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Military Intelligence

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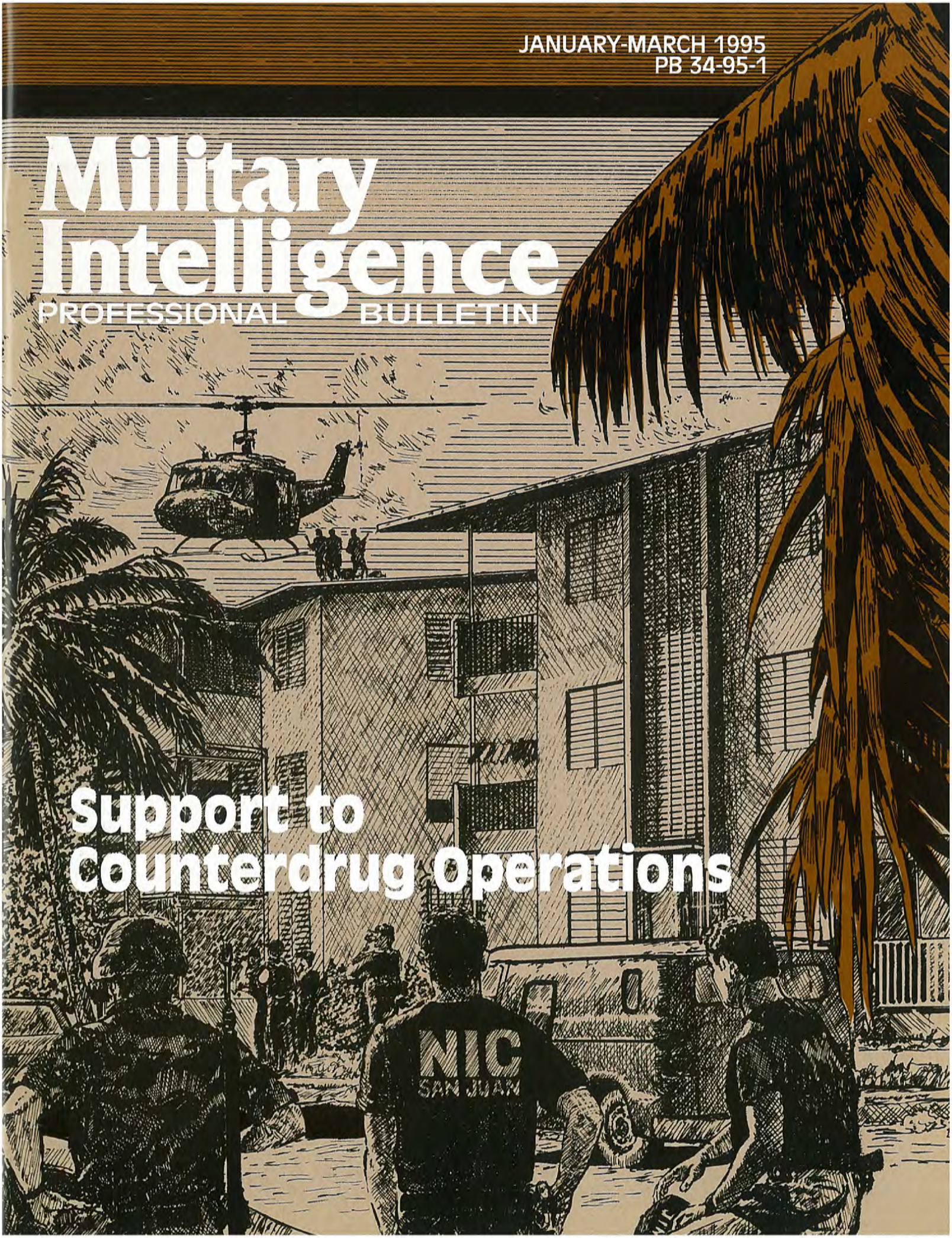

Support to Counterdrug Operations

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Writer of the Quarter

MIPB is pleased to announce the Writer of the Quarter is Chief Warrant Officer Two Mark Ingram for his article, " ASAS and 1st Cavalry Division."

Congratulations to Chief Warrant Officer Two Mark Ingram and thanks to all of our outstanding authors for spending the time and effort to write and submit these quality articles, book reviews, and letters to the editor. Choosing the Writer of the Quarter is always a very difficult choice. It is the contributions of all of our authors that make **MIPB** the professional forum for Military Intelligence. Keep up the good work!!

Not Getting Your Magazines?

If your MI unit or unit intelligence officer does not receive a free copy of MIPB, please let us know so that we can place your unit on our free mailing list. We receive many issues as undeliverable. If you are moving, send us a change of address to maintain your subscription.

Article Clearance

All service members and Department of Defense civilians should clear articles through their local security office prior to submission. A signed statement of clearance should accompany the article. Include a point of contact at the clearing office and a daytime phone number.

Instructions for Submitting Articles to MIPB

1. Select a topic relevant and of interest to the Military Intelligence community.
2. Write an outline to organize your work.
3. Follow proper rules of grammar. Consult **DA Pam 600-67** or William A. McIntosh's **Guide to Effective Writing**, if necessary.
4. Maintain the active voice as much as possible. Write "the Army beat Navy" instead of "the Navy was beaten by Army." (See **DA Pam 600-67**, para. 3-2,b[1].)
5. Include:
   a. Pictures and graphics with an adequate description (first-source, if possible).
   b. A computer diskette, with the article in Word Perfect, ASCii, Multimate, or MS Word.
   c. A very short biography with the full names of all authors of the article. The biography must have the current duty position and civilian education.
   d. A cover letter, with home and work phone numbers, stating your intent to publish the article.
   e. A security release by your local security office to ensure your article is unclassified and does not contain sensitive information.
6. Remember, content is the most important part of your article. When in doubt, send us your article and we can work out the details.

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FEATURES

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VANTAGE POINT

by Brigadier General Charles W. Thomas

I write these words less than a week after assuming command of our Intelligence Center and Fort Huachuca. I arrive with a great appreciation for the important initiatives that are in full bloom here. From my last position as Deputy Chief of Staff for Intelligence, U.S. Army, Europe (USAREUR), I have a continuing appreciation of just how much these initiatives mean to the success of intelligence operations in the field. The cooperation and symbiotic relationship between the field and the Intelligence Center have never been greater or more important.

The Future

Only eight days ago I completed the after-action review for ATLANTIC RESOLVE. ATLANTIC RESOLVE was an ambitious, USAREUR-sponsored, joint and combined, computer-assisted exercise that replaced the old REFORGER. It reminded me of many things, not the least of which is the importance of the intelligence concept (now captured in **FM 34-1, Intelligence and Electronic Warfare Operations**) and equipment development that the Intelligence Center spearheads and commanders in the field essentially design.

The interface between the field and the Intelligence Center is tight, consistent, and must continue if we are to move successfully into the forefront of the information age. Exercises like ATLANTIC RESOLVE are the future. These Advanced Warfighting Experiments are an avenue to prove and improve the Intelligence Center's products, from the quality of training (for our soldiers, noncommissioned officers and officers) to the doctrine and architecture of our emerging intelligence system.

Another thing that has quickly become clear to me is that we are achieving success and breaking new ground—in an age of declining resources. It is an unavoidable fact that the Army is reducing our Intelligence Center budget, and the budgets of units we support. What we must do is make the most out of the resources provided. Wasted time and effort are less acceptable today than ever before.

The combination of our entrance into the information age with declining resources means that we must have a clear vision of where we are going. All the initiatives we pursue must —

- ☐ Fit into that vision.
- ☐ Remain fully coordinated with the combat commander.
- ☐ Work the **first time**.

As we prepare for FORCE XXI, we must have the right technology, doctrine, architecture, and soldiers and officers who can make it all work. We cannot afford to do it over.

In order to keep the output on track, we must have continuous, productive, and honest input from the field. The key to our success, then, is the marriage between the Intelligence Center and the field units: this is the challenge we face. I solicit help from all of you to make it happen.

My Vision

My personal vision for our Intelligence Center is this. We must foster an environment to develop and nurture creative ideas, relevant doctrine, and practical applications. We must all do this in the context of "intelligence driven by the commander." Ensuring a dynamic interface between the field and the Intelligence Center will—

- ☐ Keep the commander in the center of intelligence.
- ☐ Make our doctrine and training relevant.
- ☐ Provide the right technology to the warfighter.

To make this happen I need all of you. Officers, noncommissioned officers, soldiers, and civilians both at Fort Huachuca and throughout the Army, must continue to talk, debate, and honestly and productively critique and improve our Intelligence Battlefield Operating System. Never lose sight of your positive, mission-oriented character; but also never let something that is wrong go "unchecked." There are many ways to make this input felt:

- ☐ Lessons learned for exercise after-action reviews.
- ☐ Contributions to publications and professional journals like this one.
- ☐ Participation in intelligence conferences like the Worldwide Military Intelligence Conference (scheduled this January at Fort Huachuca).
- ☐ Personal correspondence among each other and with me.

All of us must take this challenge and run with it. We must be leaders in the information age.

It is not a cliche to say that we live in a time of remarkable change in the Army. We in MI can take pride in what we have accomplished to this point. MI has made sound and practical innovations and contributions. They meet the needs of the warfighter, including the joint community. We must work together to keep it that way.

ALWAYS OUT FRONT!

by Command Sergeant Major Robert T. Hall

As we progress toward a new millennium, we are witnessing many changes in our military. A visible change is the continued downsizing of our defense assets—budgets and the number of active duty soldiers.

Another change includes the Secretary of the Army's decision to open several combat positions to female soldiers. One of these MOSs is 12C, Field Artillery Surveyor. This step toward equality for the women defenders of this great nation is, I think, long overdue. I believe these soldiers are as capable as their male counterparts. There are still a few jobs that, because of physical strength, exclude women.

During Operations Desert Shield and Desert Storm, many female soldiers were assigned to my battalion. I can say firsthand that they performed very well. They were not liabilities.

All military units, regardless of the branch, have soldiers, both male and female, who perform marginally. On average, it is only a small percentage of those soldiers whose performance can be labeled substandard. These soldiers are appropriately dealt with by the NCO support channel or chain of command.

Still, some leaders say there is no place in combat arms for women soldiers. I believe leaders with that attitude probably think a woman's place is in the home, not in a foxhole. They believe the "we, as men, must take care of the weaker sex" rule. There are many female soldiers who command respect because they deserve it. They command respect not because they are female, but because they are terrific soldiers.

Does change create anxiety? Sure. As professionals, however, we must meet the challenge of change with understanding and open, enquiring minds. The dawn of the 21st century is near. A new era is beginning for leaders of the MI Corps. Collectively, we must meet this challenge head on. We must eliminate discrimination and ensure all of our fellow soldiers have equal opportunity to serve and support the greatest country on Earth—the United States of America.

I'd like to conclude this article by wishing all members of the MI Corps a prosperous New Year. God's Speed.

ALWAYS OUT FRONT!

FROM THE EDITOR

As the Army continues the exciting transition toward an information age force, we must describe how Intelligence and Electronic Warfare (IEW) supports each echelon. Our cornerstone manual, **FM 34-1, Intelligence and Electronic Warfare Operations**, opens the way for this doctrinal development. ("Doctrinal Field Manuals In Progress," on page 47, contains a list of field manuals under revision.) Four recent events have highlighted the need to update both the division and especially the brigade IEW field manuals:

- ☐ Operation Desert Capture II.
- ☐ Development of draft **FM 34-8-2, Intelligence Officer's Handbook.**
- ☐ Development of draft **FM 34-25-3, All-Source Analysis System and the Analysis and Control Element.**
- ☐ Participation in joint working groups on Army and Marine integration.

Division Level and Below IEW

More specifically, the intelligence community needs to determine exactly how all the parts of the Intelligence Battlefield Operating System work together to support a maneuver brigade. We must determine the exact employment and intelligence architecture of these parts. Some of these parts include the analysis control team, imagery processing team, unmanned aerial vehicle section, battlefield intelligence coordination center, national and joint intelligence support, and the Deployable Intelligence Support Element and Military Intelligence Support Teams (when applicable).

The role and focus of the **Military Intelligence Professional Bulletin** (**MIPB**) is to enhance professional development within the intelligence community and to help formulate doctrine, tactics, techniques, and procedures. To better fulfill this role, we request your help with division level and below IEW. The quality of doctrine, training, and the **MIPB** directly reflects your input. Both **MIPB** and the Intelligence Center's doctrinal literature program want to "tap into" some of the exciting developments occurring in the field—either as doctrinal input or unit tactics, techniques, and procedures.

There is no shortage of good ideas in the Army. MI personnel and units continually train at their home station, train at the Combat Training Centers, and perform "real-world" intelligence support. I know LTC Phillips, Commander, 104th MI Battalion, and other intelligence leaders have wrestled with many of these issues and developed innovative solutions. After recent deployments, especially to Haiti and Kuwait, we know you (the field) must have some important lessons learned to share.

We plan to use your input in—

- ☐ Future issues of **MIPB**.
- ☐ Training here at the Intelligence Center.
- ☐ The eventual development of many field manuals to include **FM 34-80, Brigade and Battalion IEW Operations**, and **FM 34-10, Division IEW Operations**.

MIPB also needs other articles and book reviews covering all facets of intelligence. Our general guideline for articles is 8 to 15 double-spaced pages. Please submit articles on a disk in Word Perfect, Multimate, or MS Word. Include a short biography, security review, and your address and telephone number. If possible, include graphics or photographs with a brief explanation. Send submissions to Commander, USAIC&FH, ATTN: ATZS-TDL-B, Fort Huachuca, AZ 85613-6000, no later than 5 April for the July-September 1995 and 5 July for the October-December 1995 issues.

Annette Castro

MIPB and the Doctrinal Publications Division are sad to announce the retirement of Mrs. Annette Castro, Associate Editor, **MIPB**, after 23 years of service. As Associate Editor, Mrs. Castro has served as the driving force behind **MIPB** over the last four years. She trained two editors, two designers, and several other supporting members of the staff on the intricacies of **MIPB**. Annette's dedication includes managing the production of and editing five outstanding issues of **MIPB** without a military editor.

Her commitment to excellence and hard work are reflected in all of the great feedback you, the readers, have provided to **MIPB** over the years. Annette has played a significant role in professional development within the intelligence community and has the appreciation of the entire Doctrinal Publication Division. We wish Annette all the best in her retirement.

LETTERS

To the Editor:

In your last issue, I must take exception to Mr. McGuire's article, "CIA: Myth and Reality" (Oct-Dec 94).

First, in his opening paragraph, he states, in a superfluous and slanted manner, that the Central Intelligence Agency is unique and that it deals with covert operations. Whether he admits it or not, the lack of outsider knowledge, due to the nature of its business, propels the myth particularly among uninformed individuals. In reality, the CIA is like any other government entity with successes and failures attributed to a large bureaucracy. Nonetheless, the author misses the "big picture" when he misconstrues this agency's mission. Throughout the article the author states an "us" (i.e., CIA) versus "them" (i.e., policymakers and the military) mentality. This is unfortunate. CIA personnel should recognize that they are part of the intelligence community and not a separate entity. Their goal, as well as others within the community, is to provide intelligence for **national** security. National military strategy is subsumed under national security objectives.

Second, in these tight budgetary times, I can see why the CIA

(Continued on page 57)

Intelligence Support to Civilian Law Enforcement

by Major George Santiago, USAR

Support for domestic counterdrug operations includes military planning and training assistance for domestic law enforcement agencies, National Guard participation, equipment loans and transfers, use of military facilities, and other assistance as requested and authorized. This support may expand as national policy and legal prohibitions evolve.

—FM 100-5, Operations

Photographs provided by author

Police and National Guard soldiers search a wooded area adjacent to the housing projects.

The Puerto Rico Army National Guard (PRARNG) is involved in the longest sustained support to a civilian law enforcement mission in modern U.S. history.

Drug dealers and petty criminals are the threats in this mission. They behave much like insurgents; but unlike insurgents, they do not want political change. They are trying to create safe havens where they can conduct their criminal enterprises without fear of legal actions. While they lack a political ideology, they thrive in the same soil as traditional insurgencies: poverty and ignorance.

Like most police departments, the Puerto Rico Police Department (PRPD) is not large enough to handle these problems. Therefore, the PRARNG is assisting the PRPD in its counterdrug operations. The PRARNG adheres to the following mission statement from paragraph 2, PRARNG Operations Order 3-93:

The Puerto Rico Army National Guard will conduct joint operations (State Police/National Guard) geared toward the elimination of drug selling points, the arrest of individuals who operate such points, and the confiscation of drugs and stolen property.

In practice, this involves supporting police operations in public housing areas. The PRPD has focused these operations on the public housing projects or *"residentiales"* where criminal elements have established drive-by drug distribution points and stolen car and merchandise street fairs. Puerto Rico Police Colonel Jose A. Carrasquillo-Rosa, Auxiliary Superintendent for Criminal Investigations, states:

Our mission in these housing projects is to **invade** *and take back the territory held by these criminals so that its law-abiding residents can enjoy their constitutionally guaranteed rights.*

FM 100-20, Low Intensity Conflict Operations, provides guidance for the conduct of these operations. The Army uses this field manual to support host nation counterinsurgency efforts. The task of validating the domestic use of doctrine intended for use outside the United States falls on the PRARNG's shoulders.

While other missions such as the Los Angeles Riots and Hurricane Andrew involved more U.S. ARNG soldiers, this mission promises to last much longer. The first counterdrug mission took place on 4 June 1993.

This article analyzes Puerto Rico's situation using the factors of low-intensity conflict (LIC), the phases of the mission, and the imperatives of LIC. We will then examine how and where intelligence tasks are executed. However, it is important to consider that many of the same conditions in Puerto Rico also exist in some cities throughout the United States.

Factors of LIC

Using the factors of LIC—change, discontent, poverty, violence, and instability—we will dis-

cuss how the current situation developed.

Change. Puerto Rico has undergone dramatic economic and social changes over the last 50 years. It transformed from a rural, agricultural society to an urban, industrial, and service-oriented economy. In response to these demographic shifts, the government built public housing centers to replace the growing shanty towns near the cities.

Discontent. Economic and social expectations that are not met often result in discontent on the part of the people. Sources of discontent in Puerto Rico included—

- ☐ High unemployment.
- ☐ Shortage of low-cost housing.
- ☐ Substandard public schools.
- ☐ Inadequate public health care.

These conditions resulted in a loss of hope and ambition. Once discontent sets in, it is difficult to overcome, even with innovative and progressive policies.

Poverty. By mainland standards (which Puerto Ricans compare themselves to), the island is poor. Over 40% of the population qualifies for food stamps. This pervasive poverty invariably creates both a supply and demand for drugs.

Violence. Puerto Rico has one of the highest rates of violent crime in the United States. While FBI statistics are not available, Puerto Rico is at or near the top in the murder rate. While most of the murders are drug-related, the rates of domestic violence and crimes of passion are also high.

Instability. The downward spiral of violence creates an environment where many island residents no longer feel safe. Many citizens now maintain illegal firearms for protection—symptomatic of a population losing faith in its government's ability to provide protection.

People living in the *residenciales* often see criminals and their organizations as an alternate government. In some *residenciales* gangs try, convict, and execute violators of their "criminal code." Some criminal figures have attained folk hero status by undertaking civil affairs projects, such as providing basketball courts and medical care.

Mission Phases

Counterdrug missions are executed in three phases:

- ☐ Phase I, Assault: Detain suspects, seize evidence.
- ☐ Phase II, Secure: Establish entry control points.
- ☐ Phase III, Sustain: Improve quality of life. (The PRPD and PRARNG presence is reduced in Phase III.)

Figure 1 shows how to synchronize intelligence and electronic warfare (IEW) with operations during the phases of the mission.

Operations and IEW

OPS	Select and Plan	Phase I Assault	Phase II Secure Objective	Phase III Sustain
IEW	I&W	Situation Development	I&W	I&W
	IPB*		Situation Development	Situation Development
	Target/Target Development		Force Protection	Force Projection
	Situation Development			BDA

*Update IPB continuously

Figure 1.

Imperatives of LIC

With a basic understanding of this situation and the mission phases, we can analyze PRPD and ARNG operations and how they conform to the imperatives of LIC—political dominance, unity of effort, adaptability, legitimacy, and perseverance.

Political dominance. In Puerto Rico, politics is not as important as in other operations other than war environments such as El Salvador. There, the political divisions were the cause of the conflict. However, the political ramifications surrounding the decision to use the PRARNG in this capacity were inescapable. The state needs a political consensus if such a mission is to succeed.

Most Puerto Ricans seem to approve of and support the government's actions. In a 24 August 1993 poll conducted by an island newspaper, **El Nuevo Dia**, 90% favored using the National Guard.

Unity of effort. Puerto Rico's government and Federal agencies work together to support this mission. Once deployed, the senior PRPD member exercises command and control over PRARNG officers and NCOs. The ratio for an operation is two guard members to each police officer. However, this may vary with the size and scope of the operation.

The Housing Department and state and municipal planning boards provide maps and sketches of the target area's layout. State and Federal law enforcement agencies (LEAs) share information regarding individual criminals and their organization. During Phase III of the mission, the Quality of Life Council evaluates the community's needs and coordinates the efforts of state social, medical, and utility crews.

Adaptability. The PRARNG has not created special units that support the police. Instead, they task units to provide a certain number of personnel in a specific specialty. For Phase I of the mission, the PRARNG uses Military Police since they understand arrest procedures. Their role is to

provide backup firepower for the police.

Although the Puerto Rico State Area Command (STARC) Emergency Operations Center is not part of the planning process, it is an information conduit. It can respond to requests for additional personnel and equipment. A preexisting joint concept known as *Fuerza Unida de Rapida Accion* (United Rapid Action Force), or FURA, provides channels for pooling resources and information between Federal and local LEAs.

Legitimacy. This type of operation is legal under U.S. Code and the Puerto Rican Constitution. However, authorities make every effort to reassure the population that these missions are not the first step toward a military government. In order to alleviate the concerns of the people, PRARNG members do not arrest people or seize evidence. Moreover, the chief of police and Puerto Rico's adjutant general closely supervise these operations for compliance with constitutional and legal limitations.

Perseverance. The use of short-term search and destroy tactics has only short-term success. Mao Zedong once compared the guerrilla within the population to fish within water. This applies in Puerto Rico where drug dealers need the population as a market, as workers, and as shelter. PRPD and PRARNG personnel selectively deny the criminals access to the population. They remain on location until housing project residents re-establish control of their community.

Many residents build protective fences, create checkpoints, and begin neighborhood watch programs to deny the criminals access. This approach, to gradually constrict insurgent base areas and deny access to the population, is similar to the successful approach used in the Philippines and El Salvador. To continue Mao's analogy, the water in which the fish live is drained away.

The following section discusses IEW operations, the six intelligence tasks (indications and warning [I&W], intelligence preparation of the battlefield [IPB], situation development, target development and support to targeting, force protection, and battle damage assessment [BDA]) and the tactical decision making process.

IEW Operations

In this type of situation, ARNG IEW operations are governed by—

- ☐ **NGR (Army) 381-10** (based on **AR 381-10, U.S. Army Intelligence Activities**).
- ☐ **NGR (Air Force) 200-19, Conduct of Intelligence Activities.**
- ☐ **NG Pamphlet 20-10, Intelligence Oversight.**

As in conventional operations, the intelligence cycle begins with **Plan and Direct.** What differs most in the cycle is that the police collect and analyze the major portion of the intelligence. The reasons for this are—

- ☐ The police select which *residenciales* they will target for operations.
- ☐ The basis of police intelligence revolves around building prosecutable data on private citizens. ARNG participation in this activity, of course, is not permissible in most situations.
- ☐ The police are satisfied with the intelligence they get from their street agents and sources. (See Figure 2.)

PRARNG action officers perform tactical intelligence preparation of the battlefield (IPB) as part of the decision making process and to supplement police intelli-

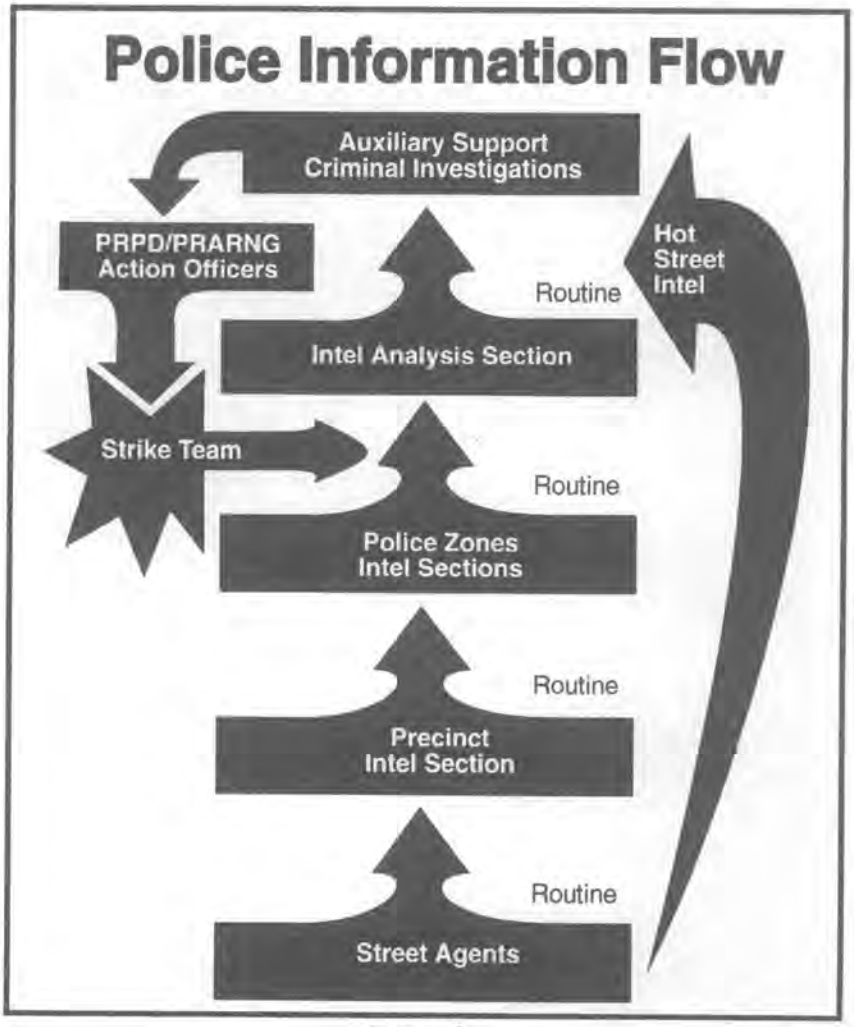

Figure 2.

gence work. The process is similar to the one used to support direct action missions for Army Special Operations Forces. It requires specific, detailed, and accurate data on a small area. The police decision making process doesn't always produce clearly stated priority intelligence requirements (PIR) and information requirements (IR).

Military staffs preparing to support the police, however, must anticipate these requirements and present intelligence to the police in a timely, relevant, accurate, and predictive form. Police and guard members need to know the terrain on and leading to the objective, as well as threat capabilities and weaknesses. The IPB process is an extremely important tool in supporting U.S. civilian LEAs.

As with many state guards, the PRARNG does not have organic MI units. Units at and above battalion level, however, have S2 sections which perform the intelligence function. The IEW tasks described below would be a challenge to even the best trained and organized S2 sections.

The nature of the threat requires that civilian LEAs conduct crime-related intelligence functions. Under the current situation, the PRARNG may not collect, investigate, or analyze prosecutable information on private citizens. There are some instances in which participating military personnel may perform limited intelligence tasks.

Indications and Warning

There are two instances where LEAs perform the equivalent of I&W. Both use a combination of information provided by Federal and local LEAs.

1. The first "I&W" center is the PRPD's *Centro de Recopilacion de Datos sobre el Narcotrafico y el Crimen Organizado*, or CRDNCO. These analysts compile information on drug trafficking and organized crime and tie in with Federal crime data bases. The center combines this data base with local crime statistics and current "street intelligence" to help predict patterns of crime in specific areas.

2. I&W information is also used in drug interdiction efforts. Federal and Puerto Rican LEAs link with the FURA concept mentioned earlier. FURA is neither a unit nor an entity. It is a concept for pooling resources and information to counter the movement of drugs into and around Puerto Rico. It ties together all concerned agencies and establishes guidelines for the dissemination of perishable I&W information.

Figure 3 shows how the concept works. Authorities use the PRARNG Emergency Operations Center as an alert center to implement prearranged transportation and labor support plans.

Although the PRARNG does not directly produce I&W intelligence, it uses I&W data to determine areas of probable future operations. Both the police CRDNCO and the FURA concept existed before the current anti-crime campaign. These are excellent examples of the LIC imperative, "adaptability." The PRPD and PRARNG are adapting existing concepts and agreements to fit the needs of the mission.

Intelligence Preparation of the Battlefield

Because of legal limitations on domestic intelligence operations, the PRARNG carries out most of its intelligence duties during the IPB process. Guard members can complete almost all of the IPB process before H-hour. Yet they must continually update information and tailor the IPB process to meet the requirements of the mission through all three phases. The four steps of the IPB process are discussed below.

Step 1: Define the battlefield environment. With the blanket mission to support the PRPD, PRARNG action officers gather available maps, sketches, and aerial photographs of potential targets: high-crime *residenciales* islandwide.

While final selection is up to PRPD's Colonel Carrasquillo-Rosa, PRARNG planners use available crime data to focus on the most probable targets. They do not have access to the crime records of individual gang members. They may, however, gather

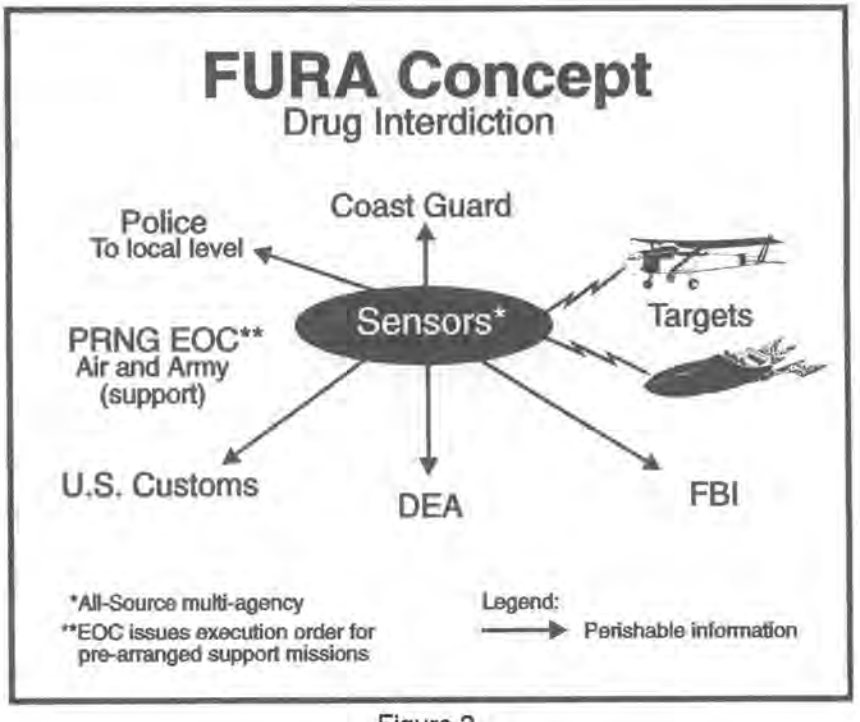

Figure 3.

existing data on estimated size and capabilities of gangs, and other social and economic data. Once the police select a *residencial*, they divide the area of operations into sectors:

- ☐ The outer ring which covers escape routes (or possible reinforcement routes).
- ☐ The inner rings around individual target buildings.

PRARNG action officers work side-by-side with their police counterparts to determine the area of operations and area of interest.

Step 2: Describe the battlefield's effects. PRARNG action officers also work side-by-side with their police counterparts to conduct terrain and weather analysis.

1. Terrain analysis. The *Residenciales* are considered built-up areas. However, there are some *Residenciales* next to open areas and even some in small towns surrounded by rural terrain.

Terrain analysis involves considering the OCOKA factors:

- ☐ Observation and fields of fire. Identify terrain that favors the positioning of the outer ring. Can personnel observe movement in and out of the objective and still provide suppressive fire support as inner ring forces take up their positions. Can personnel cover helicopter landing zones by fire from outer ring positions? What buildings provide the best friendly and threat observation and fields of fire?
- ☐ Concealment and cover. Identify concealment and cover on the objective, axis of advance, and exfiltration routes. This is particularly difficult to portray because of the urban nature of the objectives. It is useful, however, in determining friendly bounding-overwatch positions and in predicting where suspects may try to ditch evidence and weapons once the operation begins. Planners must analyze adjacent open or nearby rural areas, particularly when current operations begin to drive the criminals out of urban areas. (See concealment and cover overlay, **FM 34-7, Intelligence and Electronic Warfare Support to Low Intensity Conflict.**)
- ☐ Obstacles. Identify obstacles to foot and vehicular movement (fences, brooks, and drainage ditches). Identify overhead wires or trees that could affect helicopter operations. More specific obstacle-related data include size and thickness of doors, walls, and iron bars. These could slow the advance of search teams and give suspects time to dispose of evidence.
- ☐ Key terrain. Identify buildings police or PRARNG personnel should occupy first (because they offer the best observation and fields of fire). What street corners and major electric switches should personnel secure first? Which key personalities or local civil and folk leaders should personnel protect? Since the population is key terrain, police personnel should gather and analyze the following information: labor status (unemployment), local problems, living conditions, attitudes of support toward police and PRARNG versus the target group. (See population status and key facilities and targets overlays, **FM 34-7.**)
- ☐ Avenues of approach and mobility corridors. Major roads, intersections, alleys, drainage ditches and tunnels, helicopter landing zones, and exfiltration routes are avenues of approach. If the target is next to wooded areas, identify roads and trails leading to and from the objective. Identify navigable waterways (to include those that can hold rubber rafts and other shallow draft vessels) next to the target. Where do they lead? Identify small boat landings. (See lines of communications overlay, **FM 34-7.**)

2. Weather analysis. Analysts must consider the effects of weather on the OCOKA factors. For example, will rain-swollen ditches and streams become obstacles? Will rains flood a designated helicopter landing zone? Will running or standing rain water force the repositioning of roadblocks and outer ring positions? Will strong winds affect the use of air avenues of approach? Will rain or bad weather delay the construction of fences, checkpoints, and other infrastructure improvement projects?

Step 3: Evaluate the threat. Keeping in mind the restriction against collecting and analyzing prosecutable information, the PRARNG develops a data base on nine categories:

1. Composition: Identify gangs, families, criminal organizations, and cartel affiliation. Identify the organization of functional or combined cells and the use of commodity (drugs or stolen goods) or multi-faceted funding.

2. Disposition: Identify known *puntos* (drug sale points), *muertos* (safe houses and storage areas), growing areas and laboratories, trans-shipment points, front organizations (business, gambling, prostitution), and lookouts.

3. Strength: Identify total strength, and strength broken down in terms of runners, messengers, lookouts, triggermen, and salespersons.

4. Tactics: Identify methods criminals use to conceal or lower their profile. Will they resist? Will they use decoy tactics to lure an operation to a dead end? How do they dispose of evidence? What cover words and drug slang do they use?

5. Training: Determine if they recruit and train children and youths to carry out tasks such as couriers and look outs. Have certain "bosses" traveled to drug-producing countries?

6. External training: Identify foreign connections such as Colombian or Ecuadorian. Can we expect similar tactics such as the Colombian *Sicarios* (motor scooter hitmen)?

7. Logistics: Analyze transportation and movement timetables. Is there a correlation between peak demand periods and movement? Consider threat logistic requirements such as packing, growing, and processing supplies. What is the preferred method of transportation and types and sources of weapons and ammunition?

8. Electronic technical data: Analyze the use of cellular phones, beepers, hand-held radios, and FAX machines. What are threat communications intercept capabilities?

9. Personalities: Compile physical description and characteristics of gang leaders and triggermen.

In essence, PRARNG and PRPD action officers evaluate this data base, construct a threat model, and determine the threat's capabilities. While most of this data is textual, a significant portion must be graphically portrayed. Textual or graphic, this is as close as you will come to a doctrinal template in this type of environment. We construct the information and intelligence so that we can easily apply it to each phase of the operation.

For example, during Phase I, information on threat defensive capabilities is more critical than social problems. However, the social aspects of the target area rise in priority as the mission progresses through Phases II and III. Intelligence planners must recognize critical information during each phase of the operation, to effectively participate in threat integration.

Step 4: Determine threat courses of action. This step of IPB in support to law enforcement does not differ from the doctrine in **FM 34-130**. Often criminals have three courses of action: immediately try to escape, delay law enforcement officials while they destroy evidence, or defend their ground.

Situation Development

Police intelligence analysts carry out most situation development at each level of command: general headquarters, police zonal headquarters, and each precinct. The focus is on verifying I&W intelligence and where the threat is shifting its activity. Deployed police and PRARNG elements constantly collect on current developments and trends in the *Residenciales* in support of situation development.

Target Development

This mission does not call for fire support in the conventional sense. However, it applies to the selection of *Residenciales* for operations and intelligence collection and analysis. In *Residenciales*, the targeting authority is PRPD Colonel Carrasquillo-Rosa. Based on information from the I&W and situation development functions, he selects the *residencial* the police will "invade."

PRARNG action officers use information developed during the IPB process to identify threat entities and their probable location in the area of operation. The police use this "street information" to target specific individuals for arrest and to identify specific buildings or areas for priority searches.

Force Protection

As authorities apply pressure on the threat, the chance of retaliation against friendly forces is likely to increase. In a graphic example of the spiral of violence, "turf battles" have dramatically increased as street thugs compete for shrinking markets. Thug infighting accounts for approximately 60% of 1993's record-setting homicide rate. As police and National Guard elements pressure drug pushers, there is a growing potential that the pushers could retaliate.

Force protection, therefore, is one task where the PRARNG has more latitude in handling information on the threat. Deployed PRARNG elements that receive information concerning specific individuals or organizations planning violent acts against PRARNG and police elements may process some information.

They may disseminate names and descriptions of persons who pose a direct threat to deployed PRARNG elements including personnel on duty in the *residenciales*. We may then detain these individuals if they are spotted near PRARNG positions. However, we may not take back or in any way transmit, process, or store this information within fixed National Guard facilities.

Incidentally, the PRPD and the PRARNG take extraordinary measures to ensure the security of their operations. Only a select group knows of their intended target in advance. Because of these measures, PRARNG/PRPD operations have enjoyed total surprise—the surprised criminals have yet to fire a single shot at "invasion" teams.

No one is counting on the criminals to continue to roll over. All PRARNG personnel are briefed on the potential threat of reprisals, and on protective measures for themselves and their families. At present, PRARNG rules of engagement allow soldiers to use deadly force only in self-defense. So far, there has only been one instance of the use of deadly force. Under orders from the senior police officer on site, a soldier fired six rounds at armed individuals spotted in a car near a check point; there were no known casualties.

Battle Damage Assessment

PRPD personnel use crime data to assess the effects of their operations. Sources inside criminal organizations can often report the impact the operation has on organized crime. Drug availability and quality are both indicators. BDA can also discover alternate measures the threat undertakes to thwart friendly efforts. Current trends show a possible shift toward suburban and rural areas. Even negative BDA results are useful in helping analysts assess

Private sector support to the government's effort to eliminate drug use and drug trafficking.

how the threat avoids friendly efforts.

Tactical Decision Making Process

Once PRARNG and PRPD planners approve a target, they meet for the initial wargaming session and fuse the results into a decision support template. They discuss all friendly and threat courses of action and analyze all available information.

Traditional decision points on the ground may give way to "decision events" or threat actions that, if initiated, trigger a decision by the police. For example, if threat gunmen pin down a friendly element, the commander must decide to call in armored personnel carriers or use tear gas. If area residents react angrily to the operation, the commander must decide what crowd or riot control measures to take, or whether to call in reinforcements.

When the initial wargaming session is over, personnel assemble and quarantine the assault force for a final briefing and wargaming session. Here is where the actual operators get involved in planning the mission they will perform. Operators review information requirements and threat indicators. They task these out to undercover officers or other agencies for collection.

Police and PRARNG intelligence develop named areas of interest to focus the collection of specific information to specific points and individuals. They develop target areas of interest (TAI) to show where specific persons or evidence is likely to be found. TAI along exfiltration or escape routes are useful. While this use of the TAI is not as rigid as in other operations, it contains enough of its characteristics to retain the name.

IPB must remain a flexible process ready to support other missions.

Lessons Learned

Police must know the precise capabilities and limitations of the National Guard. There was some initial confusion about the legal and operational limitations of National Guard elements. The PRPD must define the mission, including short-term, intermediate, and long-term goals. They must include all agencies—social and essential service departments—in the conceptual planning process. This will ensure they all understand what is expected. Everyone needs to identify quality of life issues and solutions early.

IPB must remain a flexible process ready to support other missions. In domestic missions such as this, a cordon and search mission can quickly and unexpectedly turn into a riot control situation. In such cases, analysts can add possible "angry mob" targets (retail stores, supermarkets, liquor stores, gun shops) to the key facilities and targets overlay.

These were omissions common to both Operation Just Cause and the Los Angeles Riots. We must use the IPB process, and the entire IEW system, to anticipate all these worst-case scenarios. We must use the process to support any mission in the area of operations.

The missions have also yielded training and readiness benefits. We can see improvement in these PRARNG skills: military operations on urbanized terrain; civil affairs; mobilization procedures; command, control, communications, and intelligence; personnel administration; and logistics. The importance of local National Guard armories in logistics and maintenance is evident. Both police and National Guard elements use armories as local staging areas.

As for results, the joint operations netted hundreds of arrests, the seizure of numerous handguns and assault rifles, two fragmentation grenades, and tons of drugs. However, like the body counts used in Vietnam, these figures are not the true gauge of the effectiveness of this type of operation. Nothing depicts the success of these missions like the faces of those people who now enjoy the peace and tranquillity of drug- and gang-free public housing projects.

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The Tactical Analysis Team

Note: Names used in the examples are ***fictitious.*** *Any similarity between these names and those of real individuals, business organizations, or suspects in drug investigations is coincidental.*

by Major Eric L. Lamberson

The U.S. Southern Command formed the first Tactical Analysis Teams (TATs) in 1989. The stated purpose was to improve intelligence support for counterdrug operations. This effort was the result of a Joint Chiefs of Staff directive that the U.S. military support counterdrug efforts. Two key functions emerged that matched the military's capabilities: logistics and intelligence.

The new TATs were to serve as a direct link between the Intelligence Battlefield Operating System and the counterdrug forces that needed intelligence support. The TAT concept worked and the Army has expanded from 2 teams (Peru and Bolivia in 1989) to 10 in 1994. Today, TATs support counterdrug operations in Bolivia (two teams), Paraguay, Peru, Colombia, Ecuador, Venezuela, Panama, Honduras, and Guatemala. The TATs are the focal point where the "rubber (intelligence support) meets the road (counterdrug tactical operations)."

Intelligence analysts and communicators from all services staff the TATs. They perform a variety of mission essential tasks. TAT personnel—

- ☐ Analyze all-source intelligence to determine drug trafficking trends.
- ☐ Identify trafficking organizations.
- ☐ Identify counterdrug targets including laboratories, storage facilities, and operating locations.
- ☐ Produce target packages to support tactical operations.
- ☐ Provide imagery support for counterdrug ground operations.
- ☐ Provide target identification and location for counterdrug air operations.

There are as many TAT mission statements as there are TATs—each country has its own unique requirements and resources. In one country the TAT may heavily weight their support toward imagery analysis, while in another the analytical support might focus on signals intelligence (SIGINT). One of the cardