the data on the display, moving from chart to chart, or moving around to examine a succession of data items was too complex.

Using automated conceptual aids often seems to fall short of expectations. The thinker gets so involved with manipulating the database to look at the right data, and waiting for the computer to respond, that his conceptual process is subordinated. Many of these tools do not permit the free association and integration of information.

Our full sized, paper sitmaps were much more valuable tools than our computer maps could be. I believe that three to five clerks maintaining manual order of battle databases would have produced more discoveries than we were able to produce by machine. The computers often caused us to lose the learning that goes on when we manually erase and redraw on maps or pencil-in new data onto a page full of information about an enemy unit.

The medium of thought or design must become transparent to the thinker. The transition of thought to some concrete expression must take place with a minimum of conscious effort, otherwise he gets more involved in process than creation.

The trick for the new G2, then, is to determine which subtasks can best be done manually. At this point in our development, the computer seems most useful in communicating information and sharing thoughts about that information across a widely scattered intelligence network. I would recommend putting emphasis there, and keeping much of the analytical process manual.

I am convinced, too, that we needed to identify the steps involved in our manual analytical processes, and assign them formally, to individual specialists. A good part of our problem was in leaving the manual effort as an undefined, intuitive, and individualized process. It is important to study and perfect those manual tasks with the same rigor we apply to the automated tasks. We should optimize

those processes that do not require automation. Certain.y, smart programming and better equipment would make a difference, but the lesson for me is that some analytical processes are done better manually, and that a computer should be assigned to tasks which contribute to a manual effort.

We learned that we should automate based upon "expected profits". In choosing to automate a process, we must determine how much the effort will contribute to accomplishing the command's overall mission. We learned to seek our profits first in simple efforts that produced great return on the resources invested, and to avoid automating tasks which could be accomplished just as cheaply in a manual mode.

We learned again that we had to provide for computer outages. We did this by backing up the system magnetically, and on paper. We programmed our message center and the LAN computers to automatically print a copy of each message received and sent. These paper copies simply fanfolded into a box on the floor, and were available in case of power failure.

Communications Issues. On the communications side of information management, Corps had requested GoldWing teletypes for the counterintelligence and interrogation teams, but the systems did not arrive. The GoldWing would not have been the perfect answer to CI and IPW communications needs, because it takes time to set up, and is sensitive to the elements. Nevertheless, it would have provided record copy communications in digital format over

long distances. This was the capability that the teams had needed. Our CI and IPW teams would have to go into battle depending on the units around them for communications.

Our most pressing communications problem promised to be the lack of dedicated communications among the major intelligence nodes of the division. After a division communications exercise (COMEX) of 11-13 January, all members of the division intelligence community were concerned that communications would end up as a major problem. We had relied on FM nets and multichannel telephone to pass traffic in some cases, where we could not expect to have such communications in the attack. There seemed to be no reliable means available. The division as a whole would be heavily reliant on multichannel, and we would have no choice but to do the same. As in our original scheme, we expected to use FM radio from maneuver brigade headquarters to the DTAC, but now there would be a lightly manned Assault CP inserted between them. As for our reliance on a second FM net to connect the DMAIN (CM&D) to the other brigades and separate battalions, we could not expect that net to operate if the DMAIN remained 250 kilometers to the rear during the first battle. The only solution was to have all units moving forward to communicate with the DTAC via FM radio. Thus, all communications with divisional elements except those in the rear would be through a single FM net to the DTAC, and then through a tenuous, multichannel link between DTAC and DMAIN. Our one hope was with the division multichannel system. Com-

munications was a problem which we simply did not fix com-
pletely, for lack of resources, lack of ideas, and
ultimately, lack of time. It would become our one really
significant problem in the battle to come.

I was also concerned about our ability to communicate
with the Corps G2. For the most part, we relied upon our
satellite multichannel link with corps for all such communi-
cations. We had a GoldWing radio which provided some backup.
The shortcoming with GoldWing was that only one station on
the net could transmit at a time, and the transmission
speeds of 300 baud required that communications be relative-
ly short. We tried to keep messages to a page in length. The
advantage of this system was that we had our own, fairly re-
liable, long-haul, record copy message system which was com-
patible with all of our automated message handling systems.
GoldWing messages on disk could be loaded directly into our
computers and, after sanitization, into our LAN.

We were not on the corps single channel satellite in-
telligence net. The other divisions of the corps were broad-
casting intelligence information over this net, but our
division had few satellite radios, and they were all com-
mitted to commanders. The Corps G2 attempted, throughout the
period, to obtain a radio for us without success. I was con-
cerned about the information we would lose from that net,
and also our conceivable lack of ability to pass information
to corps without such a radio. Eventually, before we began

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the ground war, corps did provide the radio, and it gave us a valuable communications capability.

## Problems in Collection Management.

Collection management is probably the toughest responsibility of the G2 Staff, and our attempts to automate it were not very successful. In fact, over two years of efforts had not systematized the process. Throughout my experience in the field, it had always appeared that most of the effective collection management work is done during the planning phase, when we develop a collection plan and write an intelligence annex from that plan. Rarely, however, had I seen subordinate units assume the assigned collection tasks and aggressively try to accomplish them. I believe that many of the typical collection tasks competed with a subordinate command's primary mission, and were therefore ignored. I had rarely seen a collection plan updated successfully as an operation progressed. Early in an operation, the real priorities changed, but there was no vehicle for redirecting subordinate unit efforts.

The collection management problem has become tougher in the past ten years, as the intelligence system has found itself answering to several sets of priorities, with no agency setting a final list of all encompassing priorities for each collector. Collectors today have to respond not only to PIR (Priority Intelligence Requirements) and to the SOR (Specific Orders and Requests) generated by them, but also

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to ESM Priorities (Priorities for gathering Electronic Warfare technical data), Targeting Priorities, and the priorities dictated by the Decision Support Template, namely for collection against the NAI (Named Areas of Interest). These various lists are not coincident. I decided to develop a unified list of collection priorities, not only for the division intelligence system as a whole, but also for each collector. Some collectors might, based upon their abilities, be ordered to collect against a mid level division priority with more effort than against a high level division priority. I realized, too, that the G2 must be able to quickly change these priorities, based on the situation. Collection management, then, is a multidimensional process involving the following variables:

Changing Enemy Situation

Changing Weather Situation

Changing Terrain Situation

Changing Informational Needs

Changing Information on Hand

Changing Friendly Plans

Changing Collector Capabilities

Changing Collector Positions

Changing Collector Workload

and Changing Time

Since my assignment to the division, we had tried several techniques to organize this process. The first and most successful technique was in developing standardized

reporting criteria and standardized dissemination criteria for our Reporting SOP (Appendix D). Those criteria ensured a reasonable baseline of collection and distribution of information that required no case-by-case judgements. Our next step was to modularize the collection plan, connecting the PIR to their relating Specific Orders and Requests, and numbering them in a way that allowed us to change the priority of all associated tasks whenever we cancelled or changed the priority of a PIR. We could then hold PIR's in reserve, and call up entire lists of taskings by merely activating a reserve PIR. By publishing the entire program of PIR's in the initial plan, we could distribute all taskings and potential taskings before the battle began. During the battle, we could change the taskings with a short message. Although this was a sound idea, we implemented it only partially.

Collection Management is an art form in itself. In practice, I did not assign enough senior specialists to the CM&D section to bring forth very much artistry. Furthermore, the map distribution responsibility, also assigned to the CM&D section, prevailed over all other duties. That responsibility was dominant until 24 January, when we made our map distribution for the attack. Although I knew that CM&D was a key to Getting Intelligence as well as Giving Intelligence, I never installed enough talent and manpower to insure its success. It was a risk which I took consciously, but not happily.

There is little room anywhere in the intelligence community for inexperienced or ineffective personnel. Our critical senior positions must be filled by people of experience and skill. Unfortunately, there are too few such people to go around. CM&D is a common casualty in our distribution of experience and technical expertise. Therefore, we need routines and tools which deal with that part of the job that is science, and which help the rare artist to maximize the value of his talents. We did not develop such routines and tools to the extent that we should. If it had not been for the native intelligence and dedication of the relatively junior NCO's and officers in the section, collection management and dissemination would have failed altogether. I have more questions than answers as to the solution here. Perhaps others in the community can provide such a set of procedures and tools for G2's at large. Organizing this effort is an important mission waiting to be accomplished.

## The Frantic Effort to Get and Issue Maps for the Offense

Maps were a top priority from the time that the Commanding General received our offensive mission. Our area of operations was changing, and getting much larger. We had sufficient numbers of 1:500,000 and 1:250,000 maps on hand to cover our planning needs. However, much of the area was not mapped at 1:50,000 scale. Higher headquarters informed us that DMA was printing the necessary maps, and that we could expect delivery in mid January. By the end of this

phase, 15 January, we had received most of the needed sheets, but in far fewer copies than required. On 24 January, just prior to the division's move to the border, we finally ceased waiting, and issued the maps for the attack. By this time, we had done everything possible to obtain the maps we needed. We had pulled all that we could get from the Bahrain map warehouse and from the corps topographic battalion. We had cross levelled our maps with the other division G2s. We had even scavenged the piles of maps left behind by the 3d Armored Cavalry Regiment at their former assembly area near An Nariya.

The spreadsheet map allocation plan which we had previously developed (Appendix F) helped us to quickly devise a distribution scheme for the CG's approval. On this occasion, we advanced the sophistication and value of our map distribution process one more degree, by collating all map sets at division level. There would be no time or place for subordinate S2s to break down map sets. We had found a very large AAFES (Army and Air Force Exchange Service) warehouse tent at the DISCOM in late December, and we occupied an area in it which was about 100 X 150 feet in size. The G3 had tasked the combat units for a full time work force of about 30 soldiers. Our expert CM&D map NCO's, SSG Nations and SGT Baker had laid down the map sheets in about ten rows of 25 piles per row, each pile being dedicated to a single sheet number (Figure 19). As the weeks went by, they conducted their inventories, sought out additional maps from throughout the

Theater, and added to the piles. When we decided to issue what we had, they opened up their assembly line. A team of four or five soldiers was stationed on each row, and a larger team was stationed at the far end of the rows. Each member of the row team walked down his row, picking up one copy of each sheet, and then stacking his twenty-five sheet collection at the end of the row. A member of the end team collected one pile from each row, thereby assembling a complete set of maps. He passed this set to a team of soldiers who rolled it up, put three rubber bands around it, and sealed it in large plastic garbage bag. The process went very quickly, and we built all of the division sets in two days. The S2s then reported to our depot, where they signed for their allocated sets. They were able to issue these sets all the way down to the individual user with no further collation, and the maps remained protected from the elements. We again issued hundreds of rolls of combat acetate, so that soldiers could protect their sets once assembled. The system was one of our best innovations. I strongly recommend it for use by future G2s.

Throughout the planning period, the CG emphasized the need for as many different maps as we could find. Our G4 purchased a large number of civilian maps and atlases on the economy, and these gave us a different and useful perspective on the terrain ahead of us. It was important to take

Fig 19 Map Breakdown and Distribution Facility

advantage of all available resources, and to avoid being limited to the materials available in military channels.

### The Long Range Surveillance Planning System

The Commanding General increased his emphasis on Long Range Surveillance during this period. As the detachment came of age, his focus turned to the planning and support of LRS missions and the use of LRS reports.

He reviewed all developments and gave consistent and detailed direction to our evolving staff process. Only he would approve missions, resupply operations, or extractions. The CG would be the one person to accept the risk involved in each LRSD mission, and he did not take that responsibility lightly. He made it clear to all of us that the team was too valuable a resource to lose as a result of poor planning or coordination. Likewise, the risk to the aircraft was too great to permit resupply missions or early team recoveries. Teams would go in expecting to stay, and to stay for a long time. Our teams had been trained and readied for this tough, no-nonsense approach from the beginning by our extremely experienced ADC-M as well as by the CG.

Early in the period, the CG reiterated his earlier guidance that the Aviation Brigade Commander was responsible for air delivery, resupply, and extraction of the teams. He was to dedicate three crews to LRSD operations, with another three crews trained and in a backup role. During this phase,

the air crews began training with the teams on a frequent basis. Together, they built the mutual respect, understanding, and procedures which they would need.

The CG pointed out often that the teams would pay for themselves in their reporting. I was to handle all LRS reports in an exceptional manner. Each would have to come directly to a dedicated officer at G2 Operations, who would place the report in a specially marked file folder, and hand carry it to the CG, the Chief of Staff, and the G3 without delay. This valuable information would not be submerged into the "noise-level".

In the meantime, Corps had developed a concept for integrating all LRS operations. The Corps G2 had divided up the battlefield, reserving objectives at the greatest distances for the Corps LRS. He planned a centralized radio base (Area Walnut) to the southeast of the Corps Rear Area. At this facility, base radio stations from all LRS units in the corps could share information and support. The G2 also levied on the division a mission of conducting ground reconnaissance along one of our combat trails, which would later be a corps MSR, using LRS before the attack began. Corps had embraced the concept of using LRS as mobile recon teams, but we had not. This was a point of contention until the ground attack began.

At the division staff level, my LRSD staff officer called together G2, G3, Aviation Brigade, MI Battalion and LRSD planners to coordinate future training and combat

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operations. He and the LRSD operations staff proposed a target folder to be produced by G2.

## Phase 5 Comes to an End

Phase 5 came to an abrupt end for me on 24 February, when I climbed into a helicopter with the CG and flew to the DTAC, located near the town of Nisab on the Iraqi border. The G2 staff and the DMAIN were right behind us, striking their camp and convoying the 500 kilometers to join us at our Tactical Assembly Areas. The period had been hectic, but we went forward with confidence and a positive feeling that we had accomplished a great deal in a relatively short period.

CHAPTER 6


PHASE 6. 24 JANUARY - 23 FEBRUARY 91:

THE TOUGH TRANSITION TO COMBAT


During the next thirty days, the division concealed it-
self in its tactical assembly areas just south of the Iraqi
border. We finalized our plans and conducted one more MAPEX
on 13 February. We also gathered the vital information which
is available only at the eleventh hour. And then, on the af-
ternoon of 24 February, this phase ended with a bang as we
began our ground attack.


## A Rapid Change in Mission

Our arrival at the DTAC signalled a radical change in
the G2 mission, however, I was not immediately alert to that
signal. The physical change of place, facilities, and faces
put me in a somewhat passive mode for a day or two. The di-
vision plans cell, the G3, and I had suddenly inserted our-
selves, almost as strangers, into a small and tight-knit
staff which had worked directly for the ADC-M for several
months. Now that facility was to serve as the CG's command
post, coordinating the execution of the attack, without
disrupting its other duties as operations center for the

ADC-M. Of course, the G2 personnel at the DTAC were our G2 soldiers, and I knew them all well. They had been hand picked because of their individual talents, and they had bonded into a team. I was persuaded to let the capable captain who led the team continue to do so, and to act as the Division G2 Operations Officer, while I continued to work on the evolving attack plans. However, in short order we discovered that the crew would have change its style to conform to the CG's needs. The CG had little patience at this time for training a new crew. I therefore assumed the role of DTAC G2 Operations Officer. To maintain team continuity, I passed my directives through the G2 shift officer to the greatest extent possible. Nevertheless, it was a tough match, and there was much for all of us to learn about each other and the CG's method of operation in those first days together. Fortunately, I had positioned a second very capable captain at the DTAC just a week or two prior to the jump, and he added to the depth of the staff.

The staff at a Forward Command Post like this can sit with little to do for a long time. But when it is called into action, it must be well manned with a crew that works together. Although I had built a good team before the operations began, I had neither visited the CP enough, nor carried on operational activities with them enou h, to fit in now. It had always been difficult to get away and visit the DTAC or DREAR; I paid the price at this time, by feeling like a stranger in a section of my own staff.

The challenges of integrating with the G2 staff at the
DTAC were minor compared with the challenges imposed by the
sudden change in the G2 mission. As its components began to
arrive along the border, the division finally became an in-
telligence collector and producer, and we in G2 suddenly be-
came managers of a complex and untried Division Intelligence
System.

## The First Burning Question: What Does the Commander Need?

### The Division R&S Plan

Almost immediately upon our arrival, the Commanding
General expected me to begin directing the division's recon-
naissance and surveillance (R&S) plan. Of all tasks levied
upon me as a G2, this was certainly the one for which I was
least prepared. I had never e en considered the possibility
of executing a detailed R&S plan at division level. The
problem was not the mission itself; it was certainly valid.
We would have to systematically cover the border to learn
about enemy dispositions, and to prevent enemy reconnais-
sance and surveillance from doing the same to us. The prob-
lem was with me. Unfortunately, I didn't have a clue about
how to manage such a process. I had never run an R&S program
above battalion level. I had never heard of a division R&S
plan. In the midst of our struggle to really know the enemy
deep situation, I simply could not bring enough mental
energy to bear on this new responsibility to accomplish it

well. I assigned the task to the ASIC Chief, but, in the end, it was a young first lieutenant who maintained the program day by day. The ASIC Chief was just as occupied as I was. Our senior expertise was stretched thin. The CG was looking for a detailed monitoring of every event along our one hundred kilometer front, and a comprehensive R&S operation, centrally coordinated by the G2. He wanted me to produce the division current estimate of the enemy situation on the border. While we struggled to develop such a process from scratch, the CG prodded us forward by instituting a daily R&S meeting at the DMAIN, just after its arrival in the forward area. We developed a reasonable format in the early meetings. I would begin by presenting our general scheme for front-line R&S and our primary targets. Then each S2 would present the R&S results of the previous night, the operations planned for that night, and events planned for the future, seeking approval for operations 48 hours away. We would then integrate all of the plans and redirect our division resources to cover gaps in the screen. With their R&S tasks clear, the S2s could return to their headquarters and execute the coordinated plan. It was a sound management process; unfortunately, it didn't work. I was not closely enough in touch with the CG's intent. The process of integrating the efforts of so many units and collectors was extremely complex, and therefore difficult to throw together in a hurry. And neither the S2s nor I had the authority to commit unit resources. After a few days of watching us

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fumble with ineffective planning and execution, the CG asked the ADC-M to chair the meetings.

Although BG Scott brought the necessary authority to the task, and certainly further increased our sense of urgency, I believe that he soon discovered that he had the wrong workers on the case. From a battalion commander's perspective, R&S was a mission, an operational task sent from higher headquarters requiring the use of assigned resources. It was a commander and S3 matter. In fact, it was the division's first coordinated tactical operation, and the only tactical operation of the moment. With the air war in progress, and the division merely biding its time until it would commence its attack, the R&S operation was a perfect opportunity to train as we would fight, using centralized planning and decentralized execution. This was not the business of intelligence officers; it was commander's business. By 10 February, after almost two weeks' of frustration with the G2-S2 effort, the ADC-M moved the meeting to the cavalry squadron command post, and changed the membership to commanders and their S3s. The S2s and I assisted by recommending R&S priorities and objectives. Commanders and S3s finalized missions, assigned them, and coordinated the concepts of operation. These operations were sensitive, because of the need for security, and because the combat judgement of our leaders was still relatively untried. Therefore the commanders backbriefed each of their daily plans to the ADC-M, and sometimes to the CG himself.

Although I had not initially wanted to take on R&S man-
agement, losing it was quite a blow to my ego. However, when
I observed the effort which even these commanders had to put
into the process, and the difficulties which they faced, I
became convinced that the G2 and S2s never could have accom-
plished this effort alone. In this instance, R&S was clearly
a commander's job. I cannot confirm that all R&S missions
would require such personal command attention, but I suspect
that they would. The G2 or S2 can certainly play a large
role in parcelling out R&S objectives  or priorities among
subordinate units, but I believe the management of an ag-
gressive R&S operation becomes an operations and command is-
sue almost immediately upon its birth. The intelligence
officer should not have to compete with the operations offi-
cer, nor should he have to become an operations officer,
just because the upcoming combat operation is tagged as "Re-
connaissance" or "Surveillance".

As this R&S process evolved, the Cavalry S2 became the
focus of the front-line enemy situation, because his unit
screened the division front. I concentrated on the deeper
enemy situation. By helping to guide the evolution of R&S
targets, going deeper and deeper with time, I attempted to
link the relatively short-ranged R&S plan with the deeper
intelligence collection plan so that they flowed together by
H-Hour. When we arrived in the border area, in late January,
we were prohibited from cross border activities, in order to
keep our OPSEC signature low, and to give the enemy no

reason to reinforce. Therefore, most of the resources working on short-range R&S could not be used against the intelligence targets that were two hundred kilometers north of the line of contact. Later, just prior to the ground attack, when the enemy no longer had time to react, we were authorized to conduct cross-border intelligence operations. By coordinating the R&S plan with the collection plan, we were able to redirect more and more assets toward the long range missions as the division's need for the information and the assets' ability to collect it increased.

We planned to begin intrusive reconnaissance operations on G-Day minus 7 (17 February). Initially, we would conduct helicopter reconnaissance along the friendly side of the border. By G-Day minus 5, we would be flying armed reconnaissance missions across the border at increasingly deep ranges of as much as 150 kilometers. By G-Day minus 3, we would insert the LRS teams, so that they could be in place and reporting by the next day. At the same time, we would begin cavalry, and then other ground reconnaissance missions, first to locate points for crossing the border berm, and then for route reconnaissances as deep as one hundred kilometers on G-Day minus 1.

## Question 2. Getting Intelligence: The Division Begins to Collect.

Of course, the reason that the G2 was suddenly challenged to manage R&S, and intelligence collection, was

because the division itself had suddenly become a collector of information. Our dedicated intelligence collection systems were now within range, and all units were coming across information of potential value.

## SIGINT/EW Operations

The Division's SIGINT/EW elements were finally able to look into enemy territory and to begin building their database and expertise. Although the environment was sparse, the enemy was communicating, and we were receiving. These operations were highly successful. Within the security context of this paper, the key lesson was that we had not developed a system for coordination between the ASIC and the MI Battalion's operations center, the Technical Control and Analysis Element (TCAE). This is an extremely difficult link to coordinate. It can be trained and tested only under the most realistic of scenarios. Only once, at the G2 workstation at Ft. Huachuca, in December 1989, had we had an opportunity to coordinate ASIC and TCAE operations. Our new Trojan Training Facility had promised to provide a continuing opportunity, but the system had not become operational prior to our deployment. Because we had been excluded from collecting near the Saudi border until now, the ASIC and the TCAE had little experience with each other. It was only in this phase, as we developed an intelligence fusion process, that we at G2 began to make demands on the TCAE. The results of those demands are described later in this chapter.

## Handling Prisoners of War

Planning for prisoner of war handling absorbed a great deal of effort in this period. The first difficulty which we faced was in getting any major subordinate commander to assume responsibility for handling the division's prisoners of war, detainees, and evacuees. The division's solution on this occasion lay with the DISCOM commander, COL James King, who accepted the function in early January. The Provost Marshall, LTC James D. Seagrove, as the officer charged with physically escorting and guarding prisoners, was the other key player. In a series of meetings during the period, we gathered representatives of all involved elements, including the surgeon, the Staff Judge Advocate, civil affairs, PSYOPS, and the maneuver units, and we devised a plan for prisoner operations. I had estimated that we could capture over two thousand prisoners in this operation. We knew that, attacking over 250 kilometers of desert on a 100 kilometer front, we would not be able to physically control a large number of scattered prisoners without enormous costs in combat power. Based upon intelligence reporting, we believed that the prisoners would not generally be too severe a threat, and we therefore devised a relatively inexpensive approach to their control and evacuation. We designated on-call prisoner collection points at the intersections of the routes (WHISKEY, XRAY, YANKEE) and the phase lines. As units captured prisoners, they were to escort them to the nearest on-call collection point and to inform the Division MPs that

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they were activating that point. There were MPs in direct support of each brigade that could assist with this evacuation. The division's general support MP teams would take charge of the prisoners at the collection point and hold them until arrival of teams from the echelon-above-corps POW escort MP battalion, which would evacuate them south to a corps level cage situated in our division rear, just inside Saudi Arabia. Our interrogators would come in contact with the prisoners as far forward as possible in the brigade area, and could hold a prisoner for as long as 24 hours, tactical situation and prisoner safety permitting. IPW teams would report, generally in hard copy, through brigade or MI Battalion communications to G2 as well as to the Brigade S2. We relied on corps and higher to take the prisoners from us well forward in the division zone, and we planned to establish our first division cage in the Euphrates River Valley. We believed that the situation would slow down sufficiently to permit a consolidated effort there. We expected to bring some of the division's interrogators back to the cage in general support at that point. Although this was a reasonable plan, we were all skeptical about our ability to carry it out amidst such a long advance. We believed that many POWs would slip through this loosely-knit dragnet. We were particularly concerned about the welfare of the civilians in the area. Civil affairs and G5 took on missions of moving just behind forward elements to direct civilians into areas and corridors where they could be bypassed by our forces.

Despite our best efforts to plan, however, I felt that we had not put this problem to rest, and that prisoner handling would be a burden throughout the attack.

## IPW Operations

Prior to the division's departure from As Sarrar, it had organized into brigade task forces. The MI Battalion had placed company teams in direct support of the Cavalry Squadron and the two forward brigades, 1st and 2d. Per our concept of "Interrogation well forward", the MI Battalion Commander assigned interrogation teams to those MI company teams. They would respond to the priorities of the brigade S2, and would forward reports through brigade and MI Battalion channels to G2. During this time, the teams were extremely busy, assisting combat commanders in handling the ever increasing flow of refugees and enemy deserters the border area. There were no violent incidents, but as time for the ground war neared, the border crossers became more and more desperate. I recall one report of a group of refugees reaching the berm which ran along the border. Fearful that we would fire upon them, they climbed upon the berm and, in plain sight of our forces, removed all of their clothes, evidently to demonstrate rather graphically that they were unarmed. The IPW teams were invaluable in processing all such groups and removing them quickly from the division zone with a minimum of exposure to our positions.

As we devised the POW handling plan, an old problem again became visible. There was no one doctrinal steering the interrogation effort. In fact, no steering mechanism exists at the tactical level. Interrogation seems to have a blind spot; like tactical counterintelligence, it is a human-based collection discipline with its own specially trained collectors, but without specially trained managers. Having been brought up in this void, the interrogators themselves did not see a need for specific guidance. They were satisfied if they knew the CG's Priority Intelligence Requirements, which, in reality, are too general to efficiently steer any collector. Faced with a large number of prisoners and no more guidance than the PIR, interrogators would be forced to process prisoners on a first-come, first-served basis, or based upon standard doctrinal priorities. Interrogation is a time-consuming process, and a glut of prisoners can all but neutralize our interrogation effectiveness unless some form of management and triage is used.

I established a HUMINT tasking officer within the CM&D. His role was to translate general information requirements into specific, prioritized IPW taskings, and to help the IPW elements to prioritize among their prisoners, determining which to interrogate first.

By distributing our teams forward, and doing without a Division interrogation cage in order to obtain information as early as possible, I had disconnected the division staff from one of its most prolific collection systems. Their

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decentralization would make the IPW teams responsible primarily to brigade S2s. Our IPW manager was to be the link between the division level requirements and the interrogators who were in direct support of the brigade. We would have to depend upon brigade and MI Battalion communications to get the interrogation reports back to G2.

Most of the IPW product has traditionally been order of battle information, particularly unit identifications, strengths, and locations. In World War II, interrogators worked directly with Order of Battle analysts, and generally produced from thirty-six to ninety percent of all usable intelligence[21]. They were most successful, however, in defensive situations or during the pauses in the offense. I suspected that the difficulties in managing prisoners and in communicating with the dispersed teams would limit their ability to provide timely data during this attack.

## Long Range Surveillance Operations

The Long Range Surveillance Teams began this phase already operating in classical hide sites observing the Iraqi border crossing points from within Saudi Arabia. This was their final phase of training. Their reports gave us a sensing for enemy awareness and readiness. By mid February, we withdrew the teams to their base, which was located near the DMAIN. The teams then went into their final period of isolation and planning for their initial cross border missions. As mentioned previously, Corps had directed that we use LRS

in a mounted reconnaissance role by about G-Day minus 4, along Route XRAY, which would eventually be a Corps MSR. This was a non-standard mission, and I was opposed to changing the disciplined procedures which we had developed. The CG, however, saw merit in getting a good look at the terrain if possible. He directed that we examine inserting teams in local trucks to do a deep ground reconnaissance, and then extracting them later by air for reinsertion into hide sites. The MI Battalion Commander and I developed a feasible plan for this operation. On closer examination, however, the CG concluded that the potential payoffs could not justify the risk. He returned the Long Range Surveillance Detachment to its classical missions.

His concern for, and belief in, the Long Range Surveillance Unit seems to be almost universal among the senior combat arms commanders whom I have known. I have previously mentioned the similarity of his dedication and that of Generals Lindsey, Watts, and Taylor. Senior leaders identified with these soldiers. MG McCaffrey made it a point to show off his LRS detachment to GEN Vuono (Chief of Staff of the Army) and, on at least two occasions, to GEN Schwarzkopf (CINC), not simply because these soldiers were competent and looked good, but because they were a source of good spirits for senior leaders, who carried heavy burdens of responsibility. The scenes that played out during these visits were reminiscent of Eisenhower's visit to the troopers of the 101st Airborne Division just prior to the Normandy Invasion.

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The senior officers clearly came away with renewed confidence in the American Soldier.

It was under the pressures of this period that we finally established an effective LRS planning process. We had not been able to fully develop the process previously because the command was not yet playing for big enough stakes in the LRS business. In a way similar to the POW planning problem, the prospect of immediate LRS operations now demanded our attention. The intelligence potential of LRS operations was now significant, and the risks were very real. The Commanding General made it necessary to institutionalize our planning process by expecting a high degree of detailed information in each LRS mission briefing. I had always known that planning a combat LRS operation would be a difficult effort, and now the planning steps finally became clear.

The key to LRS planning was to push our thinking out far enough into the future that we could envision places where we might need eyes on the ground. The CG did most of that for us, by continually proposing potential LRS missions and targets in his evening planning sessions. I passed his guidance to the G2 and G3 planners, who related the potential mission to the overall division concept, and recommended additional missions for consideration. We attempted to develop as many as three possible missions for each team, in order to maintain flexibility as the situation changed. This process was iterative; I took these proposals and evaluations back to the CG before pursuing them. He approved

and prioritized targets for further planning efforts. While continuing to generate new potential targets to reflect the continually adjusted division plan, we developed concepts of operation and questions of feasibility for the targets which the CG had already blessed. We worked on concepts of operation and coordinated them with the MI Battalion Commander and the Aviation Brigade planners to determine feasibility. We built detailed estimates concerning each team mission, estimates which included:

General target sites

Mission times

Enemy, weather and terrain

Information to be gained

The potential for gaining this information from other sources,

Feasibility of insertion, extraction, resupply, and communications

Risks of compromise

And ease of transition into future operations.

Although targets sprouted and died as the overall concept was adjusted, some targets seemed to survive throughout this period, and our analysis of them became increasingly detailed with each day. Within the last ten days of this phase, the CG narrowed us to relatively few targets, and we were submerged in the detailed analysis of those. During these last few days, too, he required us to develop a list

of subsequent targets, and thereby pushed us out beyond the near-term once again.

The Commanding General demanded an extremely detailed and complete estimate of a LRS team mission before he would approve it for execution. In essence, the plan was complete before the concept would be approved. The terrain analysts and imagery interpreters of the ASIC were fully involved with this effort, reaching the point of exhaustion during the three to five days prior to approval. They produced extremely detailed target folders, using all available photographs, maps, and reports and working directly with LRS staff and team members as well as flight crews. The terrain detachment chief later recorded, in an information paper, the process of assembling the target folder;

"After receiving a broad NAI from the G2 the analyst looked for potential hide sites on all available imagery. After finding several possible hide sites, he reviewed these with the LRSD company commander, and the LRSD (Staff) OIC. The LRSD OIC and company commander, working with the terrain analysts and photo interpreter, selected primary and alternate hide sites. Keys to selecting these sites were their distance and visibility in regards to the NAI, relationship and distance from enemy activity, ability to successfully conceal a LRSD team, and distance from possible HLZ sites (Helicopter Landing Zones). After the hide sites were selected, the analyst did an in-depth, detailed 1:50,000 overlay centered on the primary hide site with a radius of

10 kilometers. This overlay contained the primary hide site, the alternate hide site, primary and alternate HLZs, any gullies, any vegetation, any manmade features, any enemy activity, and all significant terrain features. The visible portion of the NAI was determined by using the radial line of sight program and annotated on the overlay. After this overlay was completed, it was again reviewed by the LRSD OIC and company commander, and also reviewed by the LRSD (operations) sergeants. After this review, it was submitted with an explanatory narration and DTED (Digital Terrain Engineer Database) generated products to the G-2 and 124 MI Commander (and ultimately to the Commanding General) for approval. After final approval and revisions, they were submitted to the individual teams for final approval, along with copies of the imagery. After each team had an opportunity to review their area, the team leaders were given the opportunities to ask questions about their overlays and products directly to a terrain NCO."

"The above procedure was followed loosely. Communication between terrain, order of battle, and imagery analysts was constant. Also, communication between the various levels of command was constant as the products were revised as new information or ideas arrived. The vital ingredient to the whole process was direct, one-on-one communication between the terrain analysts and the users of the products."

The terrain team chief did not mention that, as part of the package, our intelligence analysts produced 1:250,000

overlays of enemy throughout the area, and particularly those elements that could threaten the aircraft during ingress and egress.

Other staff elements produced parts of the folder, including the Aviation staff, which developed a team and aircrew recovery plan for each mission.

The MI Battalion and Aviation Company Commanders studied the briefings and target folders, in order that they could critically evaluate the mission's feasibility and likelihood of collecting the required information. The CG directed that we prebrief the ADC-M, who was particularly experienced in Special Operations, prior to his decision brief. That final briefing to the CG occurred with all the above-mentioned officers present on 21 February, one day prior to scheduled insertion. The briefing was given by the G2 LRS Staff Officer, the LRS Detachment Commander, and the Aviation Company Commander. Only when the Commanding General was satisfied that there was reasonable risk, a worthwhile objective, and a full understanding and dedication to the mission by all players did he approve the mission. In fact, despite the lateness of the hour, he required that two of the six mission folders be redone in more detail and be briefed to him on the next day, 22 February. Three of the approved missions would in  rt after 2230 hours on 22 February, and the other three would insert on 25 February, with recoveries beginning as early as 25 February after our forces had rolled over the team positions.

## The AH-64 Apache as a Collector.

From the early months of 1989, we had been discussing the use of the Apache gun camera as a source of aerial photography. Unlike the camera on the OH-58D observation helicopter, the Apache's was equipped with a videotape unit. I had discussed the possibilities with MG McCaffrey soon after his arrival, and he directed that we obtain videotape playback units for ourselves, the maneuver brigades and the cavalry. We received these tape drives after our arrival in Saudi Arabia, but we did not train on them until this phase. By early February, division surveillance elements had located a military facility, which we identified as an air defense early warning radar site, several kilometers north of the border. As part of the division R&S operation, the Aviation Brigade used its Apaches to make a videotape of the site, and the tape came to us for interpretation. We learned a few lessons regarding this system.

First, the Apache has extremely good potential, and should be cultivated as a collection system, due to its high gain optics and the thermal television mode. Before we were authorized to cross the border, our Apaches were able to stand off twelve kilometers away from the radar site and yet to count the buildings and radar antennas active there. Later, after an attack on the site, the helicopters recorded the damage which they had inflicted. Just prior to our attack, they gave us a look at the ground in Iraq to a depth

of over sixty kilometers as a result of an air reconnaissance mission.

Second, we must train interpreters, and intelligence officers on the system, and develop procedures to exploit its imagery. Interpreting the imagery is time consuming, especially in a general reconnaissance mission, when the camera runs for a long period. We interpreted very few of the many tapes made during the short war, because of the time required to transport them to the DMAIN and to interpret them. It is difficult for the interpreter to visually identify the locations of the scenes that he is watching. The viewing screen does not automatically depict the current aircraft location; it continuously presents only the compass bearing of the gun. The gunner must consciously add his current location by pressing a button on his controls, while in flight. If he fails to do this, the imagery interpreter must use visual terrain association to determine locations. Because of the low level flight perspective, terrain features do not present themselves as expected by photo interpreter.

Third, the aircrew must be trained in reconnaissance. The crew is the critical element that makes the tape valuable by placing many navigational tags on the tape, and by recording a detailed discussion of the terrain while in flight. This discussion can provide invaluable information about locations, apparent unit sizes and activities, as well as the terrain surrounding the specific target being viewed.

Fourth, the tape must get to the G2 or S2 immediately after the mission, and the crew who brings it must be debriefed as the tape plays back for the first time. Again, this helps the interpreter to understand the context of the mission and to focus on areas that were interesting to the crew. The interpreter and crew must map out the flight path of the aircraft, to aid in the interpretation process. We discovered that it was best for the flight crew to be debriefed by the Aviation Brigade S2. This S2 section, which is badly undermanned, should have its own imagery interpreters. This would help to decentralize the analytical effort, placing it closer to the collector, and it would make more of a formal collector out of the Aviation Brigade. The G2 can then get the report immediately, assuming good communications, and that report can be followed within hours by the tape. The G2 ultimately needs certain tapes for the same reasons that he needs copies of all imagery: for his own all-source analysis, and for the use of the Commanding General and his staff.

The Apache Helicopter is a superb tool for photographic reconnaissance. The OH-58D should be given a similar video recording capability. Although additional imagery interpreters are needed in the division, the enterprising G2 can make a major contribution to the division by establishing a complete intelligence discipline built around this new collector. He will need to tailor the tasking process, lay out roles of G2 and aviation brigade, ensure that the resources

and talents are in place, develop a process, and train it in exercises. I am convinced that we lost valuable information because of our inability to interpret and use information which sat latent on videotapes in the Aviation Brigade. There is an important chapter to be written on the intelligence potentials brought to our divisions by their Aviation Brigades, and on the unique intelligence needs of those brigades.

## Cavalry Border Operations

The CG's stated goal was to accomplish Reconnaissance and Surveillance without announcing that we had a major force in the area. The division cavalry squadron therefore performed its screen mission as much for counter-reconnaissance as for reconnaissance and surveillance purposes. In order to operate in a non-alerting way, no tactical vehicles were permitted within sight of the border. The cavalry conducted its patrols in civilian jeeps. We attempted to obtain Saudi border guard vehicles, but without success. Later, on 16 February, the CG authorized the squadron to use U.S. wheeled vehicles along the border, but tracked vehicles remained hidden from view until a few days prior to the attack. The cavalry made good use of hand held, commercial video cameras in their border guard role, giving us a chance to get familiar with the border without sending large parties forward.

## The Continued Value of Higher Level Intelligence

Although the division began to provide some of its own information during this period, national level intelligence continued to dominate, for several reasons. First, our area of major concern was deep in the zone, generally more than one hundred kilometers from our positions. This limited the effectiveness of most of our systems. Second, because of the open desert terrain and the relative sparseness of enemy signal communications, imagery was the most productive type of intelligence before the battle was joined. Most imagery came from the national level.

During this phase, the national intelligence system supported us well. The only difficulty which we had with using that information was the same one that we had always had; national level reports do not provide many of the desirable information qualifiers (Source, reliability, time, precision, and validity), which can transform a piece of unevaluated data into a negotiable instrument. We were forced, as we had always been, to incorporate higher level information into our files and our analyses indiscriminantly, evaluating its accuracy based only on what we could surmise of its method of collection. We continued to run into discrepancies, disagreements, and inaccuracies in higher level intelligence, and we could only bear up under the inevitable criticism which we received from our own commanders in these circumstances. Hard copy photographs continued to be the only higher level intelligence items which we could evaluate

with some certainty, and those photos therefore continued to be vital.

Surprisingly, one of the most valuable sources of intelligence during this period came in several rolls of high level aircraft-derived duplicate-positive (a positive duplicate on film rather than paper) imagery which had been taken back in November of 1990. One of our aggressive imagery interpreter sergeants hopped a ride on a C12 aircraft to Riyadh, and came back with these rolls, which she then catalogued and interpreted for the division. Their beautiful, high resolution imagery covered virtually the entire division zone. We were able to look at any area of concern to any of our consumers. This was truly a database, holding a wealth of information, which we could query based on our needs. Having that raw imagery in the division saved the entire intelligence community a great deal of time and effort. We didn't have to wait for high level analysts to read the imagery or to write time consuming reports. We didn't have to wait in line for a high level collector to image an area just so that we could have a look at terrain, which had changed little in the past two months. The single roll served many purposes, especially in terrain analysis support. With it, we surveyed each potential LRSD position. We wrote detailed estimates on each objective. We finalized the division routes and acquainted the engineers with the terrain that they would mark. This roll imagery did not replace the large scale, high resolution, current imagery of our

objectives which commanders needed in order to visualize those objectives and enemy positions there. It did, however, meet many other pressing needs, and did so very economically. We should have been given such a roll of basic coverage as soon as our attack zone was assigned. We should have been given a similar roll depicting the port of entry while we were still in the United States. Given such imagery, and a capability to reproduce portions of it as large prints, we could have satisfied 50 to 60% of all pressing requirements from our division consumers. The remaining requirements would have required current imagery.

This lesson for us should also be a lesson for the intelligence community. Many of our imagery needs can be served by a roll of high quality, somewhat dated coverage, joined with an ability at the division level to quickly reproduce it in large format (16X20). The remainder of the need can be satisfied by timely updates, still in roll negative format, with cues from higher analysts about the locations of enemy dispositions. I suspect that all of this may be feasible on computers with high resolution, photographic quality printers, but the result must still be early coverage for the analysts, quickly convertible into photographic quality prints in numbers of six to ten, and at formats up to 16X20 inches.

I would strongly emphasize that this is a valid requirement, and that no amount of rationalizing can negate it. We must get on with a solution. Even "current" imagery

can be two to four days old. We do not have the electronic channels to transmit the huge quantities of imagery needed for a division's database, nor should we attempt to develop them. We can more easily fly the imagery in rolls, prints, or optical disks to the theater, and, from there, all the way to the division within two to four days. A courier is the right device for distribution. We should have forced the development of such a courier system.

## The Tactical High Mobility Terminal

It was early in this phase that we received a Tactical High Mobility Terminal (THMT) as an attachment from corps. The THMT is a downlink station which provides high level intelligence, especially ELINT, directly to the consumer, in this case the division. We looked at it not only as a downlink, but also as a communications system. The THMT was equipped with several stand-alone communications devices, and an automated switch for routing message center traffic. It was mounted on an all-terrain-vehicle, and it had its own power supply. The Corps G2 had first sent us a THMT for a two week orientation during Phase 5. In so doing, he gave us an opportunity to appreciate its value and to plan for its use in combat. During our CPX/COMEX, we deployed it forward, at the DTAC, where it provided some backup communications assistance as well as valuable ELINT. Its most serious shortcoming was in its dedicated "SUCCESS Radio", which was a backup high speed data link to its master control station at Corps level. Its limitation was that only two stations

could talk at a time on the net. The master control station had therefore assigned an eight hour daily communications window to our THMT. At other times of the day, if our division satellite multichannel link to corps was out, the THMT could not receive intelligence from its main supplier. The master control station later altered this system, and split the day into two-hour windows, giving us more frequent up-dates of the intelligence database. When the Corps decided to attach a THMT to our division for the attack, we again placed it at the DTAC with the MI Battalion's Assault TCAE (Technical Control and Analysis Element). From there it would provide updated intelligence to the DTAC, updated technical data to the battalion, and communications links to the Division Main Command Post, Corps, and the AUTODIN net-work. We knew that, like the rest of our communications to higher, the THMT depended heavily on the signal battalion's multichannel links, but its backup SUCCESS radio would give us some recourse when division communications were down. During the COMEX, we had been able to receive message traf-fic addressed to either the THMT or the division SSO over a single, division channel by connecting the THMT to the sig-nal cable, and routing our SSO traffic through the switch built into the THMT. We used a similar method during the at-tack.

With the gain of the THMT, we faced a new problem con-cerning "Y Routers" (See "SSO Communications Difficulties", Chapter 3). During the attack, we would want to be able to

switch our incoming message traffic to the THMT at the DTAC whenever the DMAIN was displacing. It was too late to obtain another Y Router for the division, and we could not expect the systems operators at Corps to repatch routings in the heat of battle. We finally decided to use the MI Battalion's router for the THMT. We quickly sent out messages to all of our intelligence suppliers, asking them to add the MI Battalion router to all reports destined for the division. Some of these suppliers made the change in time, but others did not. The DTAC was never able to fully take over traffic destined for the DMAIN. We had little confidence, either, that the messages would wait for reestablishment of the DMAIN after a move. We expected that the message storage buffer at the Corps switch would fill and purge itself at approximately three hour intervals during the attack. We should have had the ability to somehow turn on a Y Router for the DTAC in combat.

ELINT from the THMT was extremely useful during this phase. Our one ELINT analyst, who was also the senior intelligence analyst in the entire ASIC, was swamped with responsibilities. Once he was able to take the time and integrate the THMT materials into his analysis, it proved extremely valuable, saving him a great deal of analytical effort. With experience at the division level so thin and duties so intense, he did not begin capitalizing on the wealth of ELINT data produced by the system until just before the ground battle began. Although worth the effort, it was difficult to

integrate this complex item into our operations so late in the operation. We may have achieved forty percent of the system's potential during combat because we did not fully understand its capabilities. If there was a lesson here, it was that we must field these items in peacetime to all divisions, or at least that we must aggressively train on them. The Corps G2's THMT training course given a month prior to the battle was an example of the kind of rotational training opportunities which we need routinely in peacetime.

## An Intelligence Gap between Army and Air Force

During Phase 6, as the air war rumbled on, an armada of allied aircraft overflew enemy territory. Hundreds of pilots, who would never walk on the ground which we would later fight on, were becoming much more familiar with that terrain than we were. Each day, the Air Force rolled up the substance of its pilot debriefings and produced several invaluable intelligence summaries. We learned, however, that we were just scratching the surface of the information which the pilots had in their heads. One particular instance stands out. On approximately 19 February, five days prior to the beginning of the ground attack, the division's Air Liaison Officer (ALO) briefed that Air Force pilots had sighted enemy elements in defensive positions just outside of our left boundary and about fifteen kilometers north of the border. After the brief, I prodded him for more information,

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and, within a few hours, he had traced the name and organization of the pilot who had made the report. I immediately contacted that pilot, and spent an hour on the phone learning far more than I had ever known about the area to our front. The pilot had seen what he estimated to be a company dug in, backed up by a section of AAA guns. His information was so detailed that I was able to build a clear picture of the position over the phone. The area was in the 101st Airborne Division zone, so I forwarded a report to the G2 of the 101st. Two days later a helicopter from the 101st Airborne Division (AASSLT) found the position, and took an entire battalion of prisoners from that site. The information had been accurate.

I realized then that there was a treasure of detailed intelligence available from the pilots of the Air Force, but that the information was not being distributed by the summary cables sent by AFCENT. Somehow, we needed to tap that resource. The Commanding General had recognized this potential more than a month earlier, and had directed that we find a way to monitor the traffic from the Airborne Command and Control Center (ABCCC) which orbited above us and controlled the air war. However, neither the ALO nor I had made that happen. Whether the ABCCC or some other center was the answer to our needs we were never able to discover, and this valuable source of intelligence was not tapped by us. I presented our needs to the Corps G2 on several occasions, and he worked to open better channels of communication, but

we never saw any evidence at the division level that the wealth of information available in our Air Force pilots was provided to those who could use it on the ground.

This missing intelligence linkage meant that we, the "right hand", seldom knew exactly what the Air Force, the "left hand" was doing forward of our zone. We often found ourselves speculating on whether explosions we had heard across the border were enemy artillery or friendly air strikes, or we found ourselves unsure about whether an enemy air defense site was still active, when certainly the Air Force could have told us about their last attack of the site and their estimate of its status.

On one occasion, for example, I proposed that there might be an enemy artillery unit right on the border, within fifteen kilometers of our positions, based upon several days of explosions emanating from the same site. This speculation seemed to be confirmed by some false intelligence and counterbattery reports, and we carried the artillery unit there for several days. A good link to the Air Force would probably have erased that artillery unit. In this case, it was the Commanding General himself who discovered that the counterbattery report was false, and who instructed me to revise my analysis.

Somehow, Army and Air Force elements at operator levels, pilots and G2s, must be able to access each other and to share detailed information which they need, but which higher echelons do not. The challenge in this case is to

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isolate information of value. There would never be time or other resources to fully drain the minds of the pilots, any more than we could organize all possible knowledge of prisoners, or report all possible information from photographs. The right answer probably lies in developing menus of available expertise for review by potential customers. If we had been able to track down and talk to the pilots who overflew our area each day, especially those who had seen anything at all, we could have gained the specific information we needed, at minimal cost.

### The Challenge of "Giving Intelligence" Comes to a Head

As ground combat operations became imminent, the full weight of our responsibility came to rest upon our shoulders. In the G2 Staff, even the young soldiers who identified best with their own buddies seemed to gain immeasurably in dedication and vision. Section animosities and personal incompatibilities seemed to dissolve. Each person appeared to be living a vow that he or she would not be the cause of misinformation or failure. It was a very positive environment, one of selflessness and virtue. I recall on many occasions observing the dynamics and behaviors of all soldiers with wonder. These were truly men and women at their best; perhaps the best that they would ever be. I could see the stuff of memories and war stories being acted out in those last days prior to the attack. This was a time when anyone's request for anything would be satisfied, not by one person,

but by many, all vying to make their contributions. It was a time when chaplains enjoyed large congregations, and when introspection, Bible reading, or a rosary around the neck was much more commonly seen than ever before. Certainly if there is any glory in war, it is in the selfless response of men and women to adversity.

Yet, although we were under great self-imposed pressures, we were also under even greater pressures than ever from our own leaders. The Commanding General pushed us toward our limits, but, thankfully, also refined the direction of our efforts. He reinforced his call to become output, not process-oriented. In the week since our jump forward to the DTAC, the previous confidence and feeling of accomplishment had ceased. This was a different mission, and we had much to learn. His dissatisfaction with our inability to portray the facts and to focus collection on his uncertainties became more intense and more obvious to all. He became more and more precise in his questioning at major briefings, and less patient with anything except direct, factual answers. I now gave most briefings myself; the pressure was by then too great to impose upon any junior officer in the G2 staff. Nevertheless, the CG's concerns about our intelligence products continued to grow. By early February, I believed that our reputation with the CG had hit bottom. He was so critical during formal briefings that maneuver brigade commanders sometimes stopped by afterward to pat me on the back and offer words of encouragement. On one occasion, just after a

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particularly tough briefing, an officer passed me a note from my driver, PFC Mattie, telling me to keep up a good spirit. He had heard the critique from outside the tent.

The CG's pressure also came in the form of direct and specific guidance. We spent many hours together, with him describing his need for fact or at least for qualified assumptions, and his need for answers to his questions. He was driving me toward becoming responsive to his clearly stated needs, not to an idealistic list of staff-generated PIR. My inability to provide the information did not reduce its importance. I had to find a way to account for information and to present it in a form that he could understand and accept with confidence.

On several occasions, he told me that I was a very effective intelligence officer, but that my organization was not. I believed then and still do now that such a statement was incongruous. The G2 must succeed or fail with the organization which he has built. After almost two years in that job, I knew, and I think that he knew, that I could not be any more effective than my staff was. This was a tough time, when I leaned on LTC Bob Reuss, the MI Battalion Commander, and COL Burckhardt, the Corps G2, who helped me to find a way to overcome the problem.

By early February, the CG had apparently concluded that I was too much a part of the system, and the problem, to be able to clearly see the solution. At a point of frustration, he did three things which helped to refocus our efforts and

to unite the entire division in its intelligence process. First, he directed that I reorganize the G2 Staff. Second, he reoriented the senior commanders and staff officers of the division toward a clear intelligence purpose and process. Third, he sat with the Chief of Staff, my senior officers and myself, and clarified our direction and purpose by describing the role of intelligence in the command.

## Reorganizing G2 at the Top

Early in February, only three weeks before the scheduled attack, he told me that a part of the G2 problem was organization. I needed a deputy who could serve as the G2 in my absence, and who could remove some of the process-related responsibility from my shoulders, freeing me to become the chief analyst. I had previously favored assigning the most tactically experienced major as the G2 Operations Officer and making him the kingpin of daily G2 activities. My deputy was an administrator, but not an experienced tactical intelligence officer. I had placed myself in the position of system manager, rather than analyst, and the CG had correctly identified this as a problem. He believed that the G2 Operations position could now be filled by a bright, aggressive captain, provided that I was personally involved in the intelligence product.

I was concerned about reorganizing at this late date, but clearly something had to be done. My former Operations Officer became the Deputy. For a new Operations Officer, I

chose a strong captain who enjoyed the CG's confidence, and (realizing how important this was) who had succeeded in getting information across to the CG in previous briefings. I transferred my former Deputy to supervise G2 Operations at the Division Rear Command Post.

This reassignment of personnel was an important step in aligning ourselves with the CG's needs. The new Deputy quickly became the daily supervisor of the division intelligence system, solving many organizational and procedural issues without involving me. The new Operations Officer did very well, and was fully supported by her well-established section. The former Deputy effectively trained himself to take a brigade S2 position at a later time.

In the two meetings that he convened, the CG provided his views of the purpose of intelligence, its relation to commanders, a description of the problems we were having in providing him the information he needed, and his solution. These presentations were rare opportunities to see intelligence as it is seen by a combat commander just prior to battle. I believe that his thoughts and needs were similar to those of his fellow commanders, and they are therefore worth special consideration. I have included my notes from those meetings.

## Intelligence Guidance to Commanders and Staff

Within a few days of the G2 reorganization, the CG assembled several commanders, the G3, the Chief of Staff,

and myself to present the intelligence problem and its solution. He stated that our problem was rooted in psychology, not in intellect or competence. We still did not truly believe that we were going to war. Instead, we were dancing a "minuet" with him. We were operating as if "Good players get good grades". Clearly we had not altered the CPX mentality he had spoken about previously. What we needed first was a wartime mentality. He stated that either we would get information to him and the two assistant division commanders, or we would not be fulfilling our mission.

He told us that, in the ASIC, "The Process" was continuing, but the process was irrelevant. There would be no credit for internal operations, but only for product. If the ASIC could not provide needed information, then we should do away with it. He stated that the output must be correct. There would be no credit for rapid -- but wrong -- conclusions. He told me that I could expect to receive my "grade" immediately after giving him an oral report, and that grade would be his obvious acceptance of the information, of its relevance, its credibility, and of its significance. At about the third significant error, credibility would be lost.

The problem, he said, was not with the soldiers. At the lowest level, the intelligence crews knew what they were doing. Our problem was in our inability to connect information together. We must think of what we were going to do with the information before trying to assemble it. He then laid out

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some general rules that apply to intelligence as well as to other functional areas:

1. **Role of staff officers.** Staff officers aren't in charge of anything. We are helpers to some commander or command group (which included the CG, ADC-M, ADC-S, and C/S). Everything that the CG gets done is done by a commander. Yet no specific task should be the commander's job. Commanders pierce through difficult issues by using their staffs as helpers.

2. **Simplicity of command.** Make things simple for commanders. The key to command and control is a series of commanders with maps who are talking to each other.

3. **Simplicity of intelligence.** In terms of intelligence, there are less than twenty things that the commander wants to know. Work on those things.

4. **Reporting facts.** We must report facts, not merely data points. We must identify the source. He must hear information from reliable and unreliable sources, but he must know what the source is.

5. **Negative reports.** The message that "Nothing is there" is very critical.

6. **Qualifying reports.** Qualify your information. If you don't understand the technical parameters of a system, then you can't speak authoritatively on its reports. Be sure to forward "offbeat" or "strange" reports; just be sure to characterize them as such.

7.    The Common Sense Test. The CG grades informa-
tion based on whether it passes the "common sense test". The
enemy force defending in front of its obstacle belt, for ex-
ample, did not pass his common sense test.

8.    Aviation as a collector. He expected to get
most of his information from aviation and Air Force. He
charged the Aviation Brigade Commander to provide enemy lo-
cations. When flying in direct support of a brigade, the
OH-58D pilot was to check in with the supported Operations
Center, get a briefing, and report the results of this re-
connaissance back to the Operations Center, landing for a
debriefing whenever possible. He cautioned the staff that
OH-58D reports must not get submerged in "The data stream",
but must remain visible all the way to him. He would not use
aviation as a broad look, but would cue it based upon re-
ports from maneuver commanders. I would help him to cue
those aviation assets. He directed that pilots must cue oth-
er pilots. The Aviation Brigade must organize itself to dis-
tribute information internally and to pass it to the
division CP. Pilots must be debriefed after missions. He
cautioned me that Apache imagery readouts must be accom-
plished within hours, not days, and that the all of these
flights must result in materials posted on the maps. There
was no credit to be given for merely flying a mission. the
credit was all in the information obtained. He cautioned ma-
neuver commanders to take care of these pilots, giving them
comfortable places to rest, and food between missions.

9.   **LRSD reporting.** He directed that Long Range Surveillance Reports be handled with special care. They must reach him within 30 minutes after arrival at the DMAIN. He would act on LRSD reports, but he saw a weak link in my getting the reports to him quickly. The LRSD worked for the MI Battalion Commander. Their information came directly to the G2, and PIR related information would immediately go to the CG. He required the use of a special codeword to tag all LRSD reports in order to help gain them special treatment, and to prevent them from being submerged in other reporting.

10.   **Cavalry and scout reporting.** He wanted cavalry and battalion scout reports to come all the way through the system to him, still recognizable as to their source. That would be my challenge.

11.   **Value of SIGINT.** He saw SIGINT as a tremendous capability. He believed that our MI battalion was the best in the Army, and that SIGINT soldiers were superb. The real challenge was to get the results to the cavalry, the brigades, and the Commanding General, not merely as raw information, but with its tactical meaning clear. He reinforced his strong belief in the value of ELINT, reminding me that ELINT activations are not merely "data points" to feed my analysis, but that they signify something very specific. He wanted to know of all such locations and the systems believed to be there. Concerning communications intelligence, he noted the great difference between the expertise at the MI Battalion Headquarters and the Division Main CP.

Important knowledge was being lost in the gap between the two. We would have to get the information all the way to the CG if SIGINT was to make a difference in the battle. He reinforced his priority for locating the enemy command posts and monitoring their activity.

12. <u>The operations net as a cueing device.</u> He told us all to listen to the single channel TACSAT Operations Net in order to keep track of the direction of the battle. He said that he used it as a source of information, to cue himself on upcoming actions and new events. When he had a question about the situation, he would first contact the Aviation Brigade to get their observations, if they had been flying in the area. Next, he would contact the artillery to get more information, because "The artillery always knows what is going on". Finally, he would check with the Air Liaison Officer (ALO), who always has communications, and often has someone up forward.

13. <u>The proper resolution of command information.</u> He stated that, in order to command, he would have to see his battalions, and command his brigades. From an intelligence perspective, he would follow Iraqi battalions and brigades.

14. <u>MP Reporting.</u> He expected that the MP's would probably be the best source of information in the rear area,

15. <u>Senior man on the radio.</u> Despite his many rejoinders along the way, we had still not mastered the art of putting the senior man on the radio. I had heard MG Taylor

make the same remark. Although I saw real value in this concept, I could never figure out how to do it and yet to get everything else done. We continued to use trained RTO's to pass message traffic by radio. For G2, the concept would have been more valid if we had a long range radio.

16. <u>Withholding information.</u> He cautioned me that information, especially bad news, was too important to withhold. We had to avoid being sensitive to the reputations of others in dealing with information. He was persuaded by my previous actions, I believe, that our peacetime loyalties to peers could obstruct our wartime duty to report everything of tactical importance, including information which might be critical of those peers.

17. <u>Terrain intelligence management.</u> He was concerned because he still did not know the terrain. He was not satisfied with our knowledge of "the dismal bog". He saw a need to "catalog the ground"; to build a data base which could be continually updated based upon unit reporting and which would generate collection activities as well as new appreciations. Although we had been captive to remote sensing thus far, we would soon have an enormous number of collectors ranging all over the terrain. We maintained no "current terrain estimate", or system for seeking, reporting, amalgamating, and distributing information about the terrain. He directed that we establish a linkage with the engineer staff to bring in that missing part of the intelligence process.

18.  **Centralized reporting and integration.** Centralize the reporting of information and the integration of information at the DMAIN.

19.

20.  **Make the analyst's job specific.** In the G2 Staff, each member must have a focus, a card in his or her pocket describing duties.


## Commanding General Guidance to G2 Officers

Finally, on 6 February, the CG sat with my field grade officers and myself and attempted to clarify our course, and to focus us on his priorities. Again, his comments provide an insight into the thinking of combat commanders, and I have, therefore, summarized them here.

1.  **Keep the intelligence simple.** There were relatively few pieces of information that he was interested in. He wanted to know where the "clumps of Iraqis" were. He believed that there might be twenty to thirty enemy battalions maneuvering and firing against the division at any given time. He would need to know where those battalions were located. Periodically, we should "bag up" the broader information on the enemy in the area of interest as well. With these locations, he would know most of what he needed to know from us.

2.  **Push intelligence to decision makers.** He emphasized that it would be our job to summarize information correctly, and to penetrate the communications system. We

must get through to the decision makers despite the problems we might have in doing so. He envisioned that, during combat operations, the G2 Operations Officer or I would call him as necessary, give a summary of key changes in a three-minute burst, and then discuss the matter with him until he understood the situation. He didn't expect us to call too frequently, but he did expect us to call with any important change in the enemy, weather, or terrain situations.

3. **Identifying important information.** He was dissatisfied with our intelligence support, in that there seemed to be no separation of important from unimportant. He expected us to identify the tactically significant information for him, and to highlight it. He saw this as critical in the coming austerity and pressure of combat operations.

4. **The need for output.** The CG discounted the value of information which served only the analysts in the ASIC, and pointed out that if information didn't result in a report to Corps, or to the division command group, it was worthless. In the division, intelligence must get to himself, the ADC-M, and the Chief of Staff. With the three of them advising each other and making many individual judgements, all must be kept informed.

5. **Track friendly IEW assets.** He wanted the G2 to carefully track the intelligence collectors and electronic warfare elements on our maps, and to keep the G3 map, CG map and briefing maps updated with these locations, just as we kept them updated with enemy. He placed a great deal of

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importance on being able to see and to visualize the locations of friendly elements. I believe that he used this information directly in his Conception. It was the kind of raw material he needed to think through possible combinations for future operations.

6. **The basis of fact.** The CG seemed to be reading back my own philosophy when he cautioned us that _fact_ must be the basis of analysis. He was concerned, because, at times, the ASIC was willing to analyze a subject deeply with very little fact as a basis. He reoriented us toward knowing the facts in any situation, and using our resources to discover more facts, not to extend our speculations.

7. **The sources of fact.** He directed us to identify the best sources of factual information, and to depend primarily upon them. He would place great trust in reports from the air cavalry, the long range surveillance teams, the ground cavalry, and the scouts.

8. **Integration of intelligence at the DMAIN.** Through a description of his divisional command and control system, he made it clear to us that the DMAIN is the point at which intelligence must be formed, through the integration of all available information. Nevertheless, the battle would be commanded by him elsewhere, either at the Tactical or Assault Command Post. The battle would be fought and won by company commanders and first sergeants forward. The horizontal integration of intelligence at the Main CP must result in new intelligence given to the commanders and the

fighters. It was in our hands to decide what was important. Should the CG be awakened or not? It would be an important responsibility.

9.  <u>The CG's intelligence read file.</u> After pressuring me on this issue for weeks, he took this opportunity to give us a menu of the externally generated material that he wanted to read daily. It included:

The DIA daily summary.

Key reports of our choosing at the compartmented level.

The division-generated SCI blackbook.

The results of division reconnaissance.

Our daily reports from CNN, Saudi, Kuwaiti, and Iraqi radio.

The division PERINTREPS.

The summary of division intelligence collection by system.

The intelligence portion of the theater Air Tasking Order.

10.  <u>Presenting intelligence to commanders.</u> The CG made it clear that it was our responsibility to summarize information, "in a way that makes tactical sense". He was telling us something very important here: something which would be easily lost on less experienced persons. He was telling us to somehow convert our information, to view it, and express it as he would if he had the time to study it in depth. He was telling us to make it more germane to his

thought-processes, so that he could relate its importance to his decision making and to his other informational raw materials. I believe that there were two important lessons for intelligence officers in this guidance.

The first lesson is simply the realization that it is the intelligence officer's duty to make his information relevant to the commander's personal thought processes. Intelligence production must include the evaluation and interpretation of information based upon its effect on the actions of the consumer. We are not necessarily trained to interpret the effects of the information upon the command, nor are we trained to present the information in terms easily absorbed by the commander. Merely understanding that this is our responsibility is an important lesson.

The second lesson is much tougher. It is that we must become capable of making such interpretations. We must equip ourselves to think like the commander. This is a tall enough order for the G2 himself, who is senior, and is often exposed to the commander. It is much more difficult for the junior G2 officers who are so often insulated from the commander and, even when they are exposed to his thoughts, may not fully appreciate the context of his thinking. I believe that our best means of developing this mature judgement and commander' viewpoint comes first in our own professional study of military history and doctrine. Each intelligence officer must equip himself or herself with a wide ranging understanding, an understanding that exceeds the limits of

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his or her experience. This can come only through study, discussion, and reflection. Then each senior intelligence officer must continually sharpen that general understanding in his subordinates through professional development exercises, and focus especially on enlightening his subordinates about the thought processes of their commander.

11.  <u>CG guidance to my subordinates.</u> The CG stated that he wanted to see two levels down in his own organization. He addressed each of my principal subordinates, giving all of us his views on their jobs in relation to the G2 product. He told the deputy that his duties were congruent with mine, and that one of us would have to be awake at all times. He referred to the G2 Operations Officer as our agent, and told her to pick her hours carefully. She had to be awake during the critical times, and would have to determine what those times were. He told the G2 Plans Officer, another captain, that he saw the plans effort as being somewhat decentralized and rank-irrelevent. He reminded her that she would have to get out in front of the present situation in her thinking, and that she could not depend on me to conceptualize the future. She would be a source of such thinking and would spur the rest of us into looking past the horizon. He also told her that she should deal directly with the G2 Operations Officer to stay current on the situation. Between them, they should be watching to determine how the enemy was doing and whether the enemy was beginning to unwind. She should then develop her conceptualizations from the trends

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## Fixing the Analysis Problem: A Fusion Process At Last

With the duties of managing the process turned over to the Deputy G2, and with the senior members of the G2 Staff able to share the CG's vision a bit more clearly, I turned my focus at last to the business of analysis. We instituted an all-source fusion process which served the division very well in its ground battles (Figure 20).

The focal point and target for all decision-oriented analysis became my brain. The G2 Staff's objective became one of working together to help me develop a coherent intelligence picture, so that I could present that picture to the commander. I would serve as the integrator of our intelligence product, just as the Commanding General would be the final integrator of information from all functions.

The process which we developed was cyclic, culminating at 1400 hours daily, when we held a "G2 Skunkworks Meeting", at the



Fig. 20. February 1991

ASIC. At that meeting, all analytical sections briefed me and other senior G2 officers on the intelligence developed within their disciplines. The Skunkworks Meeting began with the senior Order of Battle Technician presenting the major events of the last twenty-four hours as he saw them. This

briefing served merely as a backdrop for the working effort to follow.

In sequence, each of the chief analysts then stood up at the briefing map and attached an overlay representing the material developed by a single intelligence source. He or she briefed the reports received and his or her analysis of the picture from a single-source point of view.

Referring to his ELINT overlay, our senior ELINT analyst briefed the current radar situation and discussed the validity, reliability, precision, and time of information for each report. New information was presented in a different color than old.

The chief imagery interpreter presented two overlays. The first was the result of the previous day's JSTARS, SLAR, and photo missions. The second was a compiled overlay showing as many as 30 days worth of enemy locations from PHOTINT, taken from higher level photo reports and from our own readouts of imagery. As the days went by, these overlays became extremely cluttered, but clear patterns developed. With the enemy in the defense, much of the old information could still be accurate, and we erased the old only when the overlays became unreadable. The area was so large and we had such spotty coverage of it (Perhaps because we were the theater's secondary effort) that only this kind of a compiled picture could contain all enemy locations. At the same time, we examined the most recent sightings, in order to understand the current activity.

Next, a senior representative of the MI Battalion's
TCAE (Technical Control and Analysis Element) added his
one-day Communications Intercept/Direction Finding overlay
over the others, and briefed the technical specifications of
the communications observed during the period. He then com-
bined daily coverage with an overlay which recorded all in-
tercepts for a longer period, up to two weeks, in order to
highlight patterns.

On some occasions, there were other overlays to add to
these, but normally at this point, we would cover the over-
lays with a clean piece of acetate, and then it would be my
turn. I sought patterns, as well as confirmed information,
and built what I believed to be the tactical situation, us-
ing standard graphics symbols, and qualifying the informa-
tion based on the sources and the qualities of the
contributing reports. I developed my observations and con-
clusions aloud and on the overlay, enabling the analysts to
correct my words, offer advice, or take exception as I de-
veloped this staff officer's Perception. When we were all
satisfied, or at least assured that our voices had been
heard, the analysts of the ASIC finalized the overlay, and
the G2 Operations NCO made a copy, taking it back to the
Main CP for distribution there. I normally stayed at the
ASIC for some time after to look at the evidence, particu-
larly the photography received.

This was a difficult process, a real learning process,
especially for the analysts, who found themselves called to

defend each piece of information and to reason their own way through discrepancies. I got a good sense for the sophistication of the analysts, and came to realize that I had really been asking too much to expect them to understand friendly tactical issues and priorities or even the complexities of intelligence reports which came from disciplines other than their own. It became obvious in time that I had to take the center role in this fusion process if I were to explain or defend the product to the Commanding General. Fusion cannot take place without a point of focus, a single mind as the target. Otherwise, we are dealing with consensus building, groupthink, and a lack of unity in the product. This fusion effort was my duty.

The process worked extremely well. We were able to generate our requirements for future collection right from the fusion overlay. The G2 Operations Officer, the person who most often had to brief and answer concerning the current situation, was fully in line with the ASIC and myself. The G2 Plans Officer also attended, giving her a daily mid-course correction to assist in her planning efforts. The G2 Targeting Officer obtained many of her target nominations at this meeting. Meanwhile, the analytical section of the ASIC came to understand my Perception of the enemy situation. They had direct input in the process, and were encouraged to argue over points of contention. Discrepancies and unknowns caused by differing sources of information became visible, and the analysts returned to their sections with questions

they wanted to answer. This was the first time that I had seen a fusion process work at the tactical level. I strongly recommend its adoption and further development by other G2s. Fusion must be trained in peacetime, and the mechanics of this process are simple enough to develop even in a training environment.

The quality of our intelligence appeared to improve immediately. At his first briefing, the Commanding General seemed very satisfied that we had cracked the code at last. Although each of us had to perfect our roles in the process, this new ability to fuse information turned us around, and resulted in a daily product which the CG believed in and used.


## The ASIC-TCAE Link

As we began using the new fusion process, we discovered the lack of coordination between the ASIC and the MI Battalion's TCAE. Our skunkworks meetings provided the battalion with its first feedback, and quickly oriented its internal analysis efforts toward the division's needs. Nevertheless, we only scraped the surface in analyzing and integrating SIGINT, just as with the other disciplines. Two or three months of this experience against live targets would have made us a very sound and mature analysis and management system. This is a challenge that will require innovative training programs in peacetime divisions.

## Producing Intelligence from a Standing Start

Our inability to begin collecting in September, or even November, took a very heavy toll on the division's intelligence structure. I know now that we did not fight hard enough for the right to begin collection months before. Training this system is unbelievably challenging. We should never have permitted our hands to be tied so tightly. Unfortunately I didn't realize the cost of this inactivity. I do not believe that any of us understood how much readiness we had lost by our lack of a long train-up period. This need for trainup and the development of target familiarity should become a major lesson from Desert Storm.

We did not do a good job in helping our leaders to appreciate the amount of work which must be done before the battle if intelligence is to be produced when it is needed. Our current peacetime training practices may not enable us to jump immediately into combat in an unfamiliar place. I suspect that we must somehow increase the intensity of our peacetime intelligence training programs, supplementing our sound, maneuver oriented events, such as NTC, with extended team and unit immersions into potential target areas. Our collectors and analysts must be technically proficient as well as tactically proficient. All elements of the division intelligence system, from G2 Operations and CM&D, through the TCAE, and to the collectors must train together as a team on real targets, producing intelligence for our

commanders. TROJAN and a schedule of real-world deployments
promise to be the best such training devices.

## Unit Reporting

The lack of intelligence collection prior to this time
had led to another weakness in our divisional system; our
subordinate commands did not report information regularly.
Although, even before we deployed, we had devised a two-hour
reporting requirement using the PERINTREP/INTREP/SITREP
form, we did not put the regimen into force until Phase 4.
During the first six months of the deployment, there simply
was not enough activity across the division to justify such
frequent reporting. Our use of the report forms had been
sloppy, and we therefore became sloppy in our reporting. We
had to struggle with this problem in February, trying to get
all elements back on a solid reporting schedule. At that
time our multichannel telephone system served as our only
link, because we were under strict EMCON (emission control).
Reporting was spotty at best. It was only at the very last
of this phase, when EMCON was lifted on 17 February, that we
were able to fully implement our reporting procedure. We had
not instilled the discipline in this reporting system that I
had hoped to achieve through continued use. Reporting down-
ward from division, we kept to the schedule. Units received
their reports from us regularly. However, many subordinate
units did not report to us nearly as often.

## Key Imagery Just Prior to Launch

It was during this phase, on 9 February, that the Commanding General visited ARCENT headquarters in Riyadh, and reviewed the intelligence holdings there. He saw photography of our objective areas, photography which we had not been able to obtain. He personally requested the help of the ARCENT G2 in obtaining copies of the photos. They began arriving in the middle of the month. Combining the photos with information from divisional and other sources, we began to construct an extremely detailed picture of the enormous enemy logistics base located just south of the Euphrates river and east of the city of An Nasiriyah, directly on our axis of advance. The destruction of that materiel and the enemy units guarding it would be a major part of our mission. In these last few days before the attack, however, the focus of our analysis was on our immediate objectives along those first two hundred kilometers of the attack. Only after the attack commenced did we have the opportunity to fully exploit the imagery of the logistics base.

## Our First Critical Intelligence Report

On 21 February, we gained the first important product from our new intelligence fusion process. Bringing together the division's reconnaissance reporting and the information provided by all higher systems, we produced an accurate assessment of enemy forces located along those first two hundred kilometers of our route (Figure 21). We estimated

Fig. 21. Line of Departure

the total forces to be a brigade or less across the entire
division front. We did not expect to find any sizable enemy
units south of Objectives Gray and Brown, although there ap-
peared to be some small mobile security units and perhaps a
few platoon strong-points in zone. We saw no evidence of or-
ganized enemy defenses. The Commanding General agreed with
this staff Perception, and decided to run an air reconnais-
sance by UH-60 to Objectives Brown and Gray on the 21st, the
day prior to LRS team insertions, to check the chosen hide
site locations. The recon confirmed the work of our plan-
ners, imagery interpreters, and terrain analysts. The LRS
sites were satisfactory. Perhaps more significant, the
flight detected practically no enemy presence out to one
hundred kilometers in depth. Our first substantial product
was a success; it had integrated a wide range of information

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into a clear and accurate set of tactically relevant conclusions. The accuracy of these conclusions increased our confidence and our motivation to continue developing the process.

## The OPSEC Program Bears Fruit

As stated above, the division departed from its former defensive positions under strict Emission Control (EMCON) conditions. We used few radios until EMCON was lifted on 17 February, however, the CG redefined the EMCON requirement as necessary to meet minimum operational needs. By 27 January, he had specified that division-to-brigade communications would continue on multichannel systems as the primary means; while brigade-to-battalion communications should rely on messengers, but could use FM sparingly. Battalion and below would basically be on radio listening silence, the commanders could make exceptions for emergencies. As stated earlier, his intent was to prevent the enemy from recognizing that a large force had moved into the area. He told his commanders that, "Out of three thousand radios (in the division), keep twenty-nine hundred off the air. Within a day or two, he instructed the commanders to rotate the radio usage on a daily basis to ensure that all equipment was operational. He also required the use of low power and directional antennas to the greatest extent possible.

After 1 February, there was a strong sense of aggressiveness developing in the Corps. Major commands began

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pushing for opportunities to conduct obtrusive reconnaissance. Although the CG was prepared to step up such measures on order, he was against tipping our hand. His guidance to the division when it arrived on the border was to "Hunker down, work on your equipment and rest your people." Our OPSEC program was important, because it was protecting our force and keeping sharp our tool of surprise. Although he demanded good information on the enemy and terrain, the CG balanced those demands with his concern for OPSEC. It was gratifying to see that, from almost a standing start, a command could implement a moderately good OPSEC program based only upon a recognition of its importance and given only a little time. The key, as always, was a commander who supported OPSEC, and integrated it into his overall concept of operation.

The CG directed a wide range of deception activities, to include a demonstration focused at making our attack appear to be aimed at the center of our sector. Additionally, he required that the MI battalion prepare a number of harassing imitative communications deception measures that could be used by jammer operators as the opportunities arose.

## Counterintelligence Operations

Our counterintelligence agents were extremely busy throughout this period. The CG's initial guidance for counterintelligence was simply to find enemy collectors and

check unit OPSEC measures. I believed strongly that we should focus our few agents on denying enemy HUMINT from uncovering our most precious secrets, which the CG had identified as "When and where we would attack". To me, directing the CI effort was a surgical procedure. I was sure that there existed a lucrative objective against which the agents should be directed. However, I was far too engrossed in other actions at this late date to determine what that ideal mission and target might be. As was so often the case, the generally accurate intuition of a combat commander hit upon a 70% solution which was far superior to my uncertainty. He directed a modus operandi for the agents; to work with the MP's and Civil Affairs specialists in the towns and among the refugees. Make use of low level informants and casual contacts to identify the enemy agents in the area. The CG was convinced that there were a few intelligence agents, saboteurs, and even terrorist teams in the area, and he believed that placing the CI agents into the right circumstances would be the best way to uncover those few threats. On approximately 1 February, he further expanded their mission, directing them to perform liaison with Saudi Border Guard authorities in order to estimate the amount of general enemy activity occurring along the border. He also used the teams to visit each of the Saudi posts along our front, posts which had been abandoned by the Saudis several days before, to observe the opposing Iraqi border posts and report on activity there.

The CI agents did most of their work as members of CI/CA/MP teams (Counterintelligence/Civil Affairs/Military Police) stationed in the local towns. These teams, each with their own linguist, performed liaison with the local government officials. They based their operations at local refugee clearance facilities, where they sought to identify enemy agents, and to provide assistance to U.S. units bringing in detainees and refugees. The CI team's lack of communications was somewhat aided by the MP's. This use of CI was extremely effective; the few CI agents were able to magnify their efforts through the action of the CA teams, the MP's and local agencies, often gaining access to groups of people or officials with valuable CI information.

In retrospect, I am convinced that the CG had it right. His simple approach placed the CI agents in proximity to the enemy HUMINT threat, and provided them with support from other agencies which dealt with the local people. The CI teams did make a difference in the outcome of the battle. I am equally convinced that the division commander must have his own CI capability, just so that he can direct it toward his specific needs. Although there is a school of thought that advocates centralizing counterintelligence assets at echelons above division, there is no doubt in my mind that the division must have its own, responsive, anti-HUMINT capability in any crisis.

## G2 Organization

### G2 Staff

Figure 22 reflects the formal organization established

within the G2
Staff just prior
to the Ground
War. This chart
depicts the
breakdown of the
Current Opera-
tions Section at



Fig. 22. Organization in Desert Storm

all Division CP's. Current information was unified by the G2
Operations Officer. Also shown are the G2 Targeting Officer,
LRS Staff Officer, and Liaison Officer positions, which we
had gradually established since the deployment had begun.
Note that many of these sections were brought together by
this time inside the ASIC fence and worked at the SCI level.
Several of them had little need for access to compartmented
information, but they all had need of access to each other.
By collocating them in the ASIC, by giving them large work-
ing areas, such as our GP Medium Fusion tent, and by estab-
lishing a process which brought their efforts together as
well, we created the right atmosphere for intelligence fu-
sion.

By this time, my most tactically experienced major was
positioned as the Deputy. The major who had the most
analytical experience as well as Command and General Staff

College training served as the ASIC Chief. I had placed extremely bright and capable captains in charge of Operations, Plans, CI Analysis, and CM&D. The combat arms major who had formally commanded the LRSD was the LRS Staff Officer. The Corps LNO was a senior MI captain assisted by one of our best NCOs. The Targeting Officer was an aggressive MI lieutenant. Many of these officers were serving in positions demanding more grade and experience. However, they had proven themselves in the difficult days past. What they may have lacked in formal training they would now make up in on-the-job experience and energy. It was an outstanding team, and one which had finally come to grips with most of its responsibilities. In the same way, our NCOs and soldiers, almost all working in more senior positions, had become a functioning unit, with fairly well-defined duties and products.

Through tough experience, I had placed our few senior leaders in what I thought to be the key jobs. Speaking only from this experience, I would recommend to future G2s that Deputy G2 and ASIC chief be filled with the most competent field grade officers available. Reduced to its simplest definition, I believe that the G2's job is both chief analyst and manager of the intelligence system. If the G2 must operate with only two or three of his six authorized majors, it seems to make good sense to place one major over each of those two duties. The Deputy G2 is in a good position to manage the intelligence system on a day to day basis. The ASIC Chief is in the best position to provide the analytical

support which the G2 needs to accomplish his duty as chief analyst. It is possible, though less than optimal, to fill the other duties with the bright and dedicated captains who grace our ranks today.

Figure 22 is misleading in one respect. The Deputy G2 did not become supervisor or rater for any of the section heads. He did gain considerable responsibility for managing the division intelligence system as a whole and for supervising the operation of the G2 Staff on a day-to-day basis. He also became the "Duty G2" when I slept or left the DMAIN. However, because I had become the chief analyst, I found myself working more closely than ever with the G2 section chiefs, and I retained rating authority over them. I continue to believe that these section chiefs should be rated by the G2, in order that he can make his mark directly on their priorities and methods of operation.

## The Kuwaiti Linguists

Our ten Kuwaiti linguists arrived around 17 February. At the division headquarters, we made a big fanfare out of their arrival, giving them a formal welcome by the division commander and the staff, with briefings to make them feel that they belonged to the organization. The CG personally determined their distribution, placing two with each MI company team, one with each of the four IPW teams, and two with the civil affairs teams. Because the national intelligence community had given special dispensations regarding their

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clearances, these few volunteers were able to play a dispro-
portionately important role as leavening agents throughout
the organization. They helped improve the language skills of
our intelligence collectors, and they collected valuable in-
formation themselves.

## G2 Equipment and Procedures

Our only significant shortcoming as the ground war
neared was in communications. The S2s and I were nervous
about the ability of the multichannel system to serve as our
primary communications channel between DMAIN, DTAC, and the
maneuver brigades. The signal battalion had as good a plan
as could be developed. The multichannel nodes were to be
carried with the various headquarters on HEMTT trucks, which
were certainly dependable enough to get them to each site.
The battalion had planned what seemed to be enough interme-
diate nodes to permit relatively reliable communications
whenever the headquarters was halted for an hour or more.
However, the plan involved a lot of movement. When a head-
quarters was moving, we would depend mostly on a thin net-
work of single channel satellite radios linked into a
division command and operations net. I could not expect to
carry on routine intelligence interchanges on such an aus-
tere net. Furthermore, the distances would make FM communi-
cations difficult. We looked toward the Assault CP and the
DTAC as the two elements which should be able to communicate
with the forward maneuver elements. To get information to

those maneuver elements, we would have to be in communication with the DTAC by multichannel. Again I placed the THMT at the DTAC where it collocated with the MI Battalion Tactical Command Post as a source of ELINT and a backup channel of communications for the DTAC G2. It could terminate the DTAC teletype circuit as long as the multichannel worked. Finally, we had GoldWing communications from DMAIN to the MI Battalion Tactical Command Post. This was a tenuous communications system, especially considering our need to continuously report new information and to exchange current estimates. However, we would have to make this system work; there were no more communications available.

## Relationships with the MI Battalion Commander

Because this phase was such a pressure-filled period, this may be the most appropriate spot to describe my relationship with the MI Battalion Commander. For several years before this assignment, I had witnessed, and heard of, conflicts between MI commanders and G2s. I was determined to prevent such a problem at the 24th Infantry Division. My first Division Commander, MG Taylor, was apparently concerned about this kind of a problem as well, because, in my first briefing he stated very clearly that he would not tolerate conflicts, and that G2 and MI Commander would sink or swim together. It was perhaps good fortune that the two battalion commanders with whom I would work, LTC Ken Al'red and LTC Bobby Reuss, were total professionals in every way. I

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believe that we all entered into our relationships aware of past problems within the community, and equally determined that no conflict would arise. From my perspective, the situation could not have been better. Far from a pattern of disagreement, it was a pattern of mutual support that developed. If we succeeded as a military intelligence community in the division, I have their support and patience to thank for it. The three of us used several techniques which may be worth mentioning.

It was the very successful team of COLs Bob Covalucci (G2) and Bernie Gately (Brigade Commander) at VIIth Corps who set the example for me. One of their great pieces of advice was to be careful never to allow our subordinates to draw up sides and pull us apart. There is a natural tendency at the major level and below to cast stones at "the battalion" or at "those guys at G2". The G2 and the Battalion Commander had to establish a strong relationship, clearly intolerant of any "we-they" expressions in our subordinates. I often found it necessary to stamp out negative remarks as I heard them in the G2 staff. There could never be a question that the battalion was trying its best. At the same time, I had to be honest and forthright with the battalion commander concerning budding problems, so that the two of us could resolve them before a crisis could occur.

In the desert, Bobby Reuss was a major source of advice and moral support throughout the period of deployment, but especially during this phase, as we grappled with a

radically changing mission just prior to entering combat. Although he was in many ways the senior intelligence officer, having already served as a division G2 for three years, he was careful always to allow me to do the job, and I was similarly careful concerning his position as a battalion commander.

I believe that there are very few areas in which our duties overlapped to the point of providing a potential for conflict. He was fully employed as an executor of orders. He worked for the ADC-M and the CG, conducting a very specialized part of the intelligence, electronic warfare, and OPSEC mission. My only connection with his effort was in drafting intelligence collection missions for G3 and Commanding General approval, and as a consumer, integrating his information with the information supplied by tens of other intelligence providers. Our command group was clearly in charge of that battalion, and the battalion's successes and failures, strengths and weaknesses were subjects of discussion between commanders. I was never asked by the CG, nor did I ever offer any evaluation of the MI battalion's product. As far as I know, the MI battalion commander never had occasion to comment on the G2's work either. Our relationship, then, was similar to that between a maneuver brigade commander and the chief of staff. There was no need for conflict. We were both blessed by a division hierarchy which understood and separated command and staff issues.

It was important as a G2 to command nothing. It has been the practice in various divisions to place CI teams, the LRSD, and even Interrogation teams under the "Operational Control" of the G2. Although this approach can work, I do not believe that it can work well in combat. The G2 Staff was always overwhelmed throughout the period of our deployment. After six months of preparation in the desert, we still went to war with many of my priority tasks undone. I had no time, talent, or resources to direct the efforts of a single platoon or team other than my own. Having been a battalion commander, on the other side of the picture, I had never wanted the G2 to take away my resources or my mission. Therefore, in this division, all of these resources remained under the command and operational control of the MI battalion commander. He and his staff proved very capable of accomplishing sensitive CI missions, commanding and controlling MI company teams and attachments, and supervising the efforts of the LRSD as well as the aviation brigade's Quick Fix helicopters. Although we issued "taskings" directly to the MI Battalion or, for that matter to any other divisional unit, a tasking was a call to collect information within the guidance of current orders. To reorient any collector outside the provisions of current orders required a new order from G3. We drafted such orders and submitted them to G3 for approval. This step negated even the appearance that I somehow controlled the MI battalion or any of its assets. All orders to the battalion were integrated

completely with the overall operation by the G3 and the Commanding General. In reality, the G3 probably had more direct business with the MI Battalion Commander than I did.

On the other hand, it was my duty to assist the battalion with their requirements. Whether our good relationship had anything to do with these principles, or whether it was based solely on the professionalism and forbearance of the battalion commander I cannot say. I am convinced, though, that we mutually supported each other, and that our cooperation lent strength to the division.

# CHAPTER 7

## PHASE 7. 24 FEBRUARY - 8 MARCH 91:
## COMBAT INTELLIGENCE SUPPORTING THE ATTACK

Our cross-border reconnaissance missions and those of adjacent commands became progressively more intrusive after 19 February, but were uncovering very little organized enemy resistance. By the dawn of 24 February, G-Day, we were all sitting on the edges of our seats waiting for the final word to begin the attack. Some ground forces would attack on this date, but our division was scheduled to hold until the 25th.



Fig. 23. Attack to PL Lion

Apparently, the lack of enemy resistance encouraged more im-
mediate action, because we received word early in the day to
be ready to launch our attack by 1500 hours. At 1000hrs the
G3 issued a FRAGO advancing the Line of Departure (LD) to
our Phase Line OPUS, about twenty kilometers north of the
border (Figure 23), and requiring our units to be at the LD
and in attack positions no later than 1200 hours. We began
our attack at 1500 hours on the 24th.


### The Command, Control and Communications Scheme

As the attack bounded forward, the command, control and
communications structure unfolded according to a complex
plan. The Division Assault CP would travel with the lead ma-
neuver brigades. The DTAC would be the base of intelligence
communications for the advancing forces, but the Assault CP
would stop at intervals and establish multichannel communi-
cations with the DMAIN (Figure 24) in order for the DTAC to
leapfrog forward. Between the two forward CP's, the staff
should be able to communicate with most forward ele-
ments by FM ra-dio, and with the DMAIN by multi-channel. CM&D at the DMAIN would



FIG. 24 Planned Communications for the Attack

communicate directly with several of the brigades, using either FM or multichannel.

The Commanding General would command from the Assault CP, which carried a full range of communications, but a very austere staff. Its only G2 representitive was CPT Jim Morris, an outstanding young captain with a great deal of battalion S2 experience. He would rely heavily on the DTAC to bring in higher level intelligence and to integrate it with the information provided by front-line units and the MI Battalion.

The DTAC G2 section was organized a bit lighter than a brigade S2 staff, with only nine personnel. Although it had the THMT (Tactical High Mobility Terminal) to provide some high level intelligence and communications, it would rely on the DMAIN for the overall division intelligence estimate, all-source analysis, weather, and the assessment of uncommitted enemy forces. It would depend upon the brigades, the separate battalions, and the MI Battalion for information on the enemy's committed forces. The DTAC had no ability to manage intelligence collection activities, counterintelligence, or LRS operations. It was fully occupied in trying to share incoming information with other division, brigade, and separate battalion command posts. It would rely on CM&D at tyhe DMAIN to communicate directly with brigades and to carry out these functions. The DTAC's priority consumer was the Commanding General, and, therefore, the Assault CP. In order to obtain and provide information, the DTAC G2 staff

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required good communications with the brigades, the Assault CP, and the DMAIN. Short outages in any of these paths were acceptable as long as the Assault CP remained in contact with the brigades and the DMAIN.

During the first days of the battle, the Assault CP and the DTAC leapfrogged their way forward. The DMAIN and DTAC G2 staffs provided the analysis for the Assault CP, and the Assault CP provided continuity when the DTAC was moving. As they advanced, these two forward command posts stretched their linkage to the DMAIN and its valuable products (Figure 25). The DMAIN CM&D Section soon lost FM radio contact with most of the functional brigades and separate battalions that it was sup-



FIG. 25. Communications by 26 February

posed to service on the second FM Intelligence Net. Multi-channel from DMAIN to the brigades also became undependable. The Assault CP and DTAC were therefore forced to add all advancing brigades these units to the already crowded primary Operations and Intelligence FM Net. The DTAC became responsible for relaying reports from virtually all of the division's brigades and battalions back to the DMAIN, and for passing all higher level intelligence down to units whenever multichannel links were disrupted between DMAIN and any

subordinate command. Fortunately, at least until late on 26 February, the DTAC and the Assault CP posts were able to mutually support each other. One of the two could almost always communicate with almost any brigade or battalion via FM radio.

## Supporting the Attack from the Rear

For the first two days of the battle, I remained at the DMAIN, in accordance with our divisional plan and with doctrine. From the DMAIN I expected to integrate all available information and to develop a clear intelligence picture. From the DMAIN, I should be able to distill the needed information into its simplest form and force it through our limited communications systems. However, as the attacking force moved further and further north, I found it increasingly difficult to accomplish the intelligence function.

## The Second Critical Fusion Report

After we had issued our first fusion report, covering the initial two hundred kilometers of the zone, we turned our attention to the newly arrived, high resolution imagery of the enemy logistics base east of Tallil, the division objective for 26 and 27 February. With the help of our new fusion process, we put together a second all-source report. It included a detailed overlay, showing the locations and dispositions of artillery, infantry, and armor units down to individual fighting positions, and a detailed description of

the forty kilometer by seventy kilometer theater logistics base. Up forward, communications were limited by bad weather, range, and the constant displacement of our attacking forces. We were unable to get the information to the DTAC. Thus, I was haunted by one of the "G2's Three Burning Questions (Figure 12), "How do I give the commander the intelligence he needs?".

The other two burning questions were also unanswered. I was having trouble determining "What intelligence does the commander need?" My only communication with the CG was over the division command TACSAT net. Although I could talk to him over this net, I was extremely reticent to use it often. There was a battle taking place up forward, and the brigade commanders there were relying on that same net. The G4 had to depend upon it, too, in order to know of emerging logistics problems. In short, we in G2 probably did not make more than six calls on the net during the first 24 hours of the attack. The CG passed a few questions back to me at the DMAIN, but he was now preoccupied with many command matters. I could not talk to him, my G2 personnel at the DTAC, or the senior S2s often enough to understand what was needed from us. In effect, the DTAC had become the G2 Operations staff for the division, and it was attempting to perform that task with relatively few people, and little higher-level intelligence. Too often, it was isolated from the DMAIN, which meant that the captain in charge there had effectively become the Division G2 in many respects.

It was also difficult to answer the remaining "burning question", "How do I get the intelligence that the commander needs?". I was out of touch with the brigades and battalions, the cavalry, and to a large extent, with the elements of the MI battalion. I had lost the ability to direct these collectors and to make use of their information.

By the afternoon of 25 February, I realized that I was in the wrong spot. I advised the Chief of Staff that I needed to travel to the DTAC; that we had an important intelligence fusion report to carry forward, and that we had not been able to track details of the intelligence situation up front by listening to the command TACSAT net. The Deputy G2 and ASIC chief would be able to run the fusion process in my absence. He approved the trip forward, and I departed for the DTAC by helicopter on the morning of 26 February, with an armload of fusion disposition overlays, and an update of message traffic on paper and diskette.

The DTAC was displacing forward, so we flew to the Assault CP, which was located at the DTAC's destination in the vicinity of Division Support Area #3 (DSA #3) (Figure 26). Conditions there were grim. The "Operations Center" consisted of four or five M577 command tracks and M113 armored personnel carriers pulled together with a fifteen by fifteen foot open area in the middle. Two of the M577's were backed into the formation, and their rear ramps were down. There was a large tarp suspended from the tracks and covering the open area, which served as a workspace. It was cold, and the

Fig. 26. Attack into Euphrates

wind was blowing at perhaps twenty-five knots, bringing the

sandstorm from the outside right into the command post. It

seemed that everything was covered with sand. The Commanding

General alternated between speaking to brigade commanders on

the radio, and working over the table-top situation map,

pausing on each return to blow and brush off the sand which

had obliterated the map surface within only a few minutes.

The officers and NCOs had become inured to the conditions,

but it was clear to me that the Assault CP was too Spartan

to permit careful reading of incoming messages and assembly

of an intelligence product. It became obvious, too, that

these officers would have little time for complex specula-

tions and academic discussions. They had enough trouble

marking unit symbols on the map. They needed simple, clear,

and accurate information.  Even from that forward location,

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it was difficult for me to understand the situation, and to distribute information to the brigades. We did manage to distribute the fusion report to most of the major subordinate commands. After a few hours there, I was convinced that going back to the DMAIN would put divisional intelligence further and further out of the battle. I decided to stay, and to pull intelligence forward from the DTAC, rather than to attempt to push it from the DMAIN. The CG agreed. I joined the DTAC when it arrived at the Assault CP site on the afternoon of 26 February. Being at the DTAC did not fully solve the dilemma, but it was a far better alternative than returning to the DMAIN.

## Getting Information

When the maneuver forces and the Assault CP continued the attack north on the afternoon of 26 February, the DTAC remained in its new position at DSA#3. For the first time, however, it could not assist the Assault CP in communicating via FM radio to forward units, or in communicating via multichannel to the DMAIN. The communications tether was continuing to stretch. By the morning of 27 February, the maneuver forces were one hundred kilometers beyond the DTAC,

Fig. 27. Communications on 26-27 February

and the intelligence "Network" was straining to pass needed information (Figure 27). Our ability to get information, and to consolidate it at any one point had greatly diminished. Information was now concentrating at two analytical nodes, but not moving well between them. One of the nodes, the DMAIN, had remained in its pre-battle location just south of the border in Saudi Arabia. It was the concentration point for higher level intelligence, but it had lost much of its access to combat information from the division units. Its analysis was therefore less complete than previously, and it was forced to analyze only the deep and rear situations, without balancing them against the close situation. The Assault CP was the other concentration node. It had access to the combat information from the brigades. It had the best view of the ongoing close battle, but with only one G2 representative, it had little opportunity to develop that view or to consider its implication on the entire operation. The Assault CP was not capable of forwarding much of its enemy information to the DTAC or DMAIN; nor was it able to integrate much of the deep battle information produced by the DMAIN.

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We at the DTAC were quite frustrated by our inability to receive information and to understand either key situation, close or deep. We were unable to perform the necessary linking and smoothing function. Communications were intermittent in either direction. Despite the difficulties, however, information did flow down during the period. We worked hard, with some success, to send division SITREPS, PERINTREPS, and INTREPS from the DTAC to those units that were within FM range and to the Assault CP. From the DMAIN, we received the third in our series of key fusion reports, on the afternoon of 27 February. By this time, the attacking force had arrived in the Euphrates River Valley at objectives just east of Tallil, had turned east, and had successfully attacked an additional sixty kilometers to Jalibah Airfield (Figure 28). The third fusion report, put together

Fig. 28. Attack to Tallil

by G2 staff at the DMAIN, located over thirty enemy battalions and remnants of battalions which could influence the next day's objectives, the oil fields at Rumaila, another seventy kilometers to the east. After many attempts to pass this lengthy report over multichannel telephone, and as the DTAC itself was tearing down to move forward, I finally interrupted activities on the command TACSAT net to send the report. Despite the difficulty, critical information like this made its way through the communications system in time. What we could not do was share noteworthy pieces of information collected by subordinate units, unit situation reports (Which expressed the intelligence estimates of those commands), and elements of evidence underlying those situation reports. There was very little grist for our analysis mill. We undoubtedly lost many valuable items of information. We

had to make the best of the situation until our Assault CP and DTAC could again mutually support each other.

I realized only after the war was over that both the Assault CP and the DTAC were too light in G2 personnel to do the job. I had inadvertently organized them to be mutually dependent instead of redundant. The Assault CP depended too heavily upon others for analysis support. Although it became the concentration node for division collection, it had no ability to steer that effort, to forward the information gained, or to assemble an analyzed product. Likewise, the DTAC did not have enough personnel to perform much analysis, steerage, or management. Although the THMT and the MI battalion tactical command post were located at the DTAC, the G2 staff there was too light to coordinate among the three elements and to capitalize on the potential synergy. Considering the length of the planned attack, many DMAIN functions could have been best performed from the front. We should have weighted these forward command posts with personnel. The DTAC was probably the right location for me in the attack, but I should have added a field grade officer and one or two analysts to the Assault CP, in order to give them a two shift, two person capability. We tied ourselves to standard command post organizations, and failed to recognize the need to change them based upon the mission and situation at hand. Despite these shortcomings, critical intelligence did get through. As the Corps G2 often said, the glass was half full, not half empty.

Communications is the absolute lifeblood of intelligence. In fact, intelligence is little more than meaningful information communicated from person to person. Just as I had learned to respect the importance of presentation, I had also learned anew the importance of communications. Our intelligence communications system was unsatisfactory. Any such system must allow us to share small pieces of information as well as large. On the other hand, our reporting SOP was a good one, and it helped us to reduce the communications requirement.

## Long Range Surveillance Operations

Our first three LRS teams were inserted during the evening of 22 February into sites from which they could observe enemy reinforcement into, or withdrawal from, our initial division objectives, Brown, Gray, and Red (Figure 21). The insertions were timed to coincide with planned EF-111 and F-4G Suppression of Enemy Air Defense (SEAD) missions. Their operations were successful. The helicopters placed them at the planned landing zones without incident. The teams moved into hide sites and remained there for two to four days undetected. They observed and reported on enemy forces moving into and out of the zone. They were extracted as planned by UH-60 after our maneuver brigades passed over their dug-in positions. The brigades were fully aware of all team locations, and they were able to contact the teams in their zone by FM radio once in range. Team reports were timely and

accurate, and provided the CG and staff with assurance as to the situation along these major lateral routes. The HF communications system worked very well, with all reports passing through base radio stations at the DMAIN and Area Walnut, the corps base radio area for all LRS units southeast of the division rear. Because of the pace of the attack, we deployed only three teams. By the 25th, the date of the next planned insertions, the division's forward elements were already passing through the programmed LRS targets. We waited for an opportunity for the teams to provide intelligence not already available through forward or flank security units. The opportunity never materialized.

## Brigade Collection and Reporting during the Attack

Because of communications limitations on 26 and 27 February, the brigade and battalion S2 staffs became centers of tactical analysis for information which they or their MI company teams had generated, and for the higher level information that they received from the division CP's. I believe that MG Taylor's long term investment in highly qualified battalion S2s paid off at this time. These officers, who were NTC and Desert Shield experienced, and veteran members of their units, provided the intelligence which their commanders required.  The decentralized network of intelligence analysis which we had envisioned more than a year before did work, particularly at the bottom.

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Unfortunately, we at the DTAC received too little reporting from the brigades. A number of factors worked against us. First, as stated previously, communications were very limited during those two days. Until we arrived in the forward area and the situation stabilized on the 28th, we rarely maintained contact with any brigade for very long, and we almost never attained FM communications with all subordinate units simultaneously. Second, although the brigade S2s had become valuable collectors of information, they were fully employed trying to displace forward, determine what was needed, get the needed information, and provide it to their own commanders. Our intermittent communications discouraged frequent reporting, and made it difficult to discipline the system. Too often, we at the DMAIN and DTAC had to aggressively extract information from the subordinate commands which should have been forthcoming. Our units would have overcome more of the obstacles if a solid intelligence reporting discipline had been ingrained in them earlier. On the other hand, their reporting did improve significantly when the DTAC arrived in their area on 28 February. I am confident that, given a few more days of combat, or somewhat less unit dispersion, unit reporting would have become satisfactory.

## Giving Information

### Direct Contact with the Commanding General

Considering that this short period was my one big op-
portunity to personally provide intelligence to a commanding
general in combat, I could easily have become disappointed.
After twenty years of preparation for this time, I had very
little occasion to speak with him directly during the bat-
tle. In the first two days of operation, I recall speaking
to him less than five times. I could not, however, feel dis-
appointed, because this limited interaction was of my own
choosing. The CG had told me to come up on the net periodi-
cally and whenever I had anything important. When I con-
tacted him, he was always receptive. I restrained these
communications because I had little to add to his ongoing
efforts, and because we managed to get the critical informa-
tion through to his staff officers at the Assault CP. When I
joined the Assault CP for a day on the 26th, we discussed
matters in detail, as we always had, but, when he continued
forward and I remained in the DTAC, our direct communication
all but ceased. I concentrated again on passing most infor-
mation to his staff at the Assault CP. Deciding when to
speak, what the commander needed to know, and when to keep
silent was no small issue. It had been important in garri-
son, and it became much more critical in combat. It was an
issue that required some deliberate thought before the
operation, and constant sensitivity as the operation

progressed. I cannot determine even now whether I spoke to him often enough. My only conclusion is that deciding when to advise the commander in and out of combat is probably a general challenge for G2s.

## The SWO in Combat

The Staff Weather Officer was able to provide some important information based upon his access to long range forecasts, but, because he had lost the brigade weather teams several months before, he had no formal means to obtain accurate observation from the forward units, or to provide knowledgeable advice to forward commanders. I believe that this was a significant problem.

On the afternoon of 25 February, as we at the DMAIN scurried about, trying to envision the battlefield some 150 kilometers to our north, and to provide commanders of advancing units with there with needed information, I was surprised when the Commanding General told me over the radio that the Assault CP was undergoing hurricaine-like weather conditions. Without the Staff Weather infrastructure in place, it seemed that we discovered changes in the weather as they occurred, and we were forced then to make decisions that could have been made earlier. On 26 February, I flew out of the DMAIN, not realizing that the winds were very strong up forward. By the time that we landed at the Assault CP, the winds were threatening to aviation operations. The ADC-M had put his helicopter down in the middle of the

desert after recommending to the CG that we ground aviation assets. The CG immediately did so. Weather teams forward could have given us warning of that impending weather problem as well.

It was also partially due to weather that the division cavalry squadron and elements of the 197th Bde found themselves caught in the "Great Dismal Bog", the miry sand south of Tallil, on the night of 27 February. It was no surprise to us that this would be a soft area. However, what we didn't fully realize or account for was the fact that it had rained heavily in that area for over 24 hours prior to our arrival, evidently expanding the size of the inundated area. The division's lack of weather observation forward caused us to miss that cue, and to make no warning to the forward units. The consequences could have been extremely serious if the enemy had been able to exploit our misfortune.

Probably the most risky effect of poor weather data forward was that our aviators flew all over an extended battlefield, hundreds of kilometers in every direction, without sufficient observer support in the forward area. Weather conditions varied so greatly across the desert that the pilots often ran into unexpected conditions. We needed our weather teams, not just in the Aviation Brigade, but also at each of the brigades which occupied separate pieces of desert. I believe that aviation safety would have been enhanced if observer teams had remained with each brigade.

# FINAL OBSERVATIONS AND CONCLUSIONS

For the most part, I have presented my observations and con-
clusions within the body of this paper. I came away from the G2 ex-
perience filled with more questions than answers, more projects
unfinished than problems solved. This writing and research experi-
ence has served to clarify my view of many G2 issues which were
previously unclear, but it has not brought me to "final" conclu-
sions on all of them. Perhaps by being made aware of these issues
before his G2 experience, the reader will take them to conclusion,
and thereby advance the profession.

This section will briefly evaluate our performance during com-
bat operations, and present some final thoughts which came to light
after the G2 assignment was complete. This section does not summa-
rize the conclusions already expressed throughout the document.

## How Did We Do?

If it is true that the G2 has no standing of his own, and that
he serves as an extension of the commander, then it must also be
true that he can evaluate his performance based only upon his com-
mander's evaluation of it. In this respect, our intelligence staff
did its job well. The commander was very complementary of the in-
telligence produced, not only by the G2 staff, but by the Division
Intelligence System as a whole. This paper has concentrated on

pointing out the imperfections in our system, but we were not expected to be perfect. Within a realistic context, we did well. We all saw room for improvement. and this paper has gone to some length pointing out areas to be improved.

## The Division After Action Review

Our Division After Action Review took place on 18 March, at "Victory Station" our rear base near the port of Ad Dammam. For a very long day and most of that night, all battalion and higher commanders again gathered around a large scale map board and reenacted the battle, attempting to piece together the action and the roles played by all. Comments on intelligence were generally favorable. They are summarized below.

Our terrain intelligence and our mapping of potential combat trails was fairly accurate and beneficial. The CG felt that our G2 NCOs were the "best thing we had on terrain."

The CG was fully satisfied with the training and performance of the Long Range Surveillance Detachment.

The brigades stated that they usually found enemy or evidence of enemy where we had placed them, but that the numbers were considerably reduced from our estimates. Our national level intelligence was not always timely enough to track the migrations of enemy forces from their early defensive positions as the battle progressed. The 2d Brigade Commander stated that, based on good intelligence, his force destroyed four or five enemy artillery battalions during its attack on Jalibah Airfield. He also stated that he used aerial photographs of the Airfield to brief his forces for

their assault. The 1st Brigade Commander stated that he had a good intelligence picture of enemy artillery during the same battle, because they were exactly as located in division reports. The commander of the 212th Field Artillery Brigade, which supported the Division, likewise stated that G2 provided accurate intelligence on enemy forces east of Jalibah and in the objective areas.

There were also some shortcomings noted:

Commanders were almost unanimously dissatisfied with the quality of the imagery given to them for the operation. There were enemy soldiers on Objective Brown, where they were not expected.

The "Great Dismal Bog" was larger than expected, and its possible crossing points were impassible.

Overall, however, the G2 Staff, the MI Battalion, and the entire Division Intelligence System received high marks from the subordinate commands of the Division.


## The S2 After Action Review

Our S2s presented more detailed evaluations during the After Action Review (AAR) which we conducted with them in April at Ft. Stewart. On the positive side:

They appreciated our Open Door Policy (Similar to the Corps G2 policy), which permitted brigade and battalion S2s and subordinates to come to the ASIC at any time and work through our files or talk with our specialists.

They appreciated the flow of higher level intelligence down to them prior to the battle, as well as all of the automation aids which we provided.

They sensed a team spirit within the intelligence elements of the division which had resulted in cross-talk among S2s of unrelated units, and they recognized that we had earnestly attempted to push intelligence to them.

On the other hand, there had been problems.

Communications was the universally accepted shortfall. Although we had usually been able to get critical intelligence reports down the chain, we had not been able to share the details, the evidence, and the assessments which were all so important to the S2 when he had to evaluate our information for his commander.

They were dissatisfied with the scarcity of imagery and with the fact that much of the intelligence they received during the attack was outdated.

They recognized that, in this fast moving battle, higher level collectors could not report the situation along the front as quickly as their own systems could.

They believed that the EPW plan had not worked.


## The Internal G2 After Action Review

In April, we also conducted a series of section-level After Action Reviews and a G2-wide review for senior officers and NCOs. I was unable to attend these sessions, and it is only now, in producing these conclusions, that I have read the results carefully. Their findings are very similar to mine, which, of course, may indicate only that we developed a strong corporate identity through this experience. A summary of their findings may also be the most succinct possible summary of this paper, and I have therefore

included it, as well as the results of the S2 AAR as Appendixes H and I.

## My Opinion

How did we do? I believe that the Division Intelligence System and the Intelligence Community above the division acquitted themselves well, probably better than at the start of any previous American war. However, I also believe that, as a professional intelligence corps, there is much we can do to improve. In other words, we can take pride in our accomplishments, but we must also recognize the challenge before us to align our efforts with the needs of our commanders.

Our officers, non-commissioned officers, and soldiers within the division's intelligence elements did the job they had been trained to do, and much more. They continuously innovated, they dedicated great thought and energy to their work and to their fellow soldiers, they came to know the enemy, weather, and terrain, and they succeeded in passing that information on to the soldiers who needed it. They did indeed become "Output Oriented", as directed. Their efforts made a difference in the outcome of the battle by saving friendly lives and resources, and by continuously placing the enemy at disadvantage.

## Lessons We Should Not Take Away

It would be dangerous, however, to assume generalized lessons about the nature and mission of the G2 from this unique experience, in this unique war. The purpose of this paper is not to simplify the job by presenting "Universal Principles" for G2's. Rather, it

is to broaden the G2's perspective, to add color to his mental picture of the job, and to provide some tools that have worked in specific cases. This paper might serve as part of his reading, but certainly not as his single point of reference.

The enemy gave us a best-case war. This was not the dedicated and ruthless enemy that faced us in World War II, Korea, or Vietnam. Nevertheless, some elements of our intelligence system were strained. JSTARS, Unpiloted Aerial Vehicles, and many national systems provided less support than we would have hoped, perhaps because our division and corps were secondary efforts. There was insufficient capability to support both. If this had become a desperate fight, those assets might have been dangerously insufficient.

## The Roles of Higher Level and Organic Agencies

It would also be unwise to generalize too much about the roles of higher level agencies versus tactical collectors from this experience. This was an exceptionally lucrative opportunity for national systems. The open, desert terrain and the defensive, mechanized enemy force enhanced the value of imagery-derived intelligence.

Conversely, as an institution, we made intelligence collection very difficult for tactical collectors. We provided sketchy operational and technical data on the enemy to our tactical collection units. We denied our ground MI units, and especially their SIGINT and IPW elements, early access to the border area so that they could become familiar with their intelligence targets. As a result, we could not train battalion and G2 intelligence managers and

analysts. Intelligence consumers lived with their pre-war expectations until the battle was joined, and our communications links were not stressed by realistic reporting levels.

This war provided no time to learn, adjust, and improve. Our systems were successful, but they were just beginning to fulfill their capabilities when the operation ended.

In the future we must grant our tactical intelligence elements the greatest possible opportunities to collect and to rehearse before the battle. We must also continue to advance the quality of our peacetime tactical intelligence training in two directions: developing familiarity with possible intelligence targets; and building a fully operational, responsive, and combat ready intelligence community within the division.

This second goal of enhanced training can be done only by making peacetime training operations that more closely resemble combat operations. We often say that intelligence units are at war even in times of peace. We must more closely align the way we fight our "war" in peacetime with the one we expect to fight in wartime. Perhaps the G2 Staff should operate in vans in garrison. We should place our tactical collectors in real-world training environments more often in the future, making sure always to employ their associated managers and analysts to manage and analyze the training operation, even when that operation is conducted in a remote location.

# A Few Last Words on Specific Disciplines

## Imagery

Whether commanders need imagery is an old issue, one debated before World War II, and eventually won by the commanders. Those in the intelligence community who felt that commanders did not need photography were wrong. Commanders are drawn to photos, because photos serve as bases upon which to build clear Perception. Photos cannot be replaced by written reports or by sketches or overlays. It is true that they can be misinterpreted, but that fact argues only for more experience with imagery during training, and for more imagery interpreters at the tactical level. The G2 must struggle to build an imagery interpretation capability and to obtain imagery routinely for all planning and exercises. If you ask for imagery and do not get it in peacetime, you can assume that you will not receive the imagery you need in combat.

I have previously discussed the need for a rapid photographic (Perhaps computer-based) printing capability at the tactical level, and a responsive IMINT community. There are some steps which today's G2 can take to make the current system work. When the G2 requests imagery, collection managers at higher levels typically envision dispatching a live photo mission to the area in question, and therefore typically refuse or ignore the request. Even material which is fairly old and of only moderate resolution could provide perhaps 50% of the G2's need, by enhancing his Perception of the ground. Yet, such file imagery is rarely offered. Somewhere in the national intelligence community the file photography probably

exists. The G2 may have to create a clear and compelling demand on higher echelons in order to obtain that imagery.

The G2 can increase the likelihood of obtaining imagery by establishing somewhat standardized requirements and by being as flexible as possible. To become flexible, he can develop the ability to exploit imagery in almost any form. He should make it clear that, for his internal analytical purposes, the imagery can be print or film, positive or negative, and of any scale. He should accept any available material, and require only the annotation of a reference point, a north arrow, and a date of photography. In other words, the G2 should require the minimum possible work from those agencies holding the imagery. For terrain work, he should accept any date, and then, after receiving whatever is available, he should go back for more current material if necessary. He should be sure to ask for stereo imagery, if available, creating a demand for stereo in the system. For analysis of enemy forces, he may then request informal annotation of prints. In short, until our system reorients itself to provide responsive, quality support to commanders, the G2 will have to force his way through the system. He should not, under any circumstances, take "No" for an answer.

The G2's photo requirements change during the planning and preparation period. As stated elsewhere in this paper, his early needs are often centered on terrain appreciation. He requires the most complete coverage possible of the area of interest, regardless of format. His commander will usually need moderate to high resolution prints in order to visualize the terrain in context. He will be interested primarily in critical points in the area, such as the

objectives, samplings of routes, key terrain, and areas of known or suspected enemy activity. It is when subordinate units begin their planning that the call for multiple copies of photography must go forward.

For most of our operations, each battalion and brigade needed moderate to high resolution prints of their objective areas, of critical terrain features, and of terrain occupied by enemy forces. The total requirement for a brigade objective was therefore six copies: one for G2, one of the brigade headquarters, one for each maneuver battalion, and one for the direct support artillery unit. Each attacking brigade requires prints suited for its own missions. A reserve brigade may therefore need coverage of the other brigades objectives. In the defense, the prints must cover the area of our defenses, approaches to our defense, key terrain features, and current enemy locations, but the numbers of photos needed remain about the same.

Only in the deliberate attack do the numbers increase. In the later days of World War II, when our systems had become responsive to commanders, deliberate attacks on fortified positions were supported with photography down to the company and platoon level. Although the numbers of prints would then be very high, we could do much by providing photos to the platoon level only in the assault and breaching forces.

There are other special cases demanding prints, such as the LRSD and attack aviation elements. Nevertheless, under most circumstances, any key location usually requires only six prints,

not a large number in view of the wealth of resources and lives that will be focused upon that critical point on the ground.

As the planning is completed and final preparation begins, the division should receive frequent broad coverage updates, preferably in roll-film form. The G2 analysts can continually review this latest broad area coverage, and will often find changes that are important to the division, but that were missed or deemed unimportant at the national level. Attacking units now require large scale, high resolution photos of objectives, and all other enemy locations, depicting the status of terrain and obstacles, and enemy dispositions, including the orientation of their defending forces, locations of armored vehicles, dismounted defenses, artillery, communications, and logistics elements. This material should be annotated, and those annotations can be done by division interpreters. However, if time is a concern, then brigade or battalion commanders should sit together with the interpreters and work through the imagery. Again, the numbers needed are approximately six copies per brigade objective. If there has been significant change in any key area, or if a commander requests additional coverage, then the G2 must demand new photography in the same number of copies used in planning. To a great extent, though, subordinate commands will be able to accomplish their missions with the initial issue of six planning prints.

By becoming very specific about the numbers of prints required and the locations which must be imaged, the G2 can make his photo needs attainable, and can increase his chances of obtaining the

critical materials. In the final analysis, though, he may have to force the system to produce.

## SIGINT

I have already stated that our division's pre-battle SIGINT was quite productive. I believe that we did well because we had quality equipment (such as Trailblazer), we had a reasonable number of Arabic voice intercept operators, and we had six months in the desert, armed with a modest database, to think about and work on the SIGINT problem. Certainly we were greatly restricted by our inability to go to the border early, but once at the border, our communications and non-communications product was exciting and useful.

I suspect, however, that the real success of U.S. SIGINT in this operation was as an Offensive Weapons System. I believe that the threat of our SIGINT caused the enemy to control his own communications so tightly that he lost the ability to command and control his forces. He relied on wire and fixed site communications, but when those systems were destroyed during the air war, field commanders were cut off. When captured, they told us that they had been under strict EMCON restrictions, and had therefore gone for relatively long periods with no communications. This strange turn of events can only be assessed as a success for our SIGINT system. Far from disproving the need for SIGINT, this experience demonstrated that a strong U.S. SIGINT capability places the enemy in a dilemma which will benefit our forces in one way or another.

## Long Range Surveillance

The division's Long Range Surveillance Detachment performed its mission very well, indeed. Most of our lessons have already been stated. I will merely note that planning, preparing, and conducting LRS operations in combat are very labor-intensive. We employed a major and a captain, full-time to coordinate all related activities, and to ensure that LRS reports were received by key decision-makers. Much of the analytical talent in the ASIC was dedicated to the preparation effort. The staffing process must be done at a level of detail normally handled only at the battalion staff level, with an amount of information normally available within the special operations community. Nevertheless, the effort is worthwhile. Properly trained and supported, the Long Range Surveillance Team is an extremely potent collector which fills an otherwise open gap in division collection. Its range suits it to the heavy division as well as the light division. It is a system of great value.

Unfortunately, the Long Range Surveillance Unit could disappear because of a lack of real patronage. It is an Infantry unit, designed and supported by the Infantry School. However, it is a part of a Military Intelligence Battalion, and its operations are largely directed by the division G2. The Long Range Surveillance Unit was created by tactical commanders, and, I suspect, will exist as long as tactical commanders demand that it exists. The G2 will do well for the Army if he comes to understand and actively support his LRS Unit, becomes the division's proponent, and, along with his counterpart, the G3, brings the LRSD under the wing of the division staff as a unique and invaluable asset. Unless we fully

institutionalize the LRSU at the school, branch, and command level, this superb capability could be lost in the force reductions of the future.

## Automation

Some day in the future, many Army divisions will be issued the All Source Analysis System (ASAS), which should assist us in our analytical process. However, we can expect only about six workstations in each division. Most of our analytical work will still be done "off-line". There is plenty of reason to build a cheap and effective secondary automation system which can bring our analytical efforts together. I have a few thoughts about such a system.

Our secondary automation system should be based on the computers currently available in tactical units. At the division headquarters and the MI battalion headquarters, it should be based on local area networks, and there should be modules allowing brigades to install LANs if they desire. Most brigades and battalions should interchange information with the division headquarters through dial-up or radio communications. All units should report digitally, using a common, database-oriented message system. Within analytical sections, such as the ASIC, message and order of battle databases should be linked with collection management databases. All of this is well within the capability of current, commercially available integrated software packages, such as "SmartWare", the package which we used.

In the G2 staff, the LAN should remain at the collateral level until we can compartment materials at a reasonable cost. SCI can

continue to be handled off-line. Although this shortcoming may seem less than elegant to software developers, it is just the kind of compromise which we should always be prepared to make in order to obtain a marginal improvement in our automation systems. The first such improvement is to permit the G2 staff to share information internally, to exchange formatted information with subordinate elements, and to handle incoming message traffic digitally. This relatively inexpensive effort, exported as little more than software, would make a very significant improvement at the tactical level. The entire system could be developed in modular form and fielded as it is developed across the entire tactical Army. Its development would require only a central proponent with some expertise. Modules could be developed by various tactical units, once certain standards were established by the proponent.

At headquarters levels, databases should automatically produce "Executive Information", in the form of graphic briefing charts which are always available, updated, for decision-makers. After some careful study of the best ways to "Present" information, we should distribute and exchange a wide range of standardized briefing chart formats which offer intelligence summaries in styles most usable to commanders and other consumers. Such issues as chart and database formats should become subjects of discussion among G2s. In fact, the entire community could benefit by a computerized "bulletin board", based perhaps at the Intelligence School, facilitating which encouraged the sharing and development of software and associated systems.

In our training and our professional study, too, it is time to develop "Automation Literacy". If "Computer Literacy" means being unafraid of computers, and even being well-versed in Word Processing, then it is time to move beyond that stage. Our intelligence officers, those who manage the intelligence organizations and processes, must develop expertise in database operations, computer communications, interfacing issues, executive information systems, and decision and conception aids that are already available on the open market. The tools we need for a twenty-fold increase in effectiveness are on the market today. We languish for lack of knowledge. No computer expert can assume our responsibility, as leaders and managers, for applying these tools to our duties.

## Communications

The only recommendation which I can make on this subject is that the G2 will benefit by developing a formalized intelligence communications architecture for the entire division. I had done some of that as early as May 1990, linking our decentralized analytical cells, designating types of reports that would travel over each link, and identifying information that should not be sent, or should only be sent periodically. This scheme (Appendixes B, C, and D) may serve as a starting point for future architectures. However, it was less than completely effective, because we did not sufficiently discipline the system in the months prior to combat, and because we did not organize our operation around the available communications systems. There is much more to be done here. The future G2 may have Multiple Subscriber Equipment (MSE), single

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channel TACSAT, and computer communications to assist him with this difficult effort, but, in any case, he should thoughtfully determine the quantities and types of information which will have to be sent, the formats and procedures to be used, and the elements which will communicate, and bring this design together in a formal explanation for all elements of the Division Intelligence System.

## Mapping

It seems that the right maps are never available for any crisis deployment. DMA expends great resources in printing and storing great quantities of maps, only to find that they have mapped the wrong area, or that the maps in stock are badly outdated. I suspect that the solution to this problem lies in a very different and innovative approach.

We should investigate decentralizing map printing functions to the corps, or even the division. We need a highly capable computer system which can print full color, camera-ready map sheets, and a high speed printing press or reproduction machine. DMA could concentrate its efforts on maintaining and distributing updated mapsheets on CD-ROM, or some other large capacity storage medium. The tactical command needing maps could then load current data and print original map sheets as they are needed, reproducing sufficient copies, even a few thousand, quickly, and as required. Using this approach, the corps or division would store blank paper that could be quickly transformed into the right map for any requirement. It may be that current technology will not support such a system, but this approach should then become a requirement.

I see no way to meet our short-notice requirements for maps except to print them quickly as they are needed.

## Our Organization and Procedures

### The Division G2 Organization

Except as previously noted within the paper, I believe that the G2 doctrinal organization is generally satisfactory. The most significant problem we faced was that the G2 staff is brittle, because it consists of many small sections (Figure 22, Chap. 6). The lack of a single NCO or officer leader in any of these sections can be catastrophic to that element and to the functions that it performs. The wide variety of activities and disciplines within the G2 Staff result in this fragility. It is for this reason that every missing leader has a profound effect on the organization, and for this reason as well that our Staff suffered for lack of majors and senior NCOs. The G2 should recognize the sensitivity of his organization to empty billets, and fight hard to get them filled. He should also prioritize operations, cutting back on the number of functions which his staff will perform, as a means of getting the primary missions accomplished.

The G2 will have to decide where to take his shortages. My views changed over time, as stated in the paper  Today, if I had only two highly experienced, tactically qualified majors, I would make one of them the deputy and one of them the ASIC chief. With NCO's, the call is even more difficult. After the Sergeant Major's position, I would have to place a strong leader at G2 Operations, but the next important positions to fill might well be CM&D and the

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All Source Production Section. Beyond this meager advice, the G2 himself will have to make this difficult call on his own.

## The Division G2 Procedures

As with his communications architecture, the G2 will do well to formalize his staff's procedures early in his assignment. Too often we permit each soldier to do his portion of the mission his own way, with no clarification of duties and relationships, or explanation of the purpose behind our efforts. To become "Output Oriented", the G2 staff must identify its products, its outputs, and then must develop procedures to produce those outputs. This is the realm of the G2. Although individual soldiers should have input to the design, the G2 himself must be the unifier of the effort. He cannot and should not totally delegate the identification of products, design of organizations, or approval of procedures to anyone else. I believe that the procedures described within these pages, and especially in Appendixes B, C, and D, might serve as a model. I do recommend that any such procedures fully outline the "Philosophy" which generated them, and the objects, or products which they purport to achieve.

## Our Intelligence Soldiers

The greatest shortcoming in my organization was myself. Our officers, sergeants, and soldiers were bright, aggressive, and dedicated. They lacked nothing but a clear picture of my objectives, and concepts for achieving those objectives. Before taking this job, I had given it a great deal of thought, and yet I felt con-

stantly that I was the bottleneck, the limiter which held back the organization from faster advancement. Certainly it is important to empower subordinate leaders, in order that the organization does not wait on the G2 alone. Nevertheless, the prospective G2 will do well, I believe, to give matters of organization, procedure, and purpose as much thought as possible before he begins his assignment.

## The Essence of the G2's Job

The duty of the G2 is to give his commander the enemy, weather, and terrain information he needs.

Amidst the complexity and confusion of the job, the G2 must remain focused on the essence of his duty. I believe that the above statement encompasses that essence. He cannot become so entangled in the process, or the systems, or the organization, that he loses sight of his essential duty. He succeeds or fails based on whether the commander (and by inference, the command) receives the information he needs.

It is this duty that generates the G2's three burning questions:

What intelligence does my commander need?

How do I get the intelligence my commander needs?

How do I give my commander the intelligence he needs?

And it is in answering these questions that the G2's life becomes complicated. A few last thoughts:

## Question One: What Intelligence Does My Commander Need?

The G2 who cannot answer this question will never know whether he is succeeding or failing. The Priority Intelligence Requirements (PIR) and the Essential Elements of Friendly Information (EEFI) serve as the most significant directives for the G2's efforts. In a way, they constitute contracts between the Commander and his G2. The G2 who answers the PIR and aids in the successful protection of the EEFI has succeeded. If the PIR and the EEFI are the G2's, and not the commander's, then the G2 has merely made a contract with himself, and he cannot know whether he is accomplishing the mission. Most specific needs are provided by the CG in less formal interchanges, some specified, and some implied. The G2 and his subordinates must succeed in understanding the needs of the commander and the command. It is not so much the commander's responsibility to make the G2 understand his needs, as it is the G2's responsibility to gain such understanding. His focus must be ever on his commander, more, even, than on the enemy.

The G2 must also keep his "Ends" in mind. His answers must aid all four of the commander's functions: Perception, Conception, Decision, and Action. The Commander may prioritize his G2's efforts among these four, but without such guidance, the G2 must balance his efforts to support all four of these command and control functions.

## Question Two: How Do I Get the Intelligence My Commander Needs?

It is in answering this question that the G2 and his staff must apply all of their technical and tactical expertise with great discernment and insight, to use information on hand, as well as available collectors to satisfy the needs of the command.

## Question Three: How Do I Give My Commander the Information He Needs?

Somewhere between Questions Two and Three, the G2 conducts his analysis, converting the information on hand into observations and conclusions aimed at fulfilling the needs of the commander. As stated throughout this paper, he must not only assemble the answer, but he must also choose the right time and vehicle for its presentation. The G2's judgement will be challenged here, because the goal is not merely to provide the information; it is to ensure that the commander or other consumer will comprehend the information, integrate it with his other knowledge, and put it to proper use in his operations. His responsibility is not in "Packaging" or "Marketing" in a manipulative sense, but, rather, in aiding the commander's Perception, Conception, Decision, and Action. To the extent that a staff officer can be responsible for anything, the G2 is responsible for ensuring that the command acts based upon an accurate picture of the enemy, weather, and terrain, and the potential effects of these three on friendly operations.

## Why Be a G2?

I have described the G2's job as being one of responsibility, challenge, frustration, embarrassment, occasional success, and frequent disappointment. By critically dissecting my experience, I may unwittingly painted a morose picture. If so, then, I have painted an inaccurate picture as well.

My opportunity to serve as a G2 was more than the fulfillment of a career's dream. It was the greatest of professional challenges: a time of discovery about myself and my profession; a time of growth and teaching; a time of closeness to soldiers, of mutual respect for sergeants, and of camaraderie with fellow officers. It was a time to learn and to contribute alongside good men and women. Such jobs are never easy, comfortable, or without conflict. In a way, I am sorry that this experience lies behind me.

I hope that the words in this paper assist the future G2 to meet the challenges that lay ahead.

[1]MAJ Richard J. Quirk, "Seeking a Theory of Tactical Intelligence
      to Support the AirLand Battle" (Fort Leavenworth, KS: U. S.
      Army Command and General Staff College, 1985), p. 4.
[2]FM 101-5, 1984, pg 1-4
The role of the staff as part of the command and control system.
    "Facilitate and monitor the accomplishment of command
decisions." (ACTION)
    "Provide timely and accurate information to the commander and
  subordinate units." (PERCEPTION)
      "Anticipate requirements and provide estimates of the situation." (CONCEPTIO
      "Determine courses of action" (CONCEPTION)
      "Recommend a course of action which will best accomplish the mission."
mission...Prepare plans and orders." (DECISION)
[3]MAJ Richard J. Quirk, "Seeking a Theory of Tactical Intelligence to Support
the AirLand Battle" (Fort Leavenworth, KS: U.S. Army Command and General
Staff College, 1985), p.4.
[4]We modeled our intelligence CPXs, or INTELLEXs. after a program
developed by LTC Rick Allenbaugh, a former G2 of the 82d Airborne
Division.
[5]The G2 Staff had submitted the Division's Wartime Stockage
Requirements List, as demanded by doctrine, in January 1990.
This document stated the specific sheet numbers and numbers
of copies required by the division for each OPLAN.
[6]COL Elias C. Townsend, Risks, The Key to Combat Intelligence
(Harrisburg, PA: Military Service Publishing Company, 1955),
p. 69.
[7]Take a quote from Betts on the need for confidence between
the intelligence officer and his leader
[8]BG S.L.A. Marshall, Men Against Fire (Gloucester, MA: Peter Smith,
1978), p. 154.
[9]MTOE 87004JFC24, FC1089
[10]The author was Executive Officer of the 313th MI Bn, 82d Abn
Division during the Grenada operation.
[11]Jomini, Baron Antoine Henri, The Art of War (Carlisle
Barracks, PA: U.S. Army War College Art of War Colloquium,
1983). p. 149.
[12]U.S. Department of the Army, Operations, FM 100-5 (Washington, D.C.,
1986), p. 12.
[13]Cite the 12 AG AAR indicating that interrogation was the number one source of
[14]PROCOMM is a generally available shareware program which is
available free to Department of Defense users.
[15]PK-ZIP is a file compressing program which saves storage space
and transmission time. It is a shareware program generally
available through public computer bulletin boards.
[16]Townsend, p29
[17]Sun Tzu, The Art of War, Quote on the general who does not
know his enemy.
[18]GEN Omar Bradley, A Soldier's Story (New York: Holt,
    Rinehart and Winston, Inc, 1951) p.454.
[19]Townsend, p.
[20]Terrabase is a terrain simulation program fielded with the
FORSCOM Automated Intelligence Support System (FAISS), which
was fielded by FORSCOM to corps and division level in 1990.
[21]William A. Doyle Jr., "Interrogation of Prisoners of War in the

AirLand Battle," (1987): 162

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# DEPARTMENT OF THE ARMY

HEADQUARTERS, 24TH INFANTRY DIVISION (MECHANIZED) AND FORT STEWART
FORT STEWART, GEORGIA 31314-5000

REPLY TO
ATTENTION OF

AFZP-CG

MEMORANDUM FOR                                          29 September 1989

SUBJECT:  Knowing the Threat


1.  Having observed many NTC rotations over the recent years, I am impressed by our trend toward better tactical intelligence.  We have significantly improved our brigade and battalion R&S planning.  Our collectors are becoming more and more effective.  However, we have not yet learned how to make full use of the information which we collect.  Unfortunately, many S2's can only pass on individual spot reports as he receives them and cannot build a coherent intelligence estimate.  He cannot extract the tactical meaning from his combat information and explain its significance to the commander or the S3.  For their parts, the commander and S3 are often unable to interpret enemy actions and devise appropriate courses of action.  As a result of these shortcomings in analysis and personal communications, the critical information which is in the hands of the S2 does not influence the conduct of the battle as it should.

2.  The process of converting combat information into intelligence, and intelligence into friendly action, is an art.  As such, it requires a foundation in knowledge, some basic skills, and a great deal of practice.  The Commander, S2, and S3 have many opportunities to develop basic skills and to practice during the major training events of the year.  I have charged the G2 to help develop the S2's basic skills through an aggressive program of classes, seminars, and intelligence CPX's.  However, developing the necessary foundation of knowledge is an individual responsibility.

3.  I believe that our inability to process combat information is due primarily to our lack of knowledge about the threat.  Although most S2's have been trained in the intelligence skills and have sufficient opportunity to practice, they cannot extract tactical meaning from the actions of an enemy which they do not know.

4.  S2, I charge you to KNOW THE ENEMY.  Study his doctrine.  Learn his organizations and equipment.  Understand his history, his culture, and his psychology. The success of our mission and the lives of our soldiers may someday depend upon your professionalism as a Threat expert.  For each contingency area, for each potential enemy force, you have this same duty.  Secondarily, I charge you to know U.S. and allied military organizations, doctrine, and tactics, so that you can present your intelligence to the commander in tactically significant terms.

5.  You must know, and be able to quote from, the publications which I have listed in the enclosure to this memorandum.  Begin with the FM 100-2 series of

AFZP-CG                                          29 September 1989
SUBJECT:  Knowing the Threat

manuals.  Although there are many errors in these outdated publications, they
are the most complete references generally available.  To bring yourself up to
date, study the other basic documents which I have listed.  Make full use of the
"Red Thrust Star" journal, published by the 177th Armored Brigade at Fort Irwin.
It provides the most current unclassified threat information available to our
units.  With these publications as a basis, branch out.  Develop your own areas
of expertise.  Leaders, challenge your intelligence soldiers to gain a real
depth of knowledge in specific functional areas, such as threat aviation,
engineer, or logistic capabilities.  The optional materials listed in the enclo-
sure are especially good for further research.

6.  Of course, the senior intelligence officer in any command is the commander.
The only intelligence which really matters is that information which resides
between the ears of the commander when he makes a decision.  To interpret the
S2's product, and to integrate it into your operations, you and the S3 must
understand the threat as well.  I charge you to know your enemy, in order that
you can complete the linkage, making use of the information at hand to defeat
that enemy.  You must be familiar with the publications which I have listed and
be especially knowledgeable concerning the tactics, capabilities, and vulner-
abilities of enemy formations up to the Army level.

7.  Within the next month, I will send all of you your own personal copies of
the past year's "Red Thrust Star", along with my comments concerning specific
articles.  From now on, I will send each of you your own personal copy of this
journal along with my comments quarterly.  Pay close attention to this valuable
source of information.

8.  The basic tool of any professional is knowledge, and knowledge means study.
If you haven't already done so, establish such a program for yourself.  Learn
the materials which I have assigned as your foundation, and continue your study
as long as you count yourself as a professional.  Study is indeed hard work.
However, the product of our study is victory in battle.  We cannot pay the price
of intellectual laziness in wartime.  There will be no time to study; no time to
get any smarter, at N-Hour.

1 Encl
as

                                    H. G. TAYLOR
                                    MG, USA
                                    Commanding

LISTING OF UNCLASSIFIED THREAT REFERENCE

REQUIRED READING

FM 100-2-1, The Soviet Army: Operations and Tactics, 1984.

FM 100-2-2, The Soviet Army: Specialized Warfare and Rear Area Support, 1984

FM 100-2-3, The Soviet Army: Troops, Organizatons and Equipment, 1984

JPRS-UMA-88-008-L-I, 29 June 1989, FBIS. PRS Report: TACTICS. (Volumes I and II) (FOUO).

Soviet Army Studies Office, Spearhead of the Attack: The Role of the Forward Detachment in Tactical Maneuver.

Threats Directorate, Combined Arms Center, Fort Leavenworth, Soviet Reconnaissance Handbook, 1987.

177 Armored Brigade, Fort Irwin, CA, Red Thrust Star, Volume 37 - 39.

OPTIONAL READING

Isby, David C. Weapons and Tactics of the Soviet Army, Jane's Publishing Company 1988. (Available only at MSC level).

Jane's Soviet Intelligence Review, January 1989 - current issue. (Available only at MSC level).

Encl 1

PHILOSOPHY AND CONCEPT OF OPERATION OF THE DIVISION INTELLIGENCE SYSTEM

1. CONCEPT OF OPERATION

a. The Intelligence Mission. Good intelligence is nothing more than accurate and timely information about the enemy, weather, and terrain. It is relevant to the battle, and it is expressed in terms which are tactically significant to the consumer. To produce good intelligence, the division depends upon the division intelligence system, a complex network of collectors, analysts, communicators, and consumers. In the 24th ID, this system is decentralized in order to minimize the need for communications, to speed the process, and to provide intelligence to the consumers at every level.

b. The Three Functions of Intelligence.

(1) Intelligence information serves three purposes. It provides early warning, it supports critical decision making, and it supports targeting. In its first role, it serves as an early warning tip-off of an unexpected event or an event requiring immediate reaction, such as an enemy counterattack into an exposed flank, or an incoming chemical missile. The consumers of early warning intelligence are the effected commanders. In some cases, such as warnings of incoming enemy aircraft, commanders down to company level may need the information. Timeliness is key; and the information need not be confirmed nor extremely precise to be valuable for early warning. However, if early warnings are repeatedly inaccurate, they will eventually be ignored. Therefore, the intelligence system must identify the reliability of the source, and the potential validity of the information in order to reduce the effects of false alarms. The system must be quick to confirm or deny early warnings by focusing additional collection at the areas in question.

(2) The second purpose of intelligence is situation development. The product of situation development is used as a basis for making key decisions in the battle, such as when and where to commit the reserve. The commander is the consumer of situation development information. This intelligence function poses the greatest analytical challenge to the division intelligence system. It requires that the S2 or G2 determine, from available information, a comprehensive picture of the enemy situation, including all enemy battlefield operating systems. Situation development information must be clearly categorized as to its accuracy, at least as templated, possible, and confirmed. Because the commander's time is limited, the intelligence officer must ensure that situation development information is relevant to the decision at hand. He must also present it in tactically significant terms, terms which will help the commander to integrate this information with all other information at his disposal in making the decision.

(3) The third purpose of intelligence is support to target development. This support begins with the development of targeting priorities, and ends with the location of a target and its destruction during the battle. The planning phase is integrated into the IPB process, which is the planning phase of situation development. In its planning phase, target development is aimed at the commander as the consumer. The later phase of locating specific targets and nominating them for engagement is aimed at serving the Fire Support Coordinator, who is acting for the commander based upon the commander's earlier established priorities. Information to support this phase of targeting must be extremely accurate in its target location and in its description of the target type. In the case of fleeting targets, timeliness is also essential. In some cases, the identification of the enemy unit is critical. Due

to fire support resource limitations and the threat posed by the target, the information may have to be validated or confirmed before the target will be executed. All of these variable criteria must be established in the target development process as the Target Engagement Criteria. The intelligence system must then meet these criteria in providing targeting information. By design, some targets are 'developed'; starting with generalized templates in the planning process, progressing through more accurate tentative locations as information is collected, and evolving into specific, confirmed locations as collectors are cued and focused on the tentative information. Other targets, such as enemy artillery, are located by counterbattery radar without extensive development. Some targets of opportunity simply appear without coordinated effort on our part. The intelligence system must quickly exploit all available information, assembling and prioritizing its nominations without impeding the operation of target acquisition systems.

    c.   Resource Limitations.

        (1)   Personnel:  Lack of an analytical pool colocated

        (2)   Facilities:

            (a)   Many TOCs at Division.

            (b)   Nothing hardened.

            (c)   Little climate control.

            (d)   Vulnerability to disruption.

            (e)   Need for redundancy and survivability.

        (3)   Equipment:

            (a)   Collectors.

            (b)   Communications.

            (c)   Computers.

        (4)   Procedures:  The need to displace frequently

    d.   Principles of Design for the Division Intelligence System.

        (1)   The intelligence officer produces the intelligence necessary to support his commander and his unit. He also provides this product to the intelligence officers above and below, where it serves as a part of their products.

        (2)   Although his product is usually not detailed enough to fulfill all the needs of lower units, it does serves lower unit S2's by illuminating the larger intelligence situation and by giving them a partial model from which to evaluate

their own estimates. When the higher G2/S2 uncovers information which is more detailed than needed for analysis at his level, he must nevertheless forward that information to any element which needs it.

(3) The G2 or S2 plays a much more important role in supporting the intelligence efforts of the higher G2 or S2 because his estimate forms a piece of the estimate produced at higher levels. The G2/S2 of a maneuver unit produces a geographic piece of the next higher estimate, as does the S2 of the unit having responsibility for the higher unit's rear area or deep operations area. G2/S2's of separate and functional units, such as ADA, engineer, artillery, and aviation, provide detail concerning their functional areas to the entire estimate being constructed by the parent command. Thus, as a by-product of his support to his own commander, the ADA battalion S2 develops much of the division's intelligence estimate of the enemy air threat.

(4) It is in the best interest of each command to keep its higher command informed of the intelligence situation, because the higher commander uses his overall intelligence estimate to allocate his resources. The Division G2 must integrate the input from subordinate commands in order to portray a balanced and accurate picture for his commander, and in order to properly employ available intelligence assets. ·Continuous discussion between G2 and S2's is the vehicle for the integration process.

(5) Directors and Producers located at CP's in order to support key consumers.

(a) The division intelligence system is physically stretched across the entire battlefield. Its distribution, which is dictated by the intelligence mission, influences the nature of intelligence operations.

(b) For example, the producers of intelligence, which are the S2's and the MI Bn TCAE, must locate near the commanders and operations officers whom they support. This proximity permits the commander to closely question the intelligence analyst, to observe evidence and graphic explanations of the intelligence picture, and to directly influence the intelligence priorities of work. The commander and the S3 can most easily participate in the IPB process if they are located with the S2.

(c) On the other hand, division level producers are also tethered rearward to communications centers in order that they can obtain collected information from corps and higher.

(6) Collectors located in proximity to the enemy in order to collect.

(a) Simultaneously, our intelligence collection systems pull us forward, even in front of the FLOT. Most SIGINT systems and all radars must be situated in direct line of sight with the targeted enemy. HUMINT collectors, LRS and unit patrols stretch forward of the FLOT in order to obtain information. Collection aircraft typically fly higher than other tactical aircraft in order to collect.

(b) Intermediate HQ's and communications link collectors/producers. Intermediate intelligence headquarters are pulled in two directions, having to

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command and control their collectors up front, and to report to the director/producers at higher level command posts. Communications systems are often overtaxed and consequently undependable, requiring a strict prioritization of reporting criteria.

(7)   Each level produces only what it needs, communicates only what it must.

(a)   Unlike strategic organizations, the division intelligence system cannot centralize its production efforts. Most of the division's analysts are distributed well below division level. Most of its analysis and production is therefore distributed down to the locations of the analysts. The division headquarters assembles and integrates the fragmentary pictures developed at other headquarters.

(b)   Communications and data handling systems are so limited that we cannot transmit all collected information throughout the entire system. Intermediate producers filter information which they receive, deciding which must be passed. Wherever possible, they consolidate incoming information, evaluate it, and determine its tactical significance; thereby converting it into intelligence. They then disseminate this distilled information through the limited communications means available.

(c)   To work in a unified fashion despite the geographic dispersion, all elements of the division intelligence system must be well trained, and must have a commonality of thinking. Good SOP's and a solid training program are the foundation for this unified action. During operations, we build upon this foundation of standardization with clear collection requirements and frequent personal discussions among the G2 and the S2's.

(8)   Producers are grouped into cells based upon their area of interest. Resource limitations dictate that we group producers based upon their areas of interest. There are six such groupings, or intelligence production cells, at the division level (Figure 1). Each cell has a central, division level node, which serves as the focal point for integration and distribution of the cell's information. These nodes are interconnected with formal communication systems so that they can transmit their pieces of the intelligence picture for final production, receive the division level estimate in return, and pass specific data as necessary.

(9)   Higher level producers work mostly on previously analyzed information.

(a)   Most of the division level intelligence nodes analyze and produce intelligence based upon information which has been previously analyzed to some degree at other levels.  The division's intelligence reporting system encourages lower level S2's to conduct analysis and to filter information prior to sending it to a division node.

(b)   To the greatest extent possible these central nodes communicate among themselves in terms of combat intelligence, rather than combat information, in order to minimize the communications and analytical strain. However, many critical, even decisive items of information cannot be analyzed at lower levels, and must be transmitted relatively unevaluated as combat information. Because combat information

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reports are the exception in this system, they will be more easily recognized as critical by anyone receiving them. Thus, the SALUTE report which a brigade S2 sends to the DTAC will be interpreted by the DTAC as a potentially important item of information which the brigade cannot evaluate.

(10) Disseminators assure that other cells/levels get information they need.

(a) Each element which collects information or produces intelligence has a responsibility to disseminate it, through established channels, to those other members of the intelligence system which may need it. Thus, the disseminators at each location are actually serving elements other than their own. It is this responsibility which requires selfless teamwork throughout the division intelligence system.

(b) It is in the best interests of each battalion and brigade to disseminate. If it does not do so, then its own commander often does not receive the combat resources which he could have received if the situation had been clearer at the higher headquarters or at the supporting unit.

(c) Dissemination decisions can be simplified if they are standardized. Annex A provides the standardized intelligence requirements of each major headquarters in the division. All producers in the division may disseminate to them directly. The central nodes of the intelligence cells will also disseminate to them as necessary. Reporting units must indicate previous dissemination in their reports.

(d) The division employs separate, formal tasking and reporting channels to communicate specific intelligence requirements generated by the collection plan, and to communicate the associated reports, which are called Responses to Requests for Intelligence (RRI, or GREEN 2). Formal taskings and reports travel as directly as possible between the division Collection Management and Dissemination (CM&D) Section and the designated collector. All RRI must be sent to (or copy furnished to) CM&D. In order to focus CM&D on answering the command's most critical information requirements, avoid using these channels for SOP reporting.

(11) Problems with this decentralized organization. (To be expanded later)

(a) Lack of continuity.

(b) Lack of direction.

(c) Redundancy.

(d) Time losses as info is distributed.

(e) Lack of equipment to electronically colocate.

(12) The Relationship Between the G2 and the S2's of the Division. A special, direct, and personal relationship exists between the G2 and the S2's of the

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MSC's and separate battalions. These individuals must often converse directly during critical times. Nothing in this SOP should be construed as discouraging direct contact between them. Any S2 in the division can and should contact the division G2 personally whenever he believes that the situation warrants discussion. All S2's are free to develop independent intelligence estimates of the situation to support their commands. Although the Division G2 will produce a single official estimate, PERIN-TREP, SITREP, or INTREP at any given time to cover the entire division, the S2's of subordinate units need not agree with that estimate. S2's should highlight areas of disagreement when they disseminate their products.

2. DIRECTING

a. The intelligence staff officer at each echelon has staff responsibility for directing the intelligence effort at that echelon. Directing is the process of developing intelligence missions, requirements, and specific collection tasks. Changes in mission, are typically approved by the G3 or S3, and requirements or tasks are approved by the G2 or S2.

b. Intelligence requirements are used to direct the collection, the analysis, and the reporting efforts of the entire intelligence system toward a priori¹ ced list of important que :ons, and away from the unimportant. Because of resource limitations, the G2 and S2 identifies those elements of information which are not needed as well as those elements which are needed. He generally does this by establishing reporting thresholds in his requirements. The G2 or S2 establishes intelligence requirements of two types; those which are standardized for the command, and those which apply to specific situations.

c. The G2 or S2 establishes standardized collection and reporting criteria in the Field SOP. All intelligence collectors must know these standard requirements and must report on them without further guidance. The requirements must therefore be simple and clear. The standard 24th Infantry Division reporting requirements are listed in Annex A of this SOP.

d. Standardized reporting requirements are designed to be guidelines for reporting. They outline examples of occasions when the observer must submit a report to G2 rather than waiting for the next scheduled reporting period. They do not preclude the G2 or S2 from using his own judgment in deciding what must be reported to the G2. On the contrary, G2/S2 judgments concerning what must be reported are essential, and are the most reliable reporting criteria.

e. The G2 or S2 establishes intelligence requirements to support specific operations, battles, or phases through his collection planning process. Beginning with the PIR and IR, he produces Specific Orders and Requests (SOR) and intelligence collection missions, both of which are assigned in the intelligence annex to the operations plan or order. He prioritizes them and recommends their assignment to specific units. He tasks subordinate units and asks higher units for answers to specific questions through the Request for Information (RFI). In so doing, he may suspend or alter the standard requirements originally listed in the SOP.

f.   At division level, the Collection Management and Dissemination Section
(CM&D) validates all collection and reporting requirements prior to their assignment.
All PIR, IR, SOR and RFI are formalized requirements validated by CM&D. All require a
formal report whenever a division unit uncovers information meeting their reporting
criteria.

g.   Developing Intelligence Collection and Reporting Requirements. (TBP)

3.   COLLECTING:  Reporting:  See ANNEX A.

4.   PRODUCING

a.   Intelligence expertise is distributed across the entire battlefield in the
G2 and S2 sections. Consequently, many divisional elements play a part in the devel-
opment of the overall intelligence estimate. Production responsibilities of these
elements are listed in Annex B.

b.   Each intelligence cell of the division has standard responsibilities in
contributing to the overall intelligence picture. Specific units within the cells
have specific responsibilities to provide pieces of the intelligence picture in keep-
ing with the product which they develop to support their own commanders.

c.   The 1-5 ADA Bn, 24 AVN Bde, 3d Engineer Bn,  Division Chemical Officer, and
the 124th MI Bn participate in the division's planning process as an Intelligence
Battle Staff. Whenever the situation permits, the G2 will brief these S2's on future
missions or divisional plans early in the planning process, and will provide them
with updated intelligence, allowing them to get a quick start in planning. In return,
their planning products will serve as input to the division's intelligence estimate.

d.   During the battle, update their input to the Division Intelligence Estimate
through their intelligence reports (PERINTREP, S2 SITREP, and INTREP). Those elements
involved in division level planning may submit copies of their internal estimates as
input to the divisional estimate.

5.   DISSEMINATING

a.   Annex C. outlines the elements of information which the G2 Collection Man-
agement and Dissemination Section will automatically disseminate to subordinate
commands without prompting. SCI information will be disseminated if sanitized. Other-
wise, CM&D will notify the command needing the SCI information that it is available
at the DMAIN.

b.   Communications Priorities.

(1)  The division intelligence communication system is designed to assure
that high priority messages will be transmitted, even in periods of high activity.
Each standardized message carries with it a communications precedence to help with
setting transmission priorities. These priorities apply as well to the handling of
messages at each operations center.

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(2) Additionally, this SOP describes a plan for the use of available communications channels. That plan is at Annex D

(3) Periods of high activity will demand additional prioritization in the use of communications systems. On the Division O&I FM net, the NCS will control traffic to assure that elements in contact have priority on the net.

r. Supervising. (TPB)

5. ANNEX:

A - STANDARDIZED INTELLIGENCE REPORTING THRESHOLDS

B - PRODUCTION RESPONSIBILITIES OF INTELLIGENCE CELLS

C - STANDARDIZED DISSEMINATION CRITERIA TO SUBORDINATE COMMANDS

D - INTELLIGENCE COMMUNICATION CHANNELS (DIAGRAMS) TBP

STANDARDIZED INTELLIGENCE REPORTING THRESHOLDS

1.  Immediate Reporting Thresholds:  All division elements report the following
observations via S2 SITREP channels (See Annex B) without delay, using the SALUTE
(for combat information) or INTREP (for analyzed intelligence) formats.  Submission
into Fire Support channels DOES NOT fulfill this requirement.

    a.  BOS: INTELLIGENCE

        (1)  Enemy deception, known or suspected.

        (2)  Initial contact with enemy reconnaissance in each U.S. battalion's
sector.

        (3)  Changes of 5km or more in the EFLR (Enemy Forward Line of Reconnais-
sance) since the last report.

        (4)  Indications of enemy dismounted surveillance, sabotage, terrorism in
the division area of operations.

    b.  BOS: MANEUVER

        (1)  First contact with any enemy force in a U.S. battalion's area of
operations after a break of 24 hrs or more.

        (2)  Initial contact with an enemy battalion or larger size force in a U.S.
brigade area of operations.

        (3)  Changes of 5km or more in the EFLT (Enemy Forward Line of Troops)
since the last report.

        (4)  Sighting of an enemy company or larger size force in the division rear
area.

    c.  BOS: FIRE SUPPORT

        (1)  Artillery preparation or barrage.

        (2) Incoming enemy artillery fire after a break of 24 hrs or more.

    d.  BOS: AIR DEFENSE:  Formations of more than two rotary or fixed wing aircraft
approaching the division area of operations.

    e.  BOS: MOBILITY/COUNTERMOBILITY

        (1)  Significant corrections to the estimated capacity of a mobility corri-
dor (e.g. a corridor previously estimated by G2 to support a company can actually
support a battalion).

(2)  Significant corrections to the estimated overall mobility factors in the area of interest  e.g. areas estimated to be "No-Go" are actually "Slow Go").

(3)  Gain or loss of mobility at any spot on an MSR or other high speed route (e.g. destruction of a bridge, change in bridge classification).

f.  BOS: COMBAT SUPPORT

(1)  First use of nuclear, biological, or chemical weapons in Division AO.

(2)  Use of any unexpected chemical or biological agent in the Division AO.

(3)  Enemy convoy of 50 vehicles or more in the division AO.

g.  BOS: COMMAND AND CONTROL:  The locations of enemy battalion and larger CP's.


2.  Special Reporting Tasks for Specific Divisional Units

a.  Specific divisional units have standardized reporting requirements based upon their collection capabilities. These units report in SALUTE or INTREP formats and, in some cases, in unique reporting formats. They report this information to G2 CM&D by the most direct route possible. Priority of communications is Computer link, RATT, TTY, Phone, and FAX, and finally FM.  CM&D responsibilities to retransmit the reports are also listed in ANNEX C.

b.  Specific reporting responsibilities of the following units will be published later.

(1)  124th MI Bn

(2)  TCAE

(3)  Counterintelligence Section

(4)  Interrogation of Prisoners of War Section

(5)  S2, DIVARTY

(6)  S2, 14th AVN BDE

(7)  S2, 2-4 Cavalry

(8)  S2, 1-5 ADA

(9)  Division Chemical Officer

(10)  Assistant Division Signal Officer

STANDARDIZED PRODUCTION RESPONSIBILITIES OF INTELLIGENCE CELLS

1. The central node of each intelligence cell builds and maintains an intelligence estimate for its piece of the overall battle by integrating the inputs from members of the cell into a single picture. The node provides this intelligence estimate feeder report to G2 Operations at the DMAIN, where it serves as the basis for a finished divisional level estimate. In turn, the central node receives feedback from G2 Operations at the DMAIN, which has integrated its input with information from other divisional assets and from Corps, and which sends out estimate updates in the form of Division PERINTREPS, G2/S2 SITREPS, and INTREPS (GREEN 4-6).

2. The center node of each cell shares its estimate informally with the units in the cell. It receives reports from other cell members, and determines what items must be sent to G2 Operations at the DMAIN. Generally, it receives unit PERINTREPs, SITREPs, and INTREPs and integrates them into PERINTREP Feeder Reports, G2/S2 SITREP Feeder Reports, and INTREP Feeder Reports (GREEN 4A, 5A, and 6A) to send to the DMAIN and to share with members of the close operations network. The central node may also forward unit reports directly without alteration or analysis if timeliness requirements dictate. The node receives the Division PERINTREP/SITREP/INTREP from G2 Main and forwards it to any members of his network which did not receive it. All central nodes link directly to G2 Operations at the DMAIN except the 124th MI Bn TCAE, which links to the All Source Production Section of G2, due to security requirements.

3. The OIC's of these key analytical nodes must present, discuss and defend their points of view with the G2 operations officer at DMAIN, who is responsible for assembling the division's overall estimate of the current situation. The central nodes receive and retransmit updates of this estimate in the form of the PERINTREP, G2/S2 SITREP, and the INTREP. They provide the necessary linkage and intermediate level of analysis between the division's units which are fighting the current battle and the central analytical section which is compiling an overall picture of the battle for the division.

4. Following are the members and their responsibilities for each cell.

    a. Close Operations Intelligence Cell

       (1) G2 Operations - DTAC (center node),1st Brigade, 2d Brigade, 48th Brigade. 2-4 Cavalry Squadron.

       (2) Consolidation of cavalry and maneuver brigade current estimates.

       (3) Analysis of the current, close situation and production of the close operations feeder report for the division PERINTREP, S2 SITREP, and INTREP's

       (4) Forwarding the feeder reports to G2 Operations, DMAIN on the odd hour.

       (4) Analyst to analyst discussion with elements of the close operations intelligence cell and with G2 Operations, DMAIN.

STANDARDIZED PRODUCTION RESPONSIBILITIES OF INTELLIGENCE CELLS

        b.   Rear Operations Intelligence Cell

            (1)  Operations - DREAR (center node), 24th DISCOM, 24th MP Company, 4th
Avn Brigade, 24th Signal Battalion.

            (2)  Consolidation of current estimates from units in the division rear.

            (3)  Analysis of the current, rear situation and production of the rear
operations feeder report for the division PERINTREP, S2 SITREP, and INTREP's

            (4)  Forwarding the feeder reports to G2 Operations, DMAIN on the odd hour.

            (5)  Analyst to analyst discussion with elements of the rear operations
intelligence cell and with G2 Operations, DMAIN.

        c.   Division Current Operations Intelligence Cell

            (1)  G2 Operations - DMAIN (center node).

            (2)  Maintenance and production of the division's current intelligence
estimate. Updating and maintenance of the IPB event template, and updating of the
Decision Support Template.

            (3)  Supervision and coordination of the current intelligence production
efforts of the center nodes of the other intelligence cells, with the exception of G2
Plans and Division TCAE.

            (4)  Consolidation of current estimate feeder information from each of the
other intelligence cells.

            (5)  Analysis of the overall current situation and production of division
PERINTREP, S2 SITREP, and INTREP's

            (6)  Supervising dissemination of the Division's PERINTREP's, S2 SITREP's,
AND INTREP's throughout the division on the even hour.

            (7)  Analyst to analyst discussion with the center nodes of the other
intelligence cells.

            (8)  Analyst to analyst discussion with S2's throughout the division.

            (9)  Analyst to analyst discussion and exchange of estimates, PERINTREP's,
S2 SITREP's, and INTREPS with the G2's and G2 Operations sections of Corps and the
adjacent divisions.

            (10)  Coordination with G2 Plans to ensure continuity of the current esti-
mate with estimates developed for future operations.

            (11)  Referral of areas of conflict to the G2.

 d.  Division Intelligence Plans Cell

 (1) G2 Plans - DMAIN (center node).

 (2) Supervision of the Maintenance and production of the division's intelligence estimate for future operations. This estimate is constructed by the All Source Production Section at the All Source Intelligence Center.

 (3) Coordination with G2 Operations, DMAIN, to insure continuity from the current estimate into the estimates for future operations.

 (4) Analyst to analyst discussion with S2's throughout the division concerning future operations.

 (5) Analyst to analyst discussion and exchange of future estimates, with the G2's and G2 Plans sections of Corps and the adjacent divisions.

 (6) Referral of areas of conflict to the G2.

 (7) Division Battle Staff:  Provides liaison linkage with separate battalion S2's

 (8) FSE provides Enemy Forward Lines of Troops every two hours on the odd hour.

 (9) ADADO provides early warning of imminent air attack.

 (10) ADE provides the friendly obstacle overlay and corrections or changes to the current terrain analysis product.

 e.  Division All-Source Intelligence Cell

 (1) G2 ASIC - DMAIN (center node), Division ALO, Division Chemical Officer, Corps ASIC and SSO.

 (2) As center node of the All Source Intelligence Cell, consolidates information from collateral intelligence sources (The other intelligence cells plus DIVARTY, ADA, AVN Bde, EN Bn, Sig Bn, MI Bn and less the Special Intelligence Cell) into collateral input to both the current and future intelligence estimates.

 (3) Integrates Special Intelligence into its collateral estimate input, producing a Special Intelligence estimate of current and future battles. Sanitizes key elements of information when possible for inclusion into the collateral product.

 (4) Serves as the primary source of the deep operations piece of the division's current intelligence estimate to G2 Operations, DMAIN, in the form of PERINTREP Feeder, S2 SITREP Feeder, and INTREP Feeder Reports (GREEN 4a, 5a, and 6a Reports).

(5)   Provides feeder information to G2 Operations, DMAIN, concerning all areas of the battle to add depth to the current intelligence estimate.

(6)   Under the staff supervision of G2 Plans, DMAIN, conducts the initial stages of Intelligence Preparation of the Battlefield, through the event templating step. Produces and maintains collateral and all source estimates of future operations to support the planning effort.

(7)   Maintains the division's Order of Battle (OB) files. Serves as division level accountant concerning current strengths of enemy units. Distributes OB file updates to subordinate units.

(8)   Maintains the division's terrain data base.

(9)   Receives the single source product from the Division TCAE, 124th MI Bn.

(10)   Conducts analyst to analyst discussion with members of the All Source Intelligence Cell, with the Corps ASIC, with Corps SSO, with the Division TCAE, with G2 Plans and Operations at DMAIN, and with all other members of the Division Intelligence System as required.

(11)   Provides in depth current analysis of specific topics as required.

(12)   Refers areas of conflict or overcommitment to the G2.


(13)   24th DIVARTY

(a)   As a member of the division intelligence battle staff, drafts the enemy artillery appendix to the division intelligence estimate during the planning phase.

(b)   Participates in the threat integration phase of the IPB process as the situation permits.

(c)   Analyzes current enemy artillery information, especially from TACFIRE and FIREFINDER systems, and produces intelligence reports on enemy artillery, locating artillery battalions, RAGs, DAGs, and other artillery formations.

(d)   Analyzes current TACFIRE data and develops a single source, independent estimate of the disposition of enemy maneuver units facing the division. Provides this estimate, as well as a current Enemy Forward Line of Troops (EFLT) and Enemy Forward Line of Reconnaissance (EFLR) based upon TACFIRE data, in his PERINTREP's, S2 SITREPS, and INTREPS. Includes in his reports enemy BDA as obtained from TACFIRE.

(e)  Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly the ASPS within the All Source Intelligence Center. Conducts similar discussions with G2 Operations, and with the G2 as required.

(14)  24th Combat Aviation Brigade

(a)  As a member of the division intelligence battle staff, drafts enemy ADA appendix and ADA overlay to the division intelligence estimate during the planning phase.

(b)  Participates in the planning phases of the IPB process as the situation permits.

(c)  Analyzes current enemy ADA information and produces intelligence reports on enemy ADA. Submits PERINTREP's, S2 SITREP's, and INTREPS which estimate the enemy ADA threat.

(d)  Drafts the friendly air avenues of approach overlay over friendly and enemy territory.

(e)  Reports on the location of enemy forces, BDA, and corrections to terrain data based upon observations made by the aircraft of the Brigade.

(f)  Provides TV imagery of requested sites and of targets of opportunity to G2 for readout.

(g)  Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly the ASPS within the All Source Intelligence Center. Conducts similar discussions with G2 Operations, and with the G2 as required.

(15)  1-5 ADA Battalion

(a)  As a member of the division intelligence battle staff, drafts the enemy air appendix and the air avenue of approach overlay to the division intelligence estimate during the planning phase.

(b)  Participates in the threat integration phase of the IPB process as the situation permits.

(c)  Analyzes current enemy air information and produces intelligence reports on enemy air. Submits PERINTREP's, S2 SITREP's, and INTREPS which estimate the enemy air threat.

(d)  Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly with ASPS, ALO, and 1-5 ADA Bn. Conducts similar discussions with G2 Operations, and with the G2 as required.

(16)    124th MI Battalion

(a)    As a member of the division intelligence battle staff, assists the Counterintelligence Analysis Section (CIAS) in developing an estimate of enemy Human Intelligence Activities during the planning process.

(b)    Participates in the planning phase of the IPB process at the situation permits.

(c)    Provides the known, suspected, and templated locations of enemy tactical and operational level HUMINT elements.

(17)    3d Engineer Battalion

(a)    As a member of the division intelligence battle staff, drafts the enemy mobility/countermobility appendix to the division intelligence estimate during the planning phase.

(b)    Participates in planning phases of the IPB process as the situation permits.

(c)    Analyzes current enemy mobility/countermobility information and produces intelligence reports on enemy engineer activity. Reports locations of enemy obstacles, contaminated areas, and changes in the division's terrain analysis product. Submits this information in his PERINTREP's, S2 SITREP's, and INTREPS.

(d)    Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly the ASPS and the terrain analysis team within the All Source Intelligence Center. Conducts similar discussions with G2 Operations, and with the G2 as required.

f.    Division Special Intelligence Cell

(1)    Division TCAE - 124th MI Bn (center node), SIGINT/EW Elements of the 124th MI Battalion, QUICK FIX Platoon of 24th Avn Brigade, Corps TCAE.

(2)    Consolidation of Special Intelligence information from all available sources.

(3)    Analysis and production of Special Intelligence. Conversion of Special Intelligence into tactically meaningful terms whenever possible in order to permit quick integration with colateral material at the ASIC.

(4)    Reporting of Special Intelligence to the G2 ASIC and to the Corps TCAE.

   (5) Forwarding of evaluated non-compartmented combat information and ESM ctly to maneuver unit S2's and into fire support channels.

   (6) Production of the ˙enemy EW capability˙ component to the division estimate.

# ANNEX C
## STANDARDIZED DISSEMINATION CRITERIA TO SUBORDINATE COMMANDS

1.  Following is a list of standardized intelligence requirments of the major subordinate commands and separate battalions of the division. The Collection Management and Dissemination Section will automatically disseminate these items of information in accordance with the plan shown below. Collection Management and Dissemination Section will also disseminate information identified as needed by the division collection plan, the division targeting priorities, and, where possible, by the collection plans and RFI's received from subordinate commands.

    a.  ENEMY INTELLIGENCE

        (1)  Forward Line of Enemy Reconnaissance (EFLR). Report to: Committed Maneuver Bdes, Cav.

        (2)  Surveillance, recon teams in Div AO. Report to: effected MSC responsible for the terrain.

    b.  ENEMY MANEUVER

        (1)  Battalions or larger units in Div Area of Interest: Locations, dispositions, strengths. Report to: Maneuver Bdes, Avn Bde, FSE.

        (2)  Platoons or larger in a Bde AO: Locations, dispositions, strengths. Report to: The effected Bde. FSE if targetable but not targeted.

        (3)  Airborne Forces: Locations and strengths of forces which could attack Div AO. Report to: DISCOM.

        (4)  Unconventional Warfare Elements of any size: Locations, dispositions, strengths, targets, missions. Report to: DISCOM.

    c.  ENEMY FIRE SUPPORT (Incl AIR)

        (1)  Batteries: All locations of arty or mortar batteries or larger effecting AO. Report to: DIVARTY.

        (2)  Multiple Rocket Launcher batteries or larger effecting Div AO. Report to: DISCOM, DIVARTY, FSE.

        (3)  Surface to Surface Missiles (SSM): Individual launchers, associated elements. Report to: DISCOM, DIVARTY, FSE.

        (4) Aviation: projected missions, targets for ground attack, abn/aasslt. Other data desired: number and type A/C, ETA. Report to: DISCOM, Avn Bde, FSE

        (5)  Aviation: Sightings of more than two enemy aircraft. Report to: ADA Bn

STANDARDIZED DISSEMINATION CRITERIA TO SUBORDINATE COMMANDS

     d.   ENEMY AIR DEFENSE

         (1)   Radars associated with ADA.  Report to: Avn Bde.

         (2)   Gun and launcher positions.  Report to: Avn Bde.

     e.   ENEMY MOBILITY/COUNTERMOBILITY

         (1)   Obstacles, changes to known terrain.  Report to: Engineer Bn and MSC in the effected area.

         (2)   Changes to mobility on MSR.  Report to: DISCOM, Engineer Bn, MSC in the effected area.

     f.   ENEMY COMBAT SUPPORT

         (1)   Attitude of local populace toward US and the enemy.  Report to: DIS-COM.

         (2)   Refugees: numbers, locations, strengths, direction of travel, attitude.  Report to: DISCOM.

     g.   ENEMY COMMAND AND CONTROL

24th ID
Draft Intelligence Reporting SOP

19 Apr 90

1. TWO GENERAL REPORT FORMATS: Report intelligence information
using one of two formats, the intelligence estimate format for
analyzed combat intelligence, and the SALUTE format for
unprocessed combat information.

2. COMBAT INTELLIGENCE REPORTS: Whenever the demands for
timeliness permit, G2's and S2's communicate with each other in
the form of analyzed intelligence rather than raw combat
information. The Division uses a system of three combat
intelligence reports which are based upon timeliness
requirements. G2 and S2's share routine, complete updates  twice
per day in the PERINTREP. They share abbreviated updates every
two hours in the S2 SITREP. They share intelligence about
critical developments immediately using the very brief INTREP.
The three combat intelligence reports all use the standard
intelligence estimate format. They differ in the precedence and
the amount of detail provided. Division G2, Brigade and
Battalion S2's all produce these reports, and send them to the
next higher and next lower echelons. We use the estimate format,
because it is a complete statement of the G2's or S2's
professional opinion, built logically upon a set of visible
facts or assumptions.

   a.  THE FACTS AND ASSUMPTIONS: The most important facts and
assumptions are the locations and strengths of enemy units on
LINE(S) 3B. This information, called "ENEMY DISPOSITIONS" in the
intelligence estimate, is the foundation of the G2/S2's overall
conclusions, and therefore the focus of collection, analysis,
and discussion among intelligence officers. Because these enemy
dispositions serve as the G2/S2's "proof" for his opinions, they
must include the enemy unit SIZE, STRENGTH, LOCATION (if known),
TIME, THE SOURCE OF THE INFORMATION, AND S2'S EVALUATION OF THE
INFORMATION. The intelligence officer reports located,
unlocated, and unidentified units which are significant to him
(i.e. G2 tracks maneuver Bns and Separate Companies). These
dispositions are the result of G2/S2 analysis; not merely
listings of recent spot reports. The S2 makes his evaluation
based upon all of the reports on hand. As a source, he may
indicate a single, best source, or codes for several sources. If
he is relying on a particular report in making his analysis, he
should list his journal number for that report. With this
information, the whole intelligence system can do all-source
analysis, can solve inconsistancies, and can avoid circular
reporting. The  G2/S2 has three other spaces in which to provide
his supporting facts and assumptions: WEATHER, TERRAIN, and
RECENT ACTIVITIES.

   b.    THE PROFESSIONAL OPINION: As a minimum, the G2/S2 must
keep higher and lower staffs informed on his opinion concerning
enemy COMMITTED, REINFORCING, ARTY/AIR, and NBC (LINES 3C-F), as

well as his assessment of ENEMY CAPABILITIES (LINE 4) and his
CONCLUSIONS (LINE 5). He updates this information twice per day
in the PERINTREP, and more often in the S2 SITREP or in INTREPs
if changes occur.

c.    THE INTELLIGENCE REPORTS:

      (1)   THE PERINTREP:   A twice daily update of the current
Intelligence Estimate (Sent at 1200 and 2400 hrs). It allows G2
and S2's to compare, contrast, and adjust the estimates from
above and below. It permits them to clear away outdated
information and piece together a consolidated view of the
battle. It contains a detailed laydown of the dispositions of
all significant enemy forces (LINE 3B). It should have enough
detail that the receiver can clean off his overlays and post
current overlays based upon the report. Send it in written form
(FM TACFAX) if possible. If verbal, send it between TOC oficers.
G2 and S2 personally read this report. Keep it as concise as
possible. Send it at ROUTINE precedence.

      b.    The G2/S2 SITREP: Produce this every two hours, on the
even hour, except at 1200 and 2400hrs. This is the G2/S2's most
important tool for maintaining a current picture of the battle
being fought at higher and lower echelons. It reduces the strain
on communications by limiting the need for frequent SALUTE
reports. G2 and S2 principals or duty officers prepare and send
this verbally to their counterparts. It is a carbon copy of the
situation update which the G2 or S2 would give to his commander
on short notice. As a minimum, it must include the heading
information, any enemy unit locations which have changed
significantly in the past two hours, and the committed and
reinforcing lines (3C&D). Send it at PRIORITY precedence.

      c.    The INTREP: The G2 or S2 sends an INTREP when he
perceives a development which, in his judgement, cannot wait
until the next scheduled G2/S2 SITREP. Typically he sends this
report when he suspects that the enemy has developed a
significant new capability, or has changed his course of action.
S2's of units in active contact with the enev use the INTREP to
keep higher HQ posted on the rapidly changing situation. Other
S2's, in units which are not actively involved, rely upon their
scheduled reports to update the system. INTREP's have the
highest priority on the FM O&I net. If the net is being used for
INTREP reporting. S2's will send scheduled reports via burst FM
TACFAX, RATT, phone, or FM voice, in that order. The title
INTREP alone alerts all that this is a critical intelligence
report. Although the format is the same as the PERINTREP and
G2/S2 SITREP, it is limited in detail, covering only those
elements necessary to describe the enemy capability, and the new
enemy dispositions which have led the author to his conclusions.
It is a carbon copy of the situation update which the G2/S2
would give to his commander concerning a critical development in
the battle. The staff principal or duty officer should
communicate this directly to his counterpart at higher or lower
echelons. Send it at IMMEDIATE precedence.

3.   COMBAT INFORMATION REPORTS: In order to prevent flooding of communications and analysis, the G2 and S2's exchange combat information only in answer to SOP's, specific requests or taskings. S2's use the SALUTE report to pass unevaluated combat information in accordance with the reporting thresholds established in the Field SOP's of other S2's and the G2. They use the RFI Report (Response to a Request for Information), which is also in SALUTE format, to pass combat information which seems to answer another unit's specific taskings or requests for information (Such as RFI's or SOR's). Collectors usually send combat information, rather than intelligence. There are several formats for such collection reports. When timeliness does not permit the G2/S2 to analyze, consolidate, and filter combat information reports, he may forward them to those elements needing them in the original format without comment, but he must indicate the original source of the report. Normally send these reports at ROUTINE precedence between G2's and S2's, but duty officers may choose higher precedences as appropriate.

     a. The Response to a Request for Information (RFI): This is a response to an RFI, SOR, or any other specific request or tasking. Send it in SALUTE format, but include a reference to the original requirement number. Send it as soon as the information is obtained to those who requested it.

     b.   SALUTE Report: Use this format to send critical combat information which meets the SOP reporting thresholds of the receiving unit. State the source of the information and include an evaluation of the source and information within the report. Also include your expected Circular Error Probable (CEP) and any BDA in the report. SALUTE reports which clearly do not meet the established reporting thresholds should not be forwarded. Their information may be consolidated into the next G2/S2 SITREP, if appropriate.

APPENDIX 2 TO ANNEX X TO 24TH ID (M) FIELD SOP
G2 REPORTS

1. PURPOSE. To provide guidance on the types, fequency, media and responsibil-
ities associated with intelligence reporting in the field.

2. PROPONENCY. ACofS, G2, 24th Inf Div (M).

3. GENERAL. Types of reports/requests.

| TITLE | SUBMITTING UNIT | DUE | PREFERRED METHOD |
|---|---|---|---|
| Spot Report (Green 1) | All | As Required | FM |
| RRI (Green 2) | All | As Required | FAX/PCM/FM |
| SIR (Green 3) | Bn's to Bde's | 1800 | FM |
| INTREP (Green 4) | G2 to MSC's/Sep Bn's MSC's/Sep Bn's to G2 | As Required | FM |
| G2/S2 SITREP (Green 5) | Same As Above | Every 2 Hours Begining 0200 | FAX,PCM,FM |
| PERINTREP (Green 6) | Same As Above | 1200 & 2400 | FAX,PCM,FM |
| GENERAL TEXT (Green 7) | All | As Required | FAX,PCM,FM |
| RFI (Green 8) | All | As Required | FAX,PCM,FM |
| RSR (Green 9) | TCAE, 124th MI Bn | 0600, 1800 and as required to report changes | TTY to SSO Comm Ctr |
| AIR RECON REQUEST (Green 10) | MSC's | As Required | FAX,PCM,FM |

APPENDIX 2 TO ANNEX X TO 24TH ID (M) FIELD SOP
G2 REPORTS

4. TABS:

    A - STANDARDIZED INTELLIGENCE REPORTING THRESHOLDS

    B - PRODUCTION RESPONSIBILITIES OF INTELLIGENCE CELLS

    C - STANDARDIZED DISSEMINATION CRITERIA TO SUBORDINATE COMMANDS

    D - INTELLIGENCE COMMUNICATIONS CHANNEL DIAGRAMS - TBP

    E - RELIABILITY/CREDIBILITY OF SOURCE CODES

    F - UNIT CODES

    G - SPOT REPORT

    H - RESPONSE TO REQUEST FOR INFORMATION (RRI)

    I - INTELLIGENCE REPORTS (INTREP, G2/S2 SITREP, PERINTREP)

    J - GENERAL TEXT

    K - REQUEST FOR INFORMATION (RFI)

    L - RESOURCE STATUS REPORT (RSR)

    M - AERIAL RECON REQUEST

TAB A TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED INTELLIGENCE REPORTING THRESHOLDS

1.  Immediate Reporting Thresholds:  All division elements report the following observations via S2 SITREP channels (See Annex B) without delay, using the SALUTE (for combat information) or INTREP (for analyzed intelligence) formats.  Submission into Fire Support channels DOES NOT fulfill this requirement.

    a.  BOS: INTELLIGENCE

        (1)  Enemy deception, known or suspected.

        (2)  Initial contact with enemy reconnaissance in each U.S. battalion's sector.

        (3)  Changes of 5km or more in the EFLR (Enemy Forward Line of Reconnaissance) since the last report.

        (4)  Indications of enemy dismounted surveillance, sabotage, terrorism in the division area of operations.

    b.  BOS: MANEUVER

        (1)  First contact with any enemy force in a U.S. battalion's area of operations after a break of 24 hrs or more.

        (2)  Initial contact with an enemy battalion or larger size force in a U.S. brigade area of operations.

        (3)  Changes of 5km or more in the EFLT (Enemy Forward Line of Troops) since the last report.

        (4)  Sighting of an enemy company or larger size force in the division rear area.

    c.  BOS: FIRE SUPPORT

        (1)  Artillery preparation or barrage.

        (2) Incoming enemy artillery fire after a break of 24 hrs or more.

    d.  BOS: AIR DEFENSE:  Formations of more than two rotary or fixed wing aircraft approaching the division area of operations.

    e.  BOS: MOBILITY/COUNTERMOBILITY

        (1)  Significant corrections to the estimated capacity of a mobility corridor (e.g. a corridor previously estimated by G2 to support a company can actually support a battalion).

TAB A TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED INTELLIGENCE REPORTING THRESHOLDS

        (2)   Significant corrections to the estimated overall mobility factors in the area of interest (e.g. areas estimated to be 'No-Go' are actually 'Slow Go').

        (3)   Gain or loss of mobility at any spot on an MSR or other high speed route (e.g. destruction of a bridge, change in bridge classification).

    f.  BOS: COMBAT SUPPORT

        (1)   First use of nuclear, biological, or chemical weapons in Division AO.

        (2)   Use of any unexpected chemical or biological agent in the Division AO.

        (3)   Enemy convoy of 50 vehicles or more in the division AO.

    g.  BOS: COMMAND AND CONTROL:  The locations of enemy battalion and larger CP's.

2.   Special Reporting Tasks for Specific Divisional Units

    a.  Specific divisional units have standardized reporting requirements based upon their collection capabilities. These units report in SALUTE or INTREP formats and, in some cases, in unique reporting formats. They report this information to G2 CM&D by the most direct route possible. Priority of communications is Computer link, RATT, TTY, Phone, and FAX, and finally FM.  CM&D responsibilities to retransmit the reports are also listed in ANNEX C.

    b.  Specific reporting responsibilities od the following units will be published later.

        (1)   124th MI Bn

        (2)   TCAE

        (3)   Counterintelligence Section

        (4)   Interrogation of Prisoners of War Section

        (5)   S2, DIVARTY

        (6)   S2, 24th AVN BDE

        (7)   S2, 2-4 Cavalry

        (8)   S2, 1-5 ADA

        (9)   Division Chemical Officer

        (10)   Assistant Division Signal Officer

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

1. The central node of each intelligence cell builds and maintains an intelligence estimate for its piece of the overall battle by integrating the inputs from members of the cell into a single picture. The node provides this intelligence estimate feeder report to G2 Operations at the DMAIN, where it serves as the basis for a finished divisional level estimate. In turn, the central node receives feedback from G2 Operations at the DMAIN, which has integrated its input with information from other divisional assets and from Corps, and which sends out estimate updates in the form of Division PERINTREPS, G2/S2 SITREPS, and INTREPS (GREEN 4-6).

2. The center node of each cell shares its estimate informally with the units in the cell. It receives reports from other cell members, and determines what items must be sent to G2 Operations at the DMAIN. Generally, it receives unit PERINTREPs, SITREPs, and INTREPs and integrates them into PERINTREP Feeder Reports, G2/S2 SITREP Feeder Reports, and INTREP Feeder Reports (GREEN 4A, 5A, and 6A) to send to the DMAIN and to share with members of the close operations network. The central node may also forward unit reports directly without alteration or analysis if timeliness requirements dictate. The node receives the Division PERINTREP/SITREP/INTREP from G2 Main and forwards it to any members of his network which did not receive it. All central nodes link directly to G2 Operations at the DMAIN except the 124th MI Bn TCAE, which links to the All Source Production Section of G2, due to security requirements.

3. The OIC's of these key analytical nodes must present, discuss and defend their points of view with the G2 operations officer at DMAIN, who is responsible for assembling the division's overall estimate of the current situation. The central nodes receive and retransmit updates of this estimate in the form of the PERINTREP, G2/S2 SITREP, and the INTREP. They provide the necessary linkage and intermediate level of analysis between the division's units which are fighting the current battle and the central analytical section which is compiling an overall picture of the battle for the division.

4. Following are the members and their responsibilities for each cell.

    a. Close Operations Intelligence Cell

        (1) G2 Operations - DTAC (center node),1st Brigade, 2d Brigade, 48th Brigade, 2-4 Cavalry Squadron.

        (2) Consolidation of cavalry and maneuver brigade current estimates.

        (3) Analysis of the current, close situation and production of the close operations feeder report for the division PERINTREP, S2 SITREP, and INTREP's

        (4) Forwarding the feeder reports to G2 Operations, DMAIN on the odd hour.

        (4) Analyst to analyst discussion with elements of the close operations intelligence cell and with G2 Operations, DMAIN.

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

    b.  Rear Operations Intelligence Cell

        (1)  Operations - DREAR (center node), 24th DISCOM, 24th MP Company, 4th Avn Brigade, 24th Signal Battalion.

        (2)  Consolidation of current estimates from units in the division rear.

        (3)  Analysis of the current, rear situation and production of the rear operations feeder report for the division PERINTREP, S2 SITREP, and INTREP's

        (4)  Forwarding the feeder reports to G2 Operations, DMAIN on the odd hour.

        (5)  Analyst to analyst discussion with elements of the rear operations intelligence cell and with G2 Operations, DMAIN.

    c.  Division Current Operations Intelligence Cell

        (1)  G2 Operations - DMAIN (center node).

        (2)  Maintenance and production of the division's current intelligence estimate. Updating and maintenance of the IPB event template, and updating of the Decision Support Template.

        (3)  Supervision and coordination of the current intelligence production efforts of the center nodes of the other intelligence cells, with the exception of G2 Plans and Division TCAE.

        (4)  Consolidation of current estimate feeder information from each of the other intelligence cells.

        (5)  Analysis of the overall current situation and production of division PERINTREP, S2 SITREP, and INTREP's

        (6)  Supervising dissemination of the Division's PERINTREP's, S2 SITREP's, AND INTREP's throughout the division on the even hour.

        (7)  Analyst to analyst discussion with the center nodes of the other intelligence cells.

        (8)  Analyst to analyst discussion with S2's throughout the division.

        (9)  Analyst to analyst discussion and exchange of estimates, PERINTREP's, S2 SITREP's, and INTREPS with the G2's and G2 Operations sections of Corps and the adjacent divisions.

        (10)  Coordination with G2 Plans to ensure continuity of the current esti- mate with estimates developed for future operations.

        (11)  Referral of areas of conflict to the G2.

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

    d.  Division Intelligence Plans Cell

        (1)  G2 Plans - DMAIN (center node).

        (2)  Supervision of the Maintenance and production of the division's intelligence estimate for future operations. This estimate is constructed by the All Source Production Section at the All Source Intelligence Center.

        (3)  Coordination with G2 Operations, DMAIN, to insure continuity from the current estimate into the estimates for future operations.

        (4)  Analyst to analyst discussion with S2's throughout the division concerning future operations.

        (5)  Analyst to analyst discussion and exchange of future estimates, with the G2's and G2 Plans sections of Corps and the adjacent divisions.

        (6)  Referral of areas of conflict to the G2.

        (7)  Division Battle Staff:  Provides liaison linkage with separate battalion S2's

        (8)  FSE provides Enemy Forward Lines of Troops every two hours on the odd hour.

        (9)  ADADO provides early warning of imminent air attack.

        (10)  ADE provides the friendly obstacle overlay and corrections or changes to the current terrain analysis product.

    e.  Division All-Source Intelligence Cell

        (1)  G2 ASIC - DMAIN (center node), Division ALO, Division Chemical Officer, Corps ASIC and SSO.

        (2)  As center node of the All Source Intelligence Cell, consolidates information from colateral intelligence sources (The other intelligence cells plus DIVARTY, ADA, AVN Bde, EN Bn, Sig Bn, MI Bn and less the Special Intelligence Cell) into colateral input to both the current and future intelligence estimates.

        (3)  Integrates Special Intelligence into its colateral estimate input, producing a Special Intelligence estimate of current and future battles. Sanitizes key elements of information when possible for inclusion into the colateral product.

        (4)  'Serves as the primary source of the deep operations piece of the division's current intelligence estimate to G2 Operations, DMAIN, in the form of PERINTREP Feeder, S2 SITREP Feeder, and INTREP Feeder Reports (GREEN 4a, 5a, and 6a Reports).

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

(5)  Provides feeder information to G2 Operations, DMAIN, concerning all areas of the battle to add depth to the current intelligence estimate.

(6)  Under the staff supervision of G2 Plans, DMAIN, conducts the initial stages of intelligence Preparation of the Battlefield, through the event templating step. Produces and maintains colateral and all source estimates of future operations to support the planning effort.

(7)  Maintains the division's Order of Battle (OB) files. Serves as division level accountant concerning current strengths of enemy units. Distributes OB file updates to subordinate units.

(8)  Maintains the division's terrain data base.

(9)  Receives the single source product from the Division TCAE, 124th MI Bn.

(10)  Conducts analyst to analyst discussion with members of the All Source Intelligence Cell, with the Corps ASIC, with Corps SSO, with the Division TCAE, with G2 Plans and Operations at DMAIN, and with all other members of the Division Intelligence System as required.

(11)  Provides in depth current analysis of specific topics as required.

(12)  Refers areas of conflict or overcommitment to the G2.

(13)  24th DIVARTY

(a)  As a member of the division intelligence battle staff, drafts the enemy artillery appendix to the division intelligence estimate during the planning phase.

(b)  Participates in the threat integration phase of the IPB process as the situation permits.

(c)  Analyzes current enemy artillery information, especially from TACFIRE and FIREFINDER systems, and produces intelligence reports on enemy artillery, locating artillery battalions, RAGs, DAGs, and other artillery formations.

(d)  Analyzes current TACFIRE data and develops a single source, independent estimate of the disposition of enemy maneuver units facing the division. Provides this estimate, as well as a current Enemy Forward Line of Troops (EFLT) and Enemy Forward Line of Reconnaissance (EFLR) based upon TACFIRE data, in his PERINTREP's, S2 SITREPS, and INTREPS. Includes in his reports enemy BDA as obtained from TACFIRE.

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

(e)  Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly the ASPS within the All Source Intelligence Center. Conducts similar discussions with G2 Operations, and with the G2 as required.

(14)  24th Combat Aviation Brigade

(a)  As a member of the division intelligence battle staff, drafts enemy ADA appendix and ADA overlay to the division intelligence estimate during the planning phase.

(b)  Participates in the planning phases of the IPB process as the situation permits.

(c)  Analyzes current enemy ADA information and produces intelligence reports on enemy ADA. Submits PERINTREP's, S2 SITREP's, and INTREPS which estimate the enemy ADA threat.

(d)  Drafts the friendly air avenues of approach overlay over friendly and enemy territory.

(e)  Reports on the location of enemy forces, BDA, and corrections to terrain data based upon observations made by the aircraft of the Brigade.

(f)  Provides TV imagery of requested sites and of targets of opportunity to G2 for readout.

(g)  Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly the ASPS within the All Source Intelligence Center. Conducts similar discussions with G2 Operations, and with the G2 as required.

(15)  1-5 ADA Battalion

(a)  As a member of the division intelligence battle staff, drafts the enemy air appendix and the air avenue of approach overlay to the division intelligence estimate during the planning phase.

(b)  Participates in the threat integration phase of the IPB process as the situation permits.

(c)  Analyzes current enemy air information and produces intelligence reports on enemy air. Submits PERINTREP's, S2 SITREP's, and INTREPS which estimate the enemy air threat.

(d)  Conducts analyst to analyst discussion with other members of the .vision all source intelligence cell, particularly with ASPS, ALO, and 1-5 ADA Bn. onducts similar discussions with G2 Operations, and with the G2 as required.

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

       (16)   124th MI Battalion

       (a)   As a member of the division intelligence battle staff, assists the Counterintelligence Analysis Section (CIAS) in developing an estimate of enemy Human Intelligence Activities during the planning process.

       (b)   Participates in the planning phase of the IPB process at the situatin permits.

       (c)   Provides the known, suspected, and templated locations of enemy tactical and operational level HUMINT elements.

       (17)   3d Engineer Battalion

       (a)   As a member of the division intelligence battle staff, drafts the enemy mobility/countermobility appendix to the division intelligence estimate during the planning phase.

       (b)   Participates in planning phases of the IPB process as the situation permits.

       (c)   Analyzes current enemy mobility/countermobility information and produces intelligence reports on enemy engineer activity. Reports locations of enemy obstacles, contaminated areas, and changes in the division's terrain analysis product. Submits this information in his PERINTREP's, S2 SITREP's, and INTREPS.

       (d)   Conducts analyst to analyst discussion with other members of the division all source intelligence cell, particularly the ASPS and the terrain analysis team within the All Source Intelligence Center. Conducts similar discussions with G2 Operations, and with the G2 as required.

    f.   Division Special Intelligence Cell

       (1)   Division TCAE - 124th MI Bn (center node), SIGINT/EW Elements of the 124th MI Battalion, QUICK FIX Platoon of 24th Avn Brigade, Corps TCAE.

       (2)   Consolidation of Special Intelligence information from all available sources.

       (3)   Analysis and production of Special Intelligence. Conversion of Special Intelligence into tactically meaningful terms whenever possible in order to permit quick integration with colateral material at the ASIC.

       (4)   Reporting of Special Intelligence to the G2 ASIC and to the Corps TCAE.

TAB B TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED PRODUCTION RESPONSIBILIOTIES OF INTELLIGENCE CELLS

       (5)   Forwarding of evaluated non-compartmented combat information and ESM ctly to maneuver unit S2's and into fire support channels.

       (6)   Production of the 'enemy EW capability' component to the division estimate.

TAB C TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED DISSEMINATION CRITERIA TO SUBORDINATE COMMANDS

1. Following is a list of standardized intelligence requirments of the major subordinate commands and separate battalions of the division. The Collection Management and Dissemination Section will automatically disseminate these items of information in accordance with the plan shown below. Collection Management and Dissemination Section will also disseminate information identified as needed by the division collection plan, the division targeting priorities, and, where possible, by the collection plans and RFI's received from subordinate commands.

    a. ENEMY INTELLIGENCE

        (1) Forward Line of Enemy Reconnaissance (EFLR). Report to: Committed Maneuver Bdes, Cav.

        (2) Surveillance, recon teams in Div AO. Report to: effected MSC responsible for the terrain.

    b. ENEMY MANEUVER

        (1) Battalions or larger units in Div Area of Interest: Locations, dispositions, strengths. Report to: Maneuver Bdes, Avn Bde, FSE.

        (2) Platoons or larger in a Bde AO: Locations, dispositions, strengths. Report to: The effected Bde. FSE if targetable but not targeted.

        (3) Airborne Forces: Locations and strengths of forces which could attack Div AO. Report to: DISCOM.

        (4) Unconventional Warfare Elements of any size: Locations, dispositions, strengths, targets, missions. Report to: DISCOM.

    c. ENEMY FIRE SUPPORT (Incl AIR)

        (1) Batteries: All locations of arty or mortar batteries or larger effecting AO. Report to: DIVARTY.

        (2) Multiple Rocket Launcher batteries or larger effecting Div AO. Report to: DISCOM, DIVARTY, FSE.

        (3) Surface to Surface Missiles (SSM): Individual launchers, associated elements. Report to: DISCOM, DIVARTY, FSE.

        (4) Aviation: projected missions, targets for ground attack, abn/aasslt. Other data desired: number and type A/C, ETA. Report to: DISCOM, Avn Bde, FSE

        (5) Aviation: Sightings of more than two enemy aircraft. Report to: ADA Bn

TAB C TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
STANDARDIZED DISSEMINATION CRITERIA TO SUBORDINATE COMMANDS

    d.  ENEMY AIR DEFENSE

        (1)  Radars associated with ADA.  Report to: Avn Bde.

        (2)  Gun and launcher positions.  Report to: Avn Bde.

    e.  ENEMY MOBILITY/COUNTERMOBILITY

        (1)  Obstacles, changes to known terrain.  Report to: Engineer Bn and MSC
in the effected area.

        (2)  Changes to mobility on MSR.  Report to: DISCOM, Engineer Bn, MSC in
the effected area.

    f.  ENEMY COMBAT SUPPORT

        (1)  Attitude of local populace toward US and the enemy.  Report to: DIS-
COM.

        (2)  Refugees: numbers, locations, strengths, direction of travel, atti-
tude.  Report to: DISCOM.

    g.  ENEMY COMMAND AND CONTROL

TAB E TO AFFENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
RELIABILITY/CREDIBILITY OF SOURCE CODES

RELIABILITY OF SOURCE

A - Completely Reliable
B - Usually Reliable
C - Fairly Reliable
D - Not Usually Reliable
E - Unreliable
F - Reliability Cannot Be Judged

CREDIBILITY OF SOURCE

1 - Confirmed By Other Sources
2 - Probably True
3 - Possibly True
4 - Doubtfully True
5 - Improbable
6 - Truth Cannot Be Judged

TAB F TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FIELD SOP
UNIT CODES

1. The following 3 digit Unit Header Codes will be used on all messages:

| CODE | UNIT | CODE | UNIT |
|------|------|------|------|
| G2M | G2 MAIN (OPS) | MPC | 24TH MP CO |
| G2A | G2 MAIN (ASIC) | 341 | 3-41 FA |
| G2T | G2 TAC | 141 | 1-41 FA |
| G2R | G2 REAR | 114 | 1-14 FA |
| 1BD | 1ST BRIGADE | 464 | 4-64 AR |
| 2BD | 2ND BRIGADE | 164 | 1-64 AR |
| 48B | 48TH BRIGADE | 369 | 3-69 AR |
| VBD | VICTORY BRIGADE | 108 | 1-108 AR |
| AVB | AVIATION BRIGADE | 1FT | 1-121 IN |
| ART | DIVARTY | 2FT | 2-121 IN |
| DIS | DISCOM | 27I | 2-7 IN |
| AAA | 1-5 AAA | 37I | 3-7 IN |
| ADA | 1-2 ADA | 315 | 3-15 IN |
| CAV | 2-4 CAV | AHB | 1-24 AV BN |
| 3EN | 3RD ENGINEER | 324 | 3-24 AV BN |
| MIB | 124TH MI BN | 260 | 260TH QM BN |
| 24S | 24TH SIGNAL BN | 92E | 92ND ENGINEER |

TAB G TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
SPOT REPORT (GREEN 1)

## INTELLIGENCE SPOT REPORT

DTG _____        UNIT CODE _____

SIZE (Actual/Estimated size of force by type) _____


ACTIVITY (What) _____

LOCATION (Where-use grid coordinates) _____

UNIT (Identification of enemy force) _____

TIME (When-list DTG of occurrence) _____

EQUIPMENT (Special enemy equipment) _____

REMARKS _____
_____
_____

SOURCE: _____

EVAL: _____

CEP: _____

TAB H TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
RESPONSE TO REQUEST FOR INFORMATION (GREEN 2)


DTG _____        UNIT CODE ____

SIZE (Actual/Estimated size of force by type) _____


ACTIVITY (What) _____

LOCATION (Where-use grid coordinates) _____

UNIT (Identification of enemy force) _____

TIME (When-list DTG of occurrence) _____

EQUIPMENT (Special enemy equipment) _____

RFI *:_____*

REMARKS _____
_____
_____
_____

SOURCE: _____

EVAL: _____

CEP: _____

*The only difference between this report and the Intelligence Spot Report is the
addition of the RFI number. This will allow the sender and the receiver to track
which RFI's have been answered.

TAB I TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
INTELLIGENCE REPORT

1. The following reports will be used to pass intelligence between the Division G2 and MSC/Sep Bn S2's. All reports use the same form.

    a. INTREP (Green 4): The G2 or S2 sends an INTREP when he perceives a developmen which, in his judgement, cannot wait until the next scheduled G2/S2 SITREP. Typically he sends this report when he suspects that the enemy has developed a significant new capability or has changed his course of action. INTREP's have the highest priority on the FM Intel net. The title INTREP alone alerts all that this is a critical intelligence report. Although the format is the same as the PERINTREP and the G2/S2 SITREP, it is limited in detail. It covers only those elements necessary to describe the new enemy capabilities or dispositions which have led to the author's conclusions. Send it IMMEDIATE precedence.

    b. G2/S2 SITREP (Green 5): Except for 1200 and 2400, this report is produced every two hours begining at 0200. This is the G2/S2's most important tool for maintainin a current picture of the battle being fought at higher and lower echelons. It is a carbon copy of the situation update which the G2 or S2 would give to his commander on short notice. As a minimum it must include the heading information, any enemy unit locations which have changed siginficantly in the past two hours, and the committed and reinforcing lines (3C&D). Send it PRIORITY precedence.

    c. PERINTREP (Green 6): A twice daily update of the current intelligence estimate sent at 1200 and 2400 hours. This report allows the G2 and the S2's to compare, contrast, and adjust the estimates from above and below. The report should have enough detail that the receiver can clean off his overlay and post current overlays based upon the report. Send it at ROUTINE precedence.

2. The forms will be filled out following the below instructions. The code letters indicate mandatory entries for the PERINTREP (P), G2/S2 SITREP (S), and INTREP (I). All other lines are optional. Absolute minimum entries for the G2/S2 SITREP are also enclosed in double lines on the form. If more space is needed, attach additional forms and number each as a page using the space provided in the upper right corner.

| LINE | CODE | INSTRUCTIONS |
|---|---|---|
| ALPHA | P, S, I | Enter a 4, 5, or 6 to designate the type of report. |
| BRAVO . | P, S, I | If the report is initiated within 24th ID, leave first section blank. Write the unit code in the second section. In the thrid section, write the journal number assigned by the orginating unit. If your are passing on a message you received, leave this number as original. If you are the originator, enter your journal number. |

TAB I TO APPENDIX 2 TO ANNEX X TO 24TH INF DIV (M) FSOP
INTELLIGENCE REPORT

| LINE | CODE | INSTRUCTIONS |
|------|------|--------------|
| CHARLIE | P, S, I | For scheduled reports (P, S) enter the scheduled report DTG. If it is an INTREP, enter the release time assigned by the originator. |
| DELTA | P, S, I | `U` - UNCLASSIFIED, `C` - CONFIDENTIAL, `S` - SECRET, `T` - TOP SECRET |
| 1. MISSION | | Send this only upon change in the friendly mission. |
| 2A. WEATHER | | Send current observation and any changes in the effects of the weather upon enemy or friendly operations. |
| 2B. TERRAIN | | Send only corrections to previous terrain analysis,map corrections, or new effects of terrain on enemy or friendly operations. Include effects of obstacles. |
| 3A1..10. DISPOSITION | | Each line is the originator's estimate of the current status of a single significant enemy unit. Generally these are maneuver and/or fire support units. Report all significant units in the PERINTREP. Report only those with significant changes in the G2/S2 SITREP. Report only those which the originator believes to be relevant in the INTREP. `UNIT` is as specific as possible down to identification and size. However, include unidentified and unlocated units of significance. `%` is the estimated percent strength. Enter `U/I` here or in other mandatory blocks if answer is unidentified. `DTG` is the time of latest observation. Under `SOURCE`, enter the echelon which collected the most trusted piece of information on the unit followed by the general type of the collector. Echelon codes are CO, BN, BDE, DIV, CORP, EAC. Collector codes are H-human source, I-aerial imagery,E-electronic warfare, R-radar or remote sensing devices, and M-multiple systems; i.e. electronic warfare plus human observation. Separate these with a `/`. |

TAB I TO APPENDIX 2 TO ANNEX X TO 24TH INF DIV (M) FSOP
INTELLIGENCE REPORT

| LINE | | CODE | INSTRUCTIONS |
|------|------|------|--------------|
| | | | Examples: 'CO/H' - human observation at the company level, 'DIV/E' - electronic warfare at division level. 'EVAL' is the originator's level of confidence in the information on that line. Employing the doctrinal code he indicates the reliability (A-F) and the validity (1-6) of the source and information. Under 'JRNL #', the originator enters the journal number of the report, if any, upon which he bases each of these unit dispositions. This entry is most important when he is relying on a non-confirming source for his estimate of a given unit status. Attach additional sheets if necessary. |
| 3B. | COMPOSITION | P | The identification of major enemy units and sub units facing the unit. In the SITREP and INTREP note only changes and new identifications. |
| 3C. | COMMITTED | P, S | The G2/S2 estimates the total number of enemy maneuver units currently committed against his unit or command. Unless numbers are excessive, he expresses them in numbers two echelons below his own; i.e. Division counts enemy battalions. |
| 3D. | REINFORCING | P, S | The G2/S2 estimates the total number of uncommitted enemy maneuver units currently available for committment by echelon; i.e. battalions of the regiment's second echelon followed by battalions of the division's second echelon. Include times to commitment. |
| 3E. | ARTY/AIR | P | For SITREP or INTREP report only significant changes. |
| 3F. | NBC | P | Report first use against division. Report use of new agents. Report persistant contaminated areas. Report effects of NBC on friendly and enemy. |
| 3G. | SIGNIFICANT ACTIVITIES | | Report significant enemy activities since the last report and their potential effects on enemy or friendly operations. |
| 4. | CAPABILITIES | P | Enumerate the full range of significant enemy capabilities or courses of action open to the enemy. |

TAB I TO APPENDIX 2 TO ANNEX X TO 24TH INF DIV (M) FSOP
INTELLIGENCE REPORT

| LINE | CODE | INSTRUCTIONS |
|------|------|--------------|
| 5. CONCLUSIONS | P | The G2/S2 indicates the enemy's most dangerous and most likely courses of action and justifies his choices. Except in the PERINTREP, report changes only. |
| 6. REMARKS | P, S • | Provide the enemy forward line of troops (EFLT) by giving at least two coordinates or a grid line to indicate the trace of the first echelon enemy units of significance to the reporter. Thus the G2 indicates the trace of the centers of mass of the enemy's first echelon maneuver battalions. Example: 'EFLT: NV123456 - NV139525'. Use as many sets of coordinates as necessary. Use the remarks section also to complete other sections if necessary. |

TAB J TO APPENDIX 2 TO TO ANNEX X TO 24TH INF DIV (M) FSOP
GENERAL TEXT (GREEN 7)

PRECEDENCE CODE (F,I,P,R)

UNIT CODE _____

DTG _____

CLASSIFICATION CODE (U,C,S,T)

SUBJECT: _____

TO: (UNIT CODE)

FROM: (UNIT CODE)

                        MESSAGE TEXT


_____
_____
_____
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_____ X-2-E-1 _____
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TAB K TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
REQUEST FOR INFORMATION (GREEN 8)

PRECEDENCE CODE (F,I,P,R)

UNIT CODE _____

DTG _____

CLASSIFICATION CODE (U,C,S,T)

RFI NUMBER: _____

INFORMATION DESIRED BY: DTG_____

LATEST TIME INFO OF VALUE: DTG_____

TR PLOT: _____

NARR: _____
_____
_____
_____

JUSTIF: _____
_____

SOURCES: _____
_____
_____
_____
_____

RMKS: _____
_____
_____
_____
_____
_____

TAB L TO AFFENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
RESOURCE STATUS REPORT (GREEN 9)

PRECEDENCE CODE (F,I,P,R)

UNIT CODE _____

DTG _____

CLASSIFICATION CODE (U,C,S,T)

LRSD/TEAM NO/STATUS/LOCATION GEO-UTM

_____
_____
_____
_____
_____

CI/TEAM NO/STATUS/LOCATION UTM

_____
_____

IPW/TEAM NO/STATUS/LOCATION UTM

_____
_____
_____

SIGINT/SYSTEM/TEAM NO/STATUS/LOCATION GEO-UTM
TRQ-32

_____
_____

PRD-11

_____
_____
_____

MSQ-103

_____
_____

TLQ-17A

_____
_____

'JICKFIX

_____
_____
_____

TAB L TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FSOP
RESOURCE STATUS REPORT (GREEN 9)

SIGINT/SYSTEM/TEAM NO/STATUS/LOCATION GEO-UTM
TPQ-36

TPQ-37

RMKS

TAB M TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FIELD SOP
AIR RECON REQUEST (GREEN 10)

TITLE:  Air Request Reconnaissance (AIRREQRECON) - Voice Template

_____ THIS IS _____ AIR REQUEST RECON, OVER
       addressee                  originator

_____ THIS IS _____ SEND AIR REQUEST RECON, OVER
       originator                 addressee

_____ THIS IS _____ AIR REQUEST RECON FOLLOWS
       addressee                  originator

FLASH    IMMEDIATE    PRIORITY    ROUTINE    (Underline and transmit the
                                             precedence of this message)
   TOP SECRET       SECRET    CONFIDENTIAL  (Underline and transmit the
                                             security classification of
          CLEAR    UNCLASSIFIED             this message)

AIRREQRECON

1  REQUEST _____    (Requesting Unit ID and Request Number)

2  PRIORITY_____    (IMMEDIATE or PREPLANNED and priority
                               number or number and alphabetic suffix)
3  TYPE _____       (Type reconnaissance mission)

4  START _____      (Day-Time-Zone or relative time mission
                               is desired)
5  LATEST _____     (Latest day-time-zone or relative time
                               information will be of value)
6  DAYS _____       (Number of days prior information is OK)

7  COVERAGE _____   (Type coverage requested)

8  SENSOR _____     (Type sensor requested)

9  OTHER _____      (Type of photography, film and/or
                               stereo coverage; or best)
10 TARGET _____     (Reconnaissance target code/EEI)

11 LOCTYPE _____    (Mission location type)

12 LOCATION _____   (Mission location in bearing and range,
                               GEOREF, LAT/LONG or UTM)
13 REPORT _____     (Type report requested)

                    (continue)

                    X-2-M-1

TAB M TO APPENDIX 2 TO ANNEX X TO 24TH ID (M) FIELD SOP
AIR RECON REQUEST (GREEN 10)

14 PRODUCT _____ (Number and type imagery products
                             requested)
15 DELIVERY _____ (Delivery address for report)

16 AIRDROP _____ (Airdrop locatcation in GEOREF, LAT/LONG
                             or UTM)
17 CALL SIGN _____ (Call sign of contact)

18 PRIMARY _____ (Primary frequency or frequency
                             designator of contact)
19 SECONDARY _____ (Secondary frequency or frequency
                             designator of contact)
20 POINT _____ (Report-in point in bearing and range,
                             GEOREF, LAT/LONG or UTM)
21 NARRATIVE _____ (Free text entry for amplification
                             of information)

   _____

   _____

   _____

22 TIME _____ (Hour-minute-zone)  See note.

23 AUTHENTICATION IS _____ (Message authentication)  See Note.

   OVER

Note:  The message time group is used when required to identify message time of
origin.  Authentication will be in accordance with joint task force procedures.

# MSR WHISKEY

# DESERT ⚡⚡ STORM

148 / 172

" VICTORY "

**PREPARED BY:**

148th / 172nd  ENGR. DE

24th I.D. ( MECH )

SAUDI ARABIA , APO NY

09315

# LEGEND

ESCARPMENT

ROUTE REFERENCE POINT ( CHECK POINT )

DEPRESSION

ROUTE MARKER

ROUTE
GPS COORDINATE

CHECK POINT

ACCURACY NOTE· THE COORDINATES WERE TAKEN
FROM 1·50,000 SCALE MAPS DATED JAN 90. THIS
INFORMATION IS ACCURATE WITHIN (+/-) 50m.

## COORDINATES ALONG ROUTE WHISKEY

W20 (MT73653025) - W21 (MT76303105), 1.5miles 70degrees

W21 (MT76303105) - W22 (MT89005100), 9.9miles, 11degrees

W22 (MT89005100) - W23 (NT00007511), 11.5miles, 65degrees

W23 (NT00007481) - W24 (NT01778234), 3.4miles, 10degrees

W24 (NT01778234) - W25 (NT14009100), 9miles, 52degrees

W25 (NT14009100) - W26 (NU16000600), 9.6miles, 5degrees

W26 (NU16000600) - W27 (NU12241870), 8.7miles, 161degrees

W27 (NU12241870) - W28 (NU14882739), 6miles, 14degrees

W28 (NU14882739) - W29 (NU11693330), 5miles, 329degrees

W29 (NU11693330) - W30 (NU18614831), 11.5miles, 22degrees

W30 (NU18614831) - W31 (NU14556220), 9.9miles, 341degrees

W31 (NU14556220) - W32 (NU41506081), 17miles, 90degrees

W32 (NU41506081) - W33 (NU61904918), 14.6miles, 116degrees

W33 (NU62904918) - W34 (NU66994520), 15.6miles, 127degrees

W34 (NU66904524) - W35 (NU75664674), 6.2miles, 78degrees

W35 (NU75664674) - W36 (NU82955754), 9.3miles, 30degrees

W36 (NU82955754) - W37 (NU94577154), 12.4miles, 36degrees

W37 (NU94577154) - W38 (NU96007112), 1.2miles, 104degrees

W38 (NU96007112) - W39 (NU98427580), 2.8miles, 23degrees

MSR W

ROCKY

[E-4]

W 23

SANDDUNES

ROCKY

ROCKY

8

N

1: 250,000
NH 38-10, 38-11

7 MT

W 22

SCRUB    ROCKY

ROCKY

MT NT

3

W 21    ROCKY

ROCKY

W 20    SAND

0

5-4

ROCKY

SAND

ROCKY

W29

W28

ROCKY

0

ROCKY

1:250,000
NH 38-11,38-7

2

MU NU

W27

N

W26

ROCKY

ROCKY

SAND

ROCKY

W25

ROCKY

ROCKY

W24

NT

8

ROCKY

2

MSR W

SAND

ROCKY

SCRUB

ROCKY

SAND

ROCKY

SAND

ROCKY

SAND

WADIS

ROCKY

WADI

ROCKY

ROCKY

SCRUB

ROCKY

SAND

5-6

[E-6]

1:250,000
NH 38-7

N

7

8 NU

1:250,000
NH 38-7

N

ROCKY

SANDDUNES
W59

W57

ROCKY W/
SMALL DUNES

W58

ROCKY
WADIS

W56

WADI

ROCKY W/
NUMEROUS WADIS

W55

NU 4

9

# APPENDIX F. MAP ALLOCATION SPREADSHEET

## MANEUVER BRIGADE

| PRI. | RECIPIENTS \/ | PRI. RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| 1 | COMMANDER | 1 | 1 | 1 | 1 | 1 |
| 9 | XO/DCO/CSM | 1 | 2 | 2 | 2 | 2 |
| 7 | S1 | 1 | 1 | 1 | 1 | 1 |
| 4 | S2 | 1 | 2 | 2 | 2 | 2 |
| 2 | S3 | 1 | 2 | 2 | 2 | 2 |
| 5 | SPECIAL STAFF | 5 | 1 | 1 | 5 | 5 |
| 6 | S4 | 1 | 1 | 1 | 1 | 1 |
| 3 | COMPANY COMMANDER | 1 | 1 | 1 | 1 | 1 |
| 12 | COMPANY HEADQUARTERS | 1 | 3 | 2 | 3 | 2 |
| 8 | PLATOON LEADER | 0 | 0 | | 0 | 0 |
| 11 | PLATOON SGT | 1 | 1 | 0 | 1 | 0 |
| 9 | COMMO ELEMENT | 1 | 2 | 1 | 2 | 1 |
| 13 | MEDICAL ELEMENT | 1 | 1 | 1 | 1 | 1 |
| 10 | MAINT/SUPPT ELEMENT | 1 | 2 | 1 | 2 | 1 |
| | SCOUTS | 1 | | | 0 | 0 |
| 14 | SECTION/GUN/CREW | 1 | 3 | 3 | 3 | 3 |
| 5 | TACP/SWO | 6 | 1 | 1 | 6 | 6 |
| | PILOTS | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |
| | | 1 | | | 0 | 0 |

```
SUBTOTAL/UNIT          33   29
UNITS/DIV:...       3
TOTAL MAPS/DIVISON:  99   87
```

## INFANTRY BATTALION

| PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 2 | 2 | 2 | 2 |
| 7 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 2 | 1 | 2 | 1 |
| 2 | 1 | 2 | 1 | 2 | 1 |
| 5 | 3 | 1 | 1 | 3 | 3 |
| 6 | 1 | 1 | 1 | 1 | 1 |
| 3 | 6 | 1 | 1 | 6 | 6 |
| 12 | 6 | 1 | 2 | 6 | 12 |
| 8 | 22 | 1 | 1 | 22 | 22 |
| 12 | 22 | 1 | 1 | 22 | 22 |
| 10 | 1 | 4 | 2 | 4 | 2 |
| 15 | 1 | 8 | 0 | 8 | 0 |
| 11 | 1 | 35 | 1 | 35 | 1 |
| 9 | 12 | 1 | 0 | 12 | 0 |
| 14 | 24 | 1 | 0 | 24 | 0 |
| 5 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |

```
SUBTOTAL/UNIT          151   75
UNITS/DIV:..        5
TOTAL MAPS/DIVISON  755  375
```

ARMOR BATTALION

| RECIPIENTS \/ | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | 1 | 1 | 1 | 1 | 1 | 1 |
| XO/DCO/CSM | 8 | 1 | 2 | 2 | 2 | 2 |
| S1 | 6 | 1 | 1 | 1 | 1 | 1 |
| S2 | 4 | 1 | 2 | 1 | 2 | 1 |
| S3 | 2 | 1 | 2 | 1 | 2 | 1 |
| SPECIAL STAFF | 5 | 3 | 1 | 1 | 3 | 3 |
| S4 | | 1 | 1 | 1 | 1 | 1 |
| COMPANY COMMANDER | | 5 | 1 | 1 | 5 | 5 |
| COMPANY HEADQUARTERS | | 5 | 1 | 2 | 5 | 10 |
| PLATOON LEADER | | 18 | 1 | 0 | 18 | 0 |
| PLATOON SGT | | 19 | 1 | 1 | 18 | 18 |
| COMMO ELEMENT | | 1 | 2 | 1 | 2 | 1 |
| MEDICAL ELEMENT | | 1 | 8 | 0 | 8 | 0 |
| MAINT/SUPPT ELEMENT | | 1 | 35 | 0 | 35 | 0 |
| SCOUTS | | 1 | 12 | 0 | 12 | 0 |
| SECTION/GUN/CREW | | 18 | 1 | 0 | 18 | 0 |
| TACP/SWO | | 1 | 0 | 0 | 0 | 0 |
| PILOTS | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | | 133 | 44 |
| UNITS/DIV:.. | 4 | | | | | |
| TOTAL MAPS/DIVISON | | | | | 532 | 176 |

DIVISION ARTILLERY

| PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 2 | 2 | 2 |
| 1 | 1 | 1 | 1 | 1 |
| 1 | 2 | 2 | 2 | 2 |
| 1 | 2 | 2 | 2 | 2 |
| 1 | 3 | 0 | 3 | 0 |
| 1 | 2 | 2 | 2 | 2 |
| 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 2 | 1 | 2 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 2 | 0 | 2 | 0 |
| 1 | 2 | 1 | 2 | 1 |
| 1 | 2 | 0 | 2 | 0 |
| 1 | 4 | 0 | 4 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 5 | 0 | 5 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 4 | 0 | 4 | 0 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | 36 | 14 |
| UNITS/DIV:..1 | | | | | |
| TOTAL MAPS/DIVISON | | | | 36 | 14 |

| RECIPIENTS \/ | DIRECT SUPPORT ARTILLERY BN | | | | | TARGET ACQUISITION BTRY | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MAPS/RECIP | | TOTAL/UNIT | | | MAPS/RECIP | | TOTAL/UNIT | |
| | PRI. RECIPS | 1:50 | 1:250 | 1:50 | 1:250 | PRI. RECIPS | 1:50 | 1:250 | 1:50 | 1:250 |
| COMMANDER | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| XO/DCO/CSM | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| S1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| S2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| S3 | 1 | 2 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 |
| SPECIAL STAFF | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| S4 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| COMPANY COMMANDER | 6 | 1 | 1 | 6 | 6 | 1 | 1 | 1 | 1 | 1 |
| COMPANY HEADQUARTERS | 6 | 1 | 2 | 6 | 12 | 1 | 1 | 2 | 1 | 2 |
| PLATOON LEADER | 14 | 1 | 0 | 14 | 0 | 1 | 2 | 0 | 2 | 0 |
| PLATOON SGT | 14 | 1 | 1 | 14 | 14 | 1 | 2 | 0 | 2 | 0 |
| COMMO ELEMENT | 1 | 3 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 1 |
| MEDICAL ELEMENT | 1 | 8 | 0 | 8 | 0 | 1 | 2 | 0 | 2 | 0 |
| MAINT/SUPPT ELEMENT | 1 | 8 | 0 | 8 | 0 | 1 | 2 | 0 | 2 | 0 |
| SCOUTS | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 1 | 72 | 0 | 72 | 0 | 1 | 5 | 0 | 5 | 0 |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| PILOTS | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| O36 | 1 | 6 | 0 | 6 | 0 | 1 | 4 | 0 | 4 | 0 |
| FDO | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| SURV | 1 | 4 | 0 | 4 | 0 | 1 | 4 | 0 | 4 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | 150 | 39 | | | | 26 | 5 |
| UNITS/DIV:..4 | | | | | | UNITS/DIV:..1 | | | | |
| TOTAL MAPS/DIVISON | | | | 600 | 156 | | | | 26 | 5 |

## MLRS BATTERY

| RECIPIENTS \/ | FRI. | RECIPS | MAFS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 | |
|---|---|---|---|---|---|---|---|
| COMMANDER | 1 | 0 | 0 | 0 | 0 | | |
| XO/DCO/CSM | 1 | 0 | 0 | 0 | 0 | | |
| S1 | 1 | 0 | 0 | 0 | 0 | | |
| S2 | 1 | 0 | 0 | 0 | 0 | | |
| S3 | 1 | 0 | 0 | 0 | 0 | | |
| SPECIAL STAFF | 1 | 0 | 0 | 0 | 0 | | |
| S4 | 1 | 0 | 0 | 0 | 0 | | |
| COMPANY COMMANDER | 1 | 1 | 1 | 1 | 1 | | |
| COMPANY HEADQUARTERS | 1 | 1 | 3 | 1 | 3 | | |
| PLATOON LEADER | 2 | 1 | 0 | 2 | 0 | | |
| PLATOON SGT | 9 | 1 | 1 | 9 | 9 | | |
| COMMO ELEMENT | 1 | 2 | 1 | 2 | 1 | | |
| MEDICAL ELEMENT | 1 | 2 | 0 | 2 | 0 | | |
| MAINT/SUPPT ELEMENT | 1 | 2 | 0 | 2 | 0 | | |
| SCOUTS | 1 | 0 | 0 | 0 | 0 | | |
| SECTION/GUN/CREW | 1 | 15 | 9 | 15 | 9 | | |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 | | |
| PILOTS | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 8 | 0 | 8 | 0 | STD/SAFETY | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| | 1 | 0 | 0 | 0 | 0 | | |
| SUBTOTAL/UNIT | | | | | 42 | 23 | |
| UNITS/DIV:...1 | | | | | | | |
| TOTAL MAFS/DIVISON | | | | | 42 | 23 | |

## AVIATION BRIGADE HEADQUARTERS

| | FRI. | RECIPS | MAFS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | 1 | 1 | 1 | 1 | 1 | |
| XO/DCO/CSM | 1 | 1 | 1 | 1 | 1 | |
| S1 | 1 | 1 | 1 | 1 | 1 | |
| S2 | 1 | 2 | 2 | 2 | 2 | |
| S3 | 1 | 2 | 2 | 2 | 2 | |
| SPECIAL STAFF | 1 | 0 | 0 | 0 | 0 | |
| S4 | 1 | 1 | 1 | 1 | 1 | |
| COMPANY COMMANDER | 1 | 1 | 1 | 1 | 1 | |
| COMPANY HEADQUARTERS | 1 | 0 | 0 | 0 | 0 | |
| PLATOON LEADER | 1 | 0 | 0 | 0 | 0 | |
| PLATOON SGT | 1 | 0 | 0 | 0 | 0 | |
| COMMO ELEMENT | 1 | 2 | 2 | 2 | 2 | |
| MEDICAL ELEMENT | 1 | 1 | 1 | 1 | 1 | |
| MAINT/SUPPT ELEMENT | 1 | 2 | 1 | 2 | 1 | |
| SCOUTS | 1 | 0 | 0 | 0 | 0 | |
| SECTION/GUN/CREW | 1 | 0 | 0 | 0 | 0 | |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 | |
| PILOTS | 1 | 0 | 0 | 0 | 0 | |
| | 2 | 1 | 1 | 2 | 2 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| SUBTOTAL/UNIT | | | | | 16 | 15 |
| UNITS/DIV:.. 1 | | | | | | |
| TOTAL MAFS/DIVISON | | | | | 16 | 15 |

## ATTACK HELICOPTER BATTALION

| RECIPIENTS \/ | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | 1 | 1 | 1 | 1 | 1 | 1 |
| XO/DCO/CSM | 8 | 1 | 1 | 1 | 1 | 1 |
| S1 | 7 | 1 | 1 | 1 | 1 | 1 |
| S2 | 4 | 1 | 1 | 1 | 1 | 1 |
| S3 | 2 | 1 | 2 | 2 | 2 | 2 |
| SPECIAL STAFF | 5 | 1 | 1 | 1 | 1 | 1 |
| S4 | 6 | 1 | 1 | 1 | 1 | 1 |
| COMPANY COMMANDER | 3 | 4 | 1 | 1 | 4 | 4 |
| COMPANY HEADQUARTERS | 12 | 1 | 0 | 0 | 0 | 0 |
| PLATOON LEADER | 8 | 4 | 1 | 1 | 4 | 4 |
| PLATOON SGT | 11 | 1 | 0 | 0 | 0 | 0 |
| COMMO ELEMENT | 9 | 1 | 2 | 2 | 2 | 2 |
| MEDICAL ELEMENT | 13 | 1 | 1 | 1 | 1 | 1 |
| MAINT/SUPPT ELEMENT | 10 | 1 | 2 | 2 | 2 | 2 |
| SCOUTS | | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 15 | 1 | 0 | 0 | 0 | 0 |
| TACP/SWO | 5 | 1 | 0 | 0 | 0 | 0 |
| PILOTS | 5 | 40 | 1 | 1 | 40 | 40 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |

SUBTOTAL/UNIT            61   61
UNITS/DIV:..   1
TOTAL MAPS/DIVISON       61   61

## GENERAL AVIATION BATTALION

| RECIPIENTS \/ | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | 1 | 1 | 1 | 1 | 1 | 1 |
| XO/DCO/CSM | 8 | 1 | 1 | 1 | 1 | 1 |
| S1 | 6 | 1 | 1 | 1 | 1 | 1 |
| S2 | 4 | 1 | 1 | 1 | 1 | 1 |
| S3 | 2 | 1 | 2 | 2 | 2 | 2 |
| SPECIAL STAFF | 12 | 1 | 2 | 2 | 2 | 2 |
| S4 | 5 | 1 | 1 | 1 | 1 | 1 |
| COMPANY COMMANDER | 4 | 4 | 1 | 1 | 4 | 4 |
| COMPANY HEADQUARTERS | 13 | 4 | 0 | 0 | 0 | 0 |
| PLATOON LEADER | 7 | 8 | 1 | 1 | 8 | 8 |
| PLATOON SGT | 11 | 1 | 0 | 0 | 0 | 0 |
| COMMO ELEMENT | 9 | 1 | 1 | 1 | 1 | 1 |
| MEDICAL ELEMENT | | 1 | 0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | 10 | 1 | 2 | 2 | 2 | 2 |
| SCOUTS | | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | | 1 | 0 | 0 | 0 | 0 |
| TACP/SWO | | 1 | 0 | 0 | 0 | 0 |
| PILOTS | 3 | 1 | 35 | 35 | 35 | 35 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |

SUBTOTAL/UNIT            59   59
UNITS/DIV:..   1
TOTAL MAPS/DIVISON       59   59

DIVISION SUPPORT COMMAND                    MAIN SUPPORT BATTALION

| RECIPIENTS \/ | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 | | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COMMANDER | | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| XO/DCO/CSM | | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| S1 | | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| S2 | | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| S3 | | 1 | 1 | 1 | 1 | 1 | | | 1 | 2 | 2 | 2 | 2 |
| SPECIAL STAFF | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| S4 | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| COMPANY COMMANDER | | 2 | 1 | 1 | 2 | 2 ? | | | 7 | 1 | 1 | 7 | 7 |
| COMPANY HEADQUARTERS | | 2 | 1 | 1 | 2 | 2 ? | | | 7 | 1 | 1 | 7 | 7 |
| PLATOON LEADER | | 6 | 1 | 1 | 6 | 6 | | | 1 | 24 | 30 | 24 | 30 |
| PLATOON SGT | | 6 | 1 | 1 | 6 | 6 | | | 1 | 16 | 30 | 16 | 30 |
| COMMO ELEMENT | | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| MEDICAL ELEMENT | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 6 | 0 | 6 |
| SCOUTS | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | | 1 | 25 | 4 | 25 | 4 | | | 1 | 15 | 50 | 15 | 50 |
| TACP/SWO | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| PILOTS | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| DMMC | | 1 | 2 | 8 | 2 | 8 SPTOPS | | | 1 | 1 | 3 | 1 | 3 |
| | | 1 | 0 | 0 | 0 | 0 SURVEY | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | | | 1 | 0 | 0 | 0 | 0 |

DIVISION SUPPORT COMMAND:
SUBTOTAL/UNIT — 49  34
UNITS/DIV:..  1
TOTAL MAPS/DIVISON — 49  34

MAIN SUPPORT BATTALION:
SUBTOTAL/UNIT — 77  140
UNITS/DIV:..1
TOTAL MAPS/DIVISON — 77  140

## FORWARD SUPPORT BATTALION

|  |  | MAPS/RECIP | | TOTAL/UNIT | |
|---|---|---|---|---|---|
| RECIPIENTS \/ | PRI. | RECIPS  1:50 | 1:250 | 1:50 | 1:250 |
| COMMANDER | 1 | 1  1 | 1 | 1 | 1 |
| XO/DCO/CSM | 1 | 1  1 | 1 | 1 | 1 |
| S1 | 1 | 1  1 | 1 | 1 | 1 |
| S2 | 1 | 1  1 | 1 | 1 | 1 |
| S3 | 1 | 1  2 | 2 | 2 | 2 |
| SPECIAL STAFF | 1 | 1  0 | 0 | 0 | 0 |
| S4 | 1 | 1  0 | 0 | 0 | 0 |
| COMPANY COMMANDER | 1 | 4  1 | 1 | 4 | 4  ? |
| COMPANY HEADQUARTERS | 1 | 4  1 | 1 | 4 | 4 |
| PLATOON LEADER | 1 | 11  0 | 1 | 0 | 11 |
| PLATOON SGT | 1 | 11  0 | 1 | 0 | 11 |
| COMMO ELEMENT | 1 | 1  1 | 1 | 1 | 1 |
| MEDICAL ELEMENT | 1 | 1  0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | 1 | 1  0 | 2 | 0 | 2 |
| SCOUTS | 1 | 1  0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 1 | 1  6 | 35 | 6 | 35 |
| TACP/SWO | 1 | 1  0 | 0 | 0 | 0 |
| PILOTS | 1 | 1  0 | 0 | 0 | 0 |
| SPTOPS | 1 | 1  1 | 3 | 1 | 3  FLTOPS |
|  | 1 | 0  0 | 0 | 0 | 0  EN CO |
|  | 1 | 0  0 | 0 | 0 | 0  TK CO |
|  | 1 | 0  0 | 0 | 0 | 0  MLR BA |
|  | 1 | 0  0 | 0 | 0 | 0 |
|  | 1 | 0  0 | 0 | 0 | 0 |
|  | 1 | 0  0 | 0 | 0 | 0 |
|  | 1 | 0  0 | 0 | 0 | 0 |
|  | 1 | 0  0 | 0 | 0 | 0 |
|  | 1 | 0  0 | 0 | 0 | 0 |
|  | 1 | 0  0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT |  |  |  | 22 | 77 |
| UNITS/DIV:..3 |  |  |  |  |  |
| TOTAL MAPS/DIVISON |  |  |  | 66 | 231 |

## DIVISION CAVALRY SQUADRON

|  |  | MAPS/RECIP | | TOTAL/UNIT | |
|---|---|---|---|---|---|
| RECIPIENTS \/ | PRI. | RECIPS  1:50 | 1:250 | 1:50 | 1:250 |
| COMMANDER | 1 | 1  1 | 1 | 1 | 1 |
| XO/DCO/CSM | 10 | 1  1 | 1 | 1 | 1 |
| S1 | 8 | 1  1 | 1 | 1 | 1 |
| S2 | 4 | 1  1 | 1 | 1 | 1 |
| S3 | 2 | 1  2 | 2 | 2 | 2 |
| SPECIAL STAFF | 6 | 1  1 | 1 | 1 | 1 |
| S4 | 7 | 1  1 | 1 | 1 | 1 |
| COMPANY COMMANDER | 3 | 6  1 | 1 | 6 | 6 |
| COMPANY HEADQUARTERS | 13 | 6  1 | 1 | 6 | 6 |
| PLATOON LEADER | 9 | 14  1 | 1 | 14 | 14 |
| PLATOON SGT | 14 | 14  1 | 1 | 14 | 14 |
| COMMO ELEMENT | 11 | 1  3 | 1 | 3 | 1 |
| MEDICAL ELEMENT | 15 | 1  6 | 0 | 6 | 0 |
| MAINT/SUPPT ELEMENT | 12 | 1  30 | 0 | 30 | 0 |
| SCOUTS |  | 1  0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 5 | 1  84 | 35 | 84 | 35 |
| TACP/SWO |  | 1  0 | 0 | 0 | 0 |
| PILOTS |  | 1  0 | 0 | 0 | 0 |
| SPTOPS | 10 | 1  2 | 2 | 2 | 2 |
|  | 1 | 22 | 22 | 22 | 22 |
|  | 1 | 38 | 21 | 38 | 21 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT |  |  |  | 233 | 129 |
| UNITS/DIV:..1 |  |  |  |  |  |
| TOTAL MAPS/DIVISON |  |  |  | 233 | 129 |

## AIR DEFENSE ARTILLERY BATTALION

| RECIPIENTS \: | FRI. | RECIPS | 1:50 | 1:250 | 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| | | | MAPS/RECIP | | TOTAL/UNIT | |
| COMMANDER | 1 | 1 | 1 | 1 | 1 | 1 |
| XO/DCO/CSM | | 2 | 1 | 1 | 2 | 2 |
| S1 | 7 | 1 | 1 | 1 | 1 | 1 |
| S2 | 4 | 1 | 1 | 1 | 1 | 1 |
| S3 | 2 | 1 | 1 | 1 | 1 | 1 |
| SPECIAL STAFF | 5 | 1 | 2 | 2 | 2 | 2 |
| S4 | 6 | 1 | 1 | 1 | 1 | 1 |
| COMPANY COMMANDER | 3 | 4 | 1 | 1 | 4 | 4 |
| COMPANY HEADQUARTERS | 13 | 4 | 2 | 2 | 8 | 8 |
| FLATOON LEADER | 8 | 14 | 1 | 1 | 14 | 14 |
| FLATOON SGT | 12 | 14 | 1 | 1 | 14 | 14 |
| COMMO ELEMENT | 10 | 1 | 4 | 4 | 4 | 4 |
| MEDICAL ELEMENT | 14 | 1 | 4 | 4 | 4 | 4 |
| MAINT/SUPPT ELEMENT | 11 | 1 | 4 | 4 | 4 | 4 |
| SCOUTS | | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 9 | 1 | 122 | 122 | 122 | 122 |
| TACP/SWO | | 1 | 0 | 0 | 0 | 0 |
| PILOTS | | 1 | 0 | 0 | 0 | 0 |
| U/I TM | 14 | 1 | 6 | 6 | 6 | 6 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | | 189 | 199 |
| UNITS/DIV:..1 | | | | | | |
| TOTAL MAPS/DIVISON | | | | | 189 | 199 |

## DIVISIONAL ENGINEER BATTALION

| RECIPIENTS | FRI. | RECIPS | 1:50 | 1:250 | 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| | | | MAPS/RECIP | | TOTAL/UNIT | |
| COMMANDER | 1 | 1 | 1 | 1 | 1 | |
| XO/DCO/CSM | 1 | 0 | 1 | 0 | 1 | |
| S1 | 1 | 1 | 1 | 1 | 1 | |
| S2 | 1 | 1 | 1 | 1 | 1 | |
| S3 | 1 | 1 | 1 | 1 | 1 | |
| SPECIAL STAFF | 1 | 1 | 1 | 1 | 1 | |
| S4 | 1 | 1 | 1 | 1 | 1 | |
| COMPANY COMMANDER | 5 | 1 | 1 | 5 | 5 | |
| COMPANY HEADQUARTERS | 5 | 0 | 2 | 0 | 10 | |
| FLATOON LEADER | 16 | 1 | 1 | 16 | 16 | |
| FLATOON SGT | 16 | 1 | 1 | 16 | 16 | |
| COMMO ELEMENT | 1 | 5 | 5 | 5 | 5 | |
| MEDICAL ELEMENT | 1 | 5 | 5 | 5 | 5 | |
| MAINT/SUPPT ELEMENT | 1 | 6 | 6 | 6 | 6 | |
| SCOUTS | 1 | 0 | 0 | 0 | 0 | |
| SECTION/GUN/CREW | 37 | 1 | 1 | 37 | 37 | |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 | |
| PILOTS | 1 | 0 | 0 | 0 | 0 | |
| U/I TM | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| SUBTOTAL/UNIT | | | | | 96 | 107 |
| UNITS/DIV:..3 | | | | | | |
| TOTAL MAPS/DIVISON | | | | | 288 | 321 |

CBT ENGINEER BN (HVY)

| RECIPIENTS \/ | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | 1 | 1 | 1 | 1 | 1 | |
| XO/DCO/CSM | 1 | 1 | 1 | 1 | 1 | |
| S1 | 1 | 0 | 1 | 0 | 1 | |
| S2 | 1 | 1 | 1 | 1 | 1 | |
| S3 | 1 | 1 | 1 | 1 | 1 | |
| SPECIAL STAFF | 1 | 0 | 0 | 0 | 0 | |
| S4 | 1 | 1 | 1 | 1 | 1 | |
| COMPANY COMMANDER | 5 | 1 | 1 | 5 | 5 | |
| COMPANY HEADQUARTERS | 5 | 1 | 3 | 5 | 15 | |
| FLATOON LEADER | 16 | 1 | 1 | 16 | 16 | |
| PLATOON SGT | 16 | 1 | 1 | 16 | 16 | |
| COMMO ELEMENT | 1 | 5 | 5 | 5 | 5 | |
| MEDICAL ELEMENT | 1 | 5 | 5 | 5 | 5 | |
| MAINT/SUPPT ELEMENT | 1 | 6 | 6 | 6 | 6 | |
| SCOUTS | 1 | 0 | 0 | 0 | 0 | |
| SECTION/GUN/CREW | 15 | 1 | 1 | 15 | 15 | |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 | |
| PILOTS | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| SUBTOTAL/UNIT | | | | | 79 | 89 |
| UNITS/DIV:..0 | | | | | | |
| TOTAL MAPS/DIVISON | | | | | 0 | 0 |

SIGNAL BATTALION

| RECIPIENTS | PRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | 1 | 0 | 1 | 0 | 1 | |
| XO/DCO/CSM | 1 | 0 | 1 | 0 | 1 | |
| S1 | 1 | 0 | 1 | 0 | 1 | |
| S2 | 1 | 1 | 1 | 1 | 1 | |
| S3 | 1 | 2 | 2 | 2 | 2 | |
| SPECIAL STAFF | 1 | 0 | 0 | 0 | 0 | |
| S4 | 1 | 0 | 1 | 0 | 1 | |
| COMPANY COMMANDER | 4 | 0 | 1 | 0 | 4 | |
| COMPANY HEADQUARTERS | 1 | 0 | 0 | 0 | 0 | |
| FLATOON LEADER | 12 | 0 | 1 | 0 | 12 | |
| PLATOON SGT | 12 | 0 | 2 | 0 | 24 | |
| COMMO ELEMENT | 1 | 0 | 0 | 0 | 0 | |
| MEDICAL ELEMENT | 1 | 0 | 2 | 0 | 2 | |
| MAINT/SUPPT ELEMENT | 1 | 0 | 25 | 0 | 25 | |
| SCOUTS | 1 | 0 | 0 | 0 | 0 | |
| SECTION/GUN/CREW | 1 | 0 | 0 | 0 | 0 | |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 | |
| PILOTS | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| | 1 | 0 | 0 | 0 | 0 | |
| SUBTOTAL/UNIT | | | | | 3 | 74 |
| UNITS/DIV:..1 | | | | | | |
| TOTAL MAPS/DIVISON | | | | | 3 | 74 |

## MI BATTALION W/TM DRAGON

| RECIPIENTS \/ | FRI. RECIPS | MAFS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|
| COMMANDER | 1 | 1 | 1 | 1 | 1 |
| XO/DCO/CSM | 2 | 1 | 1 | 2 | 2 |
| S1 | 1 | 1 | 1 | 1 | 1 |
| S2 | 1 | 1 | 1 | 1 | 1 |
| S3 | 1 | 4 | 3 | 4 | 3 |
| SPECIAL STAFF | 1 | 0 | 0 | 0 | 0 |
| S4 | 1 | 0 | 1 | 0 | 1 |
| COMPANY COMMANDER | 6 | 1 | 1 | 6 | 6 |
| COMPANY HEADQUARTERS | 6 | 2 | 2 | 12 | 12 |
| PLATOON LEADER | 8 | 1 | 1 | 8 | 8 |
| PLATOON SGT | 8 | 1 | 1 | 8 | 8 |
| COMMO ELEMENT | 1 | 10 | 14 | 10 | 14 |
| MEDICAL ELEMENT | 1 | 0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | 1 | 4 | 4 | 4 | 4 |
| SCOUTS | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 54 | 1 | 1 | 54 | 54 |
| TACF/SWO | 1 | 0 | 0 | 0 | 0 |
| PILOTS | 1 | 0 | 0 | 0 | 0 |
| FLTOPS | 5 | 1 | 1 | 5 | 5 |
| TCAE | 1 | 2 | 2 | 2 | 2 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |

SUBTOTAL/UNIT     118  122
UNITS/DIV:...1
TOTAL MAFS/DIVISON  118  122

## ENGINEER GROUP HQ

| | FRI. RECIPS | MAFS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|
|  | 1 | 1 | 1 | 1 | 1 |
|  | 1 | 1 | 1 | 1 | 1 |
| COURIE | 1 | 1 | 2 | 1 | 2 |
|  | 1 | 1 | 2 | 1 | 2 |
|  | 1 | 3 | 3 | 3 | 3 |
| TAC/RE | 1 | 3 | 3 | 3 | 3 |
|  | 1 | 1 | 2 | 1 | 2 |
|  | 1 | 1 | 1 | 1 | 1 |
|  | 1 | 2 | 2 | 2 | 2 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 1 | 1 | 1 | 1 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 1 | 1 | 1 | 1 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
| EQI/CO | 1 | 11 | 11 | 11 | 11 |
| MGB/CO | 1 | 11 | 11 | 11 | 11 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 |

SUBTOTAL/UNIT     38  41
UNITS/DIV:...1
TOTAL MAFS/DIVISON  38  41

## ENGINEER BN (CBT, WHEELED)

| RECIPIENTS \/ | FRI. | RECIPS | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 | |
|---|---|---|---|---|---|---|---|
| COMMANDER | | 1 | 0 | 0 | 0 | 0 | |
| XO/DCO/CSM | | 1 | 0 | 0 | 0 | 0 | |
| S1 | | 1 | 0 | 0 | 0 | 0 | |
| S2 | | 1 | 0 | 0 | 0 | 0 | |
| S3 | | 1 | 0 | 0 | 0 | 0 | |
| SPECIAL STAFF | | 1 | 0 | 0 | 0 | 0 | |
| S4 | | 1 | 0 | 0 | 0 | 0 | |
| COMPANY COMMANDER | | 1 | 0 | 0 | 0 | 0 | |
| COMPANY HEADQUARTERS | | 1 | 0 | 0 | 0 | 0 | |
| FLATOON LEADER | | 1 | 0 | 0 | 0 | 0 | |
| FLATOON SGT | | 1 | 0 | 0 | 0 | 0 | |
| COMMO ELEMENT | | 1 | 0 | 0 | 0 | 0 | |
| MEDICAL ELEMENT | | 1 | 0 | 0 | 0 | 0 | |
| MAINT/SUPPT ELEMENT | | 1 | 0 | 0 | 0 | 0 | |
| SCOUTS | | 1 | 0 | 0 | 0 | 0 | |
| SECTION/GUN/CREW | | 1 | 0 | 0 | 0 | 0 | |
| TACP/SWO | | 1 | 0 | 0 | 0 | 0 | |
| PILOTS | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | SURV |
| | | 1 | 0 | 0 | 0 | 0 | METRO |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| | | 1 | 0 | 0 | 0 | 0 | |
| SUBTOTAL/UNIT | | | | | 0 | 0 | |
| UNITS/DIV:..1 | | | | | | | |
| TOTAL MAPS/DIVISON | | | | | 0 | 0 | |

## FIELD ARTILLERY BDE HQ

| RECIPIENTS | FRI. | RECIP | MAPS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|---|
| COMMANDER | | 1 | 0 | 1 | 0 | 1 |
| XO/DCO/CSM | | 1 | 0 | 1 | 0 | 1 |
| S1 | | 1 | 0 | 1 | 0 | 1 |
| S2 | | 1 | 0 | 3 | 0 | 3 |
| S3 | | 1 | 0 | 2 | 0 | 2 |
| SPECIAL STAFF | | 1 | 0 | 3 | 0 | 3 |
| S4 | | 1 | 0 | 1 | 0 | 1 |
| COMPANY COMMANDER | | 1 | 0 | 1 | 0 | 1 |
| COMPANY HEADQUARTERS | | 3 | 0 | 1 | 0 | 3 |
| FLATOON LEADER | | 7 | 0 | 1 | 0 | 7 |
| FLATOON SGT | | 2 | 0 | 1 | 0 | 2 |
| COMMO ELEMENT | | 1 | 0 | 0 | 0 | 0 |
| MEDICAL ELEMENT | | 1 | 0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | | 1 | 0 | 0 | 0 | 0 |
| SCOUTS | | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | ADA | 11 | 0 | 1 | 0 | 11 |
| TACP/SWO | | 1 | 0 | 0 | 0 | 0 |
| PILOTS | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | | 0 | 36 |
| UNITS/DIV:1 | | | | | | |
| TOTAL MAPS/DIVI | | | | | 0 | 36 |

ARTILLERY BN 8 INCH

| RECIPIENTS \ | FRI. RECIP | MAFS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|
| COMMANDER | 1 | 0 | 1 | 0 | 1 |
| XO/DCO/CSM | 1 | 0 | 1 | 0 | 1 |
| S1 | 1 | 0 | 1 | 0 | 1 |
| S2 | 1 | 0 | 2 | 0 | 2 |
| S3 | 1 | 0 | 2 | 0 | 2 |
| SPECIAL STAFF | 1 | 0 | 1 | 0 | 1 |
| S4 | 1 | 0 | 1 | 0 | 1 |
| COMPANY COMMANDER | 5 | 0 | 1 | 0 | 5 |
| COMPANY HEADQUARTERS | 5 | 0 | 1 | 0 | 5 |
| PLATOON LEADER | 0 | 0 | 0 | 0 | 0 |
| PLATOON SGT | 1 | 0 | 0 | 0 | 0 |
| COMMO ELEMENT | 1 | 0 | 0 | 0 | 0 |
| MEDICAL ELEMENT | 1 | 0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | 1 | 0 | 0 | 0 | 0 |
| SCOUTS | 1 | 0 | 2 | 0 | 0 |
| SECTION/GUN/CREW | 18 | 0 | 1 | 0 | 18 |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 |
| PILOTS | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | 0 | 78 |
| UNITS/DIV:1 | | | | | |
| TOTAL MAFS/DIVI | | | | 0 | 78 |

MLRS BATTALION

| RECIPIENTS \ | FRI. RECIP | MAFS/RECIP 1:50 | 1:250 | TOTAL/UNIT 1:50 | 1:250 |
|---|---|---|---|---|---|
| COMMANDER | 1 | 0 | 1 | 0 | 1 |
| XO/DCO/CSM | 1 | 0 | 1 | 0 | 1 |
| S1 | 1 | 0 | 1 | 0 | 1 |
| S2 | 1 | 0 | 3 | 0 | 3 |
| S3 | 1 | 0 | 2 | 0 | 2 |
| SPECIAL STAFF | 1 | 0 | 0 | 0 | 0 |
| S4 | 1 | 0 | 1 | 0 | 1 |
| COMPANY COMMANDER | 1 | 0 | 5 | 0 | 5 |
| COMPANY HEADQUARTERS | 1 | 0 | 5 | 0 | 5 |
| PLATOON LEADER | 1 | 0 | 0 | 0 | 0 |
| PLATOON SGT | 1 | 0 | 0 | 0 | 0 |
| COMMO ELEMENT | 1 | 0 | 0 | 0 | 0 |
| MEDICAL ELEMENT | 1 | 0 | 0 | 0 | 0 |
| MAINT/SUPPT ELEMENT | 1 | 0 | 0 | 0 | 0 |
| SCOUTS | 1 | 0 | 0 | 0 | 0 |
| SECTION/GUN/CREW | 27 | 0 | 1 | 0 | 27 |
| TACP/SWO | 1 | 0 | 0 | 0 | 0 |
| PILOTS | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| | 1 | 0 | 0 | 0 | 0 |
| SUBTOTAL/UNIT | | | | 0 | 46 |
| UNITS/DIV:1 | | | | | |
| TOTAL MAFS/DIVI | | | | 0 | 46 |

| UNIT REVIEW | REQUIREMENTS MAPS/UNIT 1:50 | 1:250 | # UNITS | TOTAL RQD 1:50 | 1:250 |
|---|---|---|---|---|---|
| MANEUVER BRIGADE | 33 | 29 | 3 | 99 | 87 |
| INFANTRY BATTALION | 151 | 75 | 5 | 755 | 375 |
| ARMOR BATTALION | 133 | 44 | 4 | 532 | 176 |
| AVIATION BRIGADE HEADQUARTERS | 16 | 15 | 1 | 16 | 15 |
| ATTACK HELICOPTER BATTALION | 61 | 61 | 1 | 61 | 61 |
| GENERAL AVIATION BATTALION | 59 | 59 | 1 | 59 | 59 |
| DIVISION SUPPORT COMMAND | 49 | 34 | 1 | 49 | 34 |
| MAIN SUPPORT BATTALION | 77 | 140 | 1 | 77 | 140 |
| FORWARD SUPPORT BATTALION | 22 | 77 | 3 | 66 | 231 |
| DIVISION ARTILLERY | 36 | 14 | 1 | 36 | 14 |
| DIRECT SUPPT ARTY BN | 150 | 39 | 4 | 600 | 156 |
| TGT ACQUISITION BN | 26 | 5 | 1 | 26 | 5 |
| MLRS BATTERY | 42 | 23 | 1 | 42 | 23 |
| FIELD ARTY BDE HQ | 0 | 36 | 1 | 0 | 36 |
| ARTY BN 8 INCH | 0 | 38 | 1 | 0 | 38 |
| MLRS BN | 0 | 46 | 1 | 0 | 46 |
| DIVISION CAVALRY SQUADRON | 233 | 129 | 1 | 233 | 129 |
| ENGINEER GROUP HQ | 38 | 41 | 1 | 38 | 41 |
| DIVISIONAL ENGINEER BATTALION | 96 | 107 | 3 | 288 | 321 |
| CBT ENGINEER BN (HVY) | 78 | 89 | 0 | 0 | 0 |
| CBT ENGINEER BN (WHEELED) | 0 | 0 | 0 | 0 | 0 |
| SIGNAL BATTALION | 3 | 74 | 1 | 3 | 74 |
| MI BATTALION W/TM DRAGON | 118 | 122 | 1 | 118 | 122 |
| COMBAT SUPPORT GROUP | 0 | 106 | 1 | 0 | 106 |
| AIR DEFENSE ARTY BN | 189 | 189 | 1 | 189 | 189 |

TOTAL 1:50 MAPS NEEDED: 3287
TOTAL 1:250 MAPS NEEDED: 2478

# APPENDIX G. MAP ACCOUNT SPREADSHEET

24 ID MAP ALLOCATION PLAN      MODIFIED TO MINIMUMS
12 oct 90              24 ID MAP ALLOCATION PLAN      12 OCT 90
                       1:50,000

| UNIT | 1:50,000 ORIGINAL AUTH | CURRENT AUTH | TOTAL SETS ISSUED | SETS STILL NEEDED | SETS TO BE ISSUED | % OF OUR AUTH | ECHELON ISSUED | SETS WHICH ARE INCOMPLETE | COMPLETERS DUE | ISSUE COMPLETERS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 BDE HO | 880 | 42 | 150 | -108 | 260 | 976 | | 109 | 109 | 109 |
| 2-7 INF | 0 | 175 | 0 | 175 | 0 | 0 | | | | |
| 3-7 INF | 0 | 175 | 0 | 175 | 0 | 0 | | | | |
| 2-69 AR | 0 | 155 | 0 | 155 | 0 | 0 | | | | |
| 4-64 AR | 0 | 155 | 0 | 155 | 0 | 0 | | | | |
| 24 FSB | 0 | 22 | 0 | 22 | 0 | 0 | | | | |
| subtotal | 880 | 724 | 150 | 574 | 260 | 57 | | 109 | 109 | 109 |
| 2 BDE HO | 808 | 42 | 158 | -116 | 177 | 798 | | 104 | 104 | 104 |
| 3-15 INF | 0 | 175 | 0 | 175 | 0 | 0 | | | | |
| 1-64 AR | 0 | 155 | 0 | 155 | 0 | 0 | | | | |
| 224 FSB | 0 | 22 | 41 | -19 | 0 | 186 | | 31 | | |
| subtotal | 808 | 394 | 199 | 195 | 177 | 95 | | 135 | 104 | 104 |
| 197 BDE HO | 1500 | 109 | 311 | -202 | 128 | 403 | | 286 | 286 | 286 |
| 1-18 INF | 0 | 175 | 0 | 175 | 0 | 0 | | | | |
| 2-18 INF | 0 | 175 | 0 | 175 | 0 | 0 | | | | |
| 4-69 AR | 0 | 155 | 0 | 155 | 0 | 0 | | | | |
| 197 FSB | 0 | 22 | 0 | 22 | 0 | 0 | | | | |
| subtotal | 1500 | 636 | 311 | 325 | 128 | 69 | | 286 | 286 | 286 |
| 3 ACR HO | 1200 | 1050 | 300 | 750 | 730 | 98 | | | | |
| 1-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 2-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 3-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 4-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| SUP/3ACR | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| TF 553 CSB | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| subtotal | 1200 | 1050 | 300 | 750 | 730 | 98 | | 0 | 0 | 0 |
| AVN BDE HO | 260 | 100 | 66 | 34 | 75 | 141 | | 58 | 58 | 58 |
| 1-24 AVN | 0 | 104 | 0 | 104 | 0 | 0 | | | | |
| 2-24 AVN | 0 | 97 | 0 | 97 | 0 | 0 | | | | |
| subtotal | 260 | 301 | 66 | 235 | 75 | 47 | | 58 | 58 | 58 |
| DIVARTY HO | 423 | 41 | 49 | -8 | 200 | 607 | | 22 | | |
| 1-41 FA | 0 | 169 | 0 | 169 | 0 | 0 | | | | |
| 3-41 FA | 0 | 169 | 0 | 169 | 0 | 0 | | 14 | | |
| 4-41 FA | 0 | 169 | 0 | 169 | 70 | 41 | | | | |
| A/13 FA | 0 | 42 | 0 | 42 | 0 | 0 | | | | |
| G/33 FA | 0 | 27 | 0 | 27 | 0 | 0 | | | | |
| subtotal | 428 | 617 | 49 | 568 | 270 | 52 | | 36 | 0 | 0 |
| DISCOM HO | 575 | 68 | 42 | 26 | 60 | 150 | | 29 | | |
| 724 MSB | 0 | 82 | 0 | 82 | 0 | 0 | | | | |
| 91 CHEM | 10 | 0 | 11 | -11 | 20 | 0 | | 9 | | |
| subtotal | 585 | 150 | 53 | 97 | 80 | 89 | | 38 | 0 | 0 |
| 2-4 CAV HO | 170 | 182 | 34 | 148 | 120 | 85 | | | | |
| 1-5 AAA | 250 | 189 | 38 | 151 | 40 | 40 | | 29 | | |
| 3 EN | 125 | 96 | 24 | 72 | 78 | 78 | | 17 | | |
| 24 SIG BN | 125 | 5 | 16 | -11 | 90 | 2120 | | 14 | | |
| 124 MI BN | 130 | 125 | 32 | 93 | 50 | 66 | | 22 | | |
| 24 MP CO | 66 | 66 | 3 | 63 | 63 | 100 | | 2 | | |
| 24 FSU | 5 | 5 | 0 | 5 | 5 | 100 | | | | |
| DMAIN | 52 | 52 | 52 | 0 | 20 | 138 | | | | |
| DTAC | 4 | 4 | 4 | 0 | 10 | 350 | | | | |
| DREAR | 3 | 3 | 3 | 0 | 10 | 433 | | | | |
| HHC 24 ID | 10 | 18 | 18 | 0 | 0 | 100 | | 2 | | |
| CMD GROUP | 16 | 16 | 16 | 0 | 0 | 100 | | | | |
| MAP RESRV | 100 | 100 | 0 | 100 | 100 | 100 | | | | |
| 212 FA BD | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 75 FA BD | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 92 EN BN | 0 | 78 | 0 | 78 | 0 | 0 | | | | |
| 27 EN BN | 0 | 78 | 0 | 78 | 0 | 0 | | | | |
| 299 EN BN | 0 | 78 | 0 | 78 | 0 | 0 | | | | |
| 5 EN BN | 0 | 96 | 0 | 96 | 0 | 0 | | | | |
| 36 EN CO | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 1-2 ADA | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| | 6717 | 4733 | 1368 | 3365 | 2306 | 29 | | 748 | 557 | 557 |
| | 5517 | 3683 | 1068 | 2615 | 1576 | 29 | 0 | 748 | 557 | 557 |

| UNIT | ORIGINAL AUTH | 1:250,000 CURRENT AUTH | TOTAL SETS ISSUED | SETS STILL NEEDED | SETS TO BE ISSUED | % OF CUR AUTH | SETS WHICH ARE INCOMPLETE | COMPLETERS DUE | ISSUE COMPLETERS |
|---|---|---|---|---|---|---|---|---|---|
| 1 BDE HQ | 148 | 36 | 178 | -142 | 0 | 494 | 150 | 0 | 0 |
| 2-7 INF | 0 | 64 | 0 | 64 | 0 | 0 | | | |
| 3-7 INF | 0 | 64 | 0 | 64 | 0 | 0 | | | |
| 2-67 AR | 0 | 54 | 0 | 54 | 0 | 0 | | | |
| 4-64 AR | 0 | 54 | 0 | 54 | 0 | 0 | | | |
| 24 FSB | 0 | 77 | 0 | 77 | 0 | 0 | | | |
| subtotal | 148 | 349 | 178 | 171 | 0 | 51 | 150 | 0 | 0 |
| 2 BDE HQ | 145 | 36 | 183 | -147 | 0 | 508 | 146 | 12 | 12 |
| 3-15 INF | 0 | 64 | 0 | 64 | 0 | 0 | | | |
| 1-64 AR | 0 | 54 | 0 | 54 | 0 | 0 | | | |
| 224 FSB | 0 | 77 | 0 | 77 | 0 | 0 | | | |
| subtotal | 145 | 231 | 183 | 48 | 0 | 79 | 146 | 12 | 12 |
| 197 BDE HQ | 450 | 100 | 396 | -296 | 100 | 496 | 334 | 259 | 259 |
| 1-18 INF | 0 | 64 | 0 | 64 | 0 | 0 | | | |
| 2-18 INF | 0 | 64 | 0 | 64 | 0 | 0 | | | |
| 4-69 AR | 0 | 54 | 0 | 54 | 0 | 0 | | | |
| 197 FSB | 0 | 77 | 0 | 77 | 0 | 0 | | | |
| subtotal | 450 | 359 | 396 | -37 | 100 | 138 | 334 | 259 | 259 |
| 3 ACR HQ | 250 | 250 | 10 | 240 | 240 | 100 | | | |
| 1-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 2-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 3-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 4-3 CAV | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| SUPT/3ACR | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| TF 553 CSB | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| subtotal | 250 | 250 | 10 | 240 | 240 | 100 | 0 | 0 | 0 |
| AVN BDE HQ | 200 | 0 | 278 | -278 | 22 | 0 | 235 | 213 | 213 |
| 1-24 AVN | 0 | 104 | 0 | 104 | 0 | 0 | | | |
| 2-24 AVN | 0 | 97 | 0 | 97 | 0 | 0 | | | |
| subtotal | 200 | 201 | 278 | -77 | 22 | 149 | 235 | 213 | 213 |
| DIVARTY HQ | 25 | 18 | 33 | -15 | 45 | 433 | 28 | | |
| 1-41 FA | 0 | 46 | 34 | 12 | 0 | 74 | | | |
| 3-41 FA | 0 | 46 | 34 | 12 | 0 | 74 | | | |
| 4-41 FA | 0 | 46 | 0 | 46 | 0 | 0 | | | |
| A/13 FA | 0 | 23 | 0 | 23 | 0 | 0 | | | |
| 6/13 FA | 0 | 6 | 0 | 6 | 0 | 0 | | | |
| | 25 | 185 | 101 | 84 | 45 | 79 | 28 | 0 | 0 |
| DISCOM HQ | 180 | 37 | 100 | -63 | 200 | 811 | 98 | 0 | 0 |
| 724 MSB | 0 | 246 | 0 | 246 | 0 | 0 | | | |
| 91 CHEM | 10 | 0 | 15 | -15 | 5 | 0 | | | |
| | 190 | 283 | 115 | 168 | 205 | 113 | 98 | 0 | 0 |
| 2-4 CAV HQ | 40 | 95 | 69 | 26 | 0 | 73 | 58 | 0 | 0 |
| 1-5 AAA | 25 | 189 | 59 | 130 | 111 | 90 | 48 | | |
| 3 EN | 10 | 112 | 23 | 89 | 88 | 99 | | | |
| 24 SIG BN | 15 | 85 | 20 | 65 | 0 | 24 | | | |
| 124 MI BN | 40 | 135 | 87 | 48 | 48 | 100 | | | |
| 24 MP CO | 6 | 6 | 45 | -39 | 0 | 750 | | | |
| 24 FSU | 5 | 5 | 0 | 5 | 5 | 100 | | | |
| DMAIN | 54 | 54 | 54 | 0 | 0 | 100 | | | |
| DTAC | 4 | 4 | 4 | 0 | 0 | 100 | | | |
| DREAR | 3 | 3 | 3 | 0 | 0 | 100 | | | |
| HHC 24 ID | 10 | 10 | 10 | 0 | 0 | 100 | | | |
| CMD GP | 11 | 11 | 11 | 0 | 0 | 100 | | | |
| MAP RESRV | 100 | 100 | 0 | 100 | 100 | 100 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1731 | 2667 | 1646 | 1021 | 964 | 62 | 1097 | 484 | 484 |
| LESS 3ACR | 1481 | 2417 | 1636 | 781 | 724 | 68 | 1097 | 484 | 484 |

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# APPENDIX H. DESERT STORM S2 AFTER ACTION REVIEW

## S-2 DESERT STORM AFTER ACTION REVIEW

HIGHLIGHTS

SUSTAIN

- G-2 Open Door to MSCs
- Desire/Push of intel down to units
- Flow of national intel down to battalion level
- Automated intel system
- Cross-talk/cooperation among Bde, Bn S-2s

IMPROVE

- Commo (Div to Bde/Sep Bn)
- Imagry
- Outdated intel during attack
- EPW/Refugee handling- Who's in charge?
- Transition of prewar to combat intel operations
- Staff control of reconnaissance  G2/G3?
- More computers & software
- Mobile operations (Mvmnt to Contact)
- Reporting system
- Reporting system
- DataBase: limited training for SIGINT
- No weather observers

ADDITIONAL/EXPANDED COMMENTS

SUSTAIN

- Good FAX when static in defense
- Computer commo great but limited to units at nodes
- Did NOT get overwhelmed by bulk computer msgs.
- Use of LNOs
- Pre-combat intel good/complete
- Good intel training
- Good combat intel training through OBJ Orange
- AVN: good intel prior to battle
- DISCOM: overall good, esp. water & route/no-go overlays
- DIVARTY: good precombat info
- 1st Bde: good precombat info, good to BP 102
- 1-5 ADA: slow start, good precombat, overall satisfied
- 3-41: overall satisfied with precombat

IMPROVE

   Commo
- Need dedicated TACSAT channel esp. when moving
- Need commo for lateral as well as higher/lower comms
- Need OE 254 (crank-up) rather than 292 or ground mount
- Redundant commo
- Intel AM secure net?
- No computer commo to CAV & others

   Maps
- Unit contingency map storage
- Map distribution organization
- B&W maps NO-GO!
- 1:100,000 scale maps preferred
- 1:250,000 scale maps inaccurate, did not match 1:50,000s

   Reporting
- Reporting from lower needs work
- Getting USAF info
- After OBJ Orange, intel from higher became just locations and lacked narrative
- At Jalibah SE airfield, only 20% of reported enemy positions were occupied-info outdated
- Same at Nasiriyah-info based on DIA/long-range systems-up todays/month old
- No reporting on orientation of defenses
- Once we moved to attack positions, reporting remained too general; we did not re-focus
- Bns not getting the same info as Bdes
- CREAR/CMAIN briefings did not always match due to personal observations by briefers

TO&E Manning & Equipment
- Insufficient personnel for 24 hour opns; also could not visit units, debrief prisoners, etc.
   TO&E Manning & Equipment (Cont)
- S-2s often did not have own vehicles- could not visit units, recon area, etc. No HMMWVs

   EPWs
- EPW plan did not work
- CAV had no MPs
- Position EPW cage with interrogators FORWARD at BDE TAC, not BSA

   R&S
- Lack of reconnaissance at brigade level
- R&S planning at DIV level

   Imagry
- Too much overclassified imagry
- Not enough imagry

- Targeting (no expanded comments)

   Units
- AVN: poor intel on ADA after battle began
- 2nd BDE: no SPOT imagry
- DISCOM: wanted more imagry
- DIVARTY: unhappy w/ flow of combat info, lack of imagry
- 1st Bde: unhappy after move from BP 102

APPENDIX I

G-2 Internal After Action Review
Operation Desert Storm

AREAS TO SUSTAIN

Physical Organization
- ASIC entrance opposite DMAIN entrance; Goal: complete
integration
- Air-mobile tents
- MI Bn located close to/with DMAIN
- MILVANS (for maps, etc.)
- MI Bn Jump TOCwith DTAC
- 2 water trailers needed instead of 1
- LNOs (at Corps/MI Bn LNO at DIV/Marine LNO at DIV/ etc.)
- EPW teams forward
- Interrogators with Bde TAC

Operations
- Collection plan
- R&S planning remain in G3
- Keep meetings to minimum
- Final results of FUSION-"Big Picture"-accurate
- Targeting
- Dedicated personnel to radio/open source monitoring
- Open Sources: CNN!
- Interaction within G2: "Continue to talk to each other!"
- Overall LRSD Operations
- Debriefing of pilots
- S2 cross-talk on battlefield
- Flexibility to make ADHOC groups

Products
- Final results of FUSION-"Big Picture"-accurate
- INTSUMS/INTEL products

Communications
- Computer commo betwee G2 & MSCs
  * Everyone must have (preferably laptop & printer)
  * Practice in peacetime
  * MCS 2?
- Communications maintenance
- SACC procedures for message handling/downgrading

Security/CI
- Access guards
- SCI access: one time "Read-On" went well
- Access rosters

Personnel
- Right people in Assault CP critical
- S2s well-trained, well chosen
- Update of internal Division access roster; access roster
from highr for visitors

AREAS TO IMPROVE

Organization
- Give CM&D (or someone) TO&E authorization to support map distribution
mission
- Must have large work space for special projects: used 2 GP
Mediums for projects & attachments
- Need imagry interpretation van that has large storage
space.  Need 4 imagry interpreters
- Integrate/co-locate Imagry & Terrain teams (RFAB work
space?)
- Transportation: Need more vehiles; can't even move own
personnel, all need to be cross-country capable
- Terrain van not cross-country capable: needs 5 Ton wheels
- Waterproof storage area
- Move Air Force cell out of ASIC
- Relook wartime TO&E (personnel, vehicles, radios,
equipment): CM&D not manned for map distribution mission
- MI Bn assets as far forwrd aspossible; no MI assets "in
reserve"
- "Universal" G2 (representatives from all sections) with
DTAC
- DMAIN/G2 had large signature

Operations
- Staff responsibilities vs. Manning the task (CM&D handling
maps)
- EPW Handling/Captured Material : material did not accompany
EPWs to rear
- Relook requirement for FUSION meeting
- DISTRO list
- LRSD mission SOP
- Integrating LRSD operations to manuever operations/cannot
use LRSD in friendly territory without CLOSE coordination
with friendly units
- Maps/personnel
- Reporting system (lower to higher)
- Collection cell with DTAC (mini ASIC/G2)
- Keep DTAC FORWARD
- Apache Helicopter R&S SOP (How/who analyzes, etc.)
- Knowledge of outside areas
- SSO service must always be immediately available to CG (for
general to general message traffic)
- Be "Output Orienteed"
- More imagry to those who need it
- IRIS imagry arrived too late to help terrain analysis
- Large Intel signature
- Too many meetings initially
- Imagry information from Corps needs comment/explanation;
useless without it
- No Corps backup for 39 Van

Communications
- NEED IDEPENDENT INTELLIGENCE COMMUNICATIONS SYSTEM:
competition kills us
- Need dedicated THMT-style single-channel SATCOM data link
to higher intel agencies & from MI Bn to G2
- Need dedicated TACSAT/SATCOM links between DIV & MSCs
- CM&D never got an FM operational: Tasking & Reporting net
(FM) never worked
- Get all units automated (laptops & printers)
- Use FM in SCIF to monitor battle (CM&D/OPNS net)
- No ome running Div O&I net once battle started
                    OR
   Edes did not communicate with DTAC (lower to higher)
-Determine which nets will handle which information/users:
develop a realistic communications system
- Intel needs FM retrans capability
- Determine security requirements/concerns in our computer
communications from ASIC
- Unannounced "Minimizes" and screw-ups in Y/R routers caused
major problems and misunderstandings
- Get separate routers from garrison & DMAIN/DTAC
- SSO messages-"Eyes Only"-We must be sure they arrive
- SSO service must always be immediately available to CG
- Commo dependency on TYK-39 is unacceptable: it crashed too
often
- G2 needs stand alone commo

Security/CI
- Security of LIMDIS information: no prgram exists. Physical
separation needed & "Need to Know" must be determined
- Determine security requirements/concerns in our computer
commo from ASIC
- Guards (access) to CM&D needs to be MPs/Band. not CM&D
personnel
- Clearances/SCI billets not sufficient for wartime
- Responsibility for Badge system
- Access rosters:need ALWAYS to be updated and for visitors

Personnel
- Staff Responsibility vs. Manning the Task ie. CM&D handling
maps
- Need 4 Imagry Interpreters
- Relook wartime personnel manning (TO&E) requirements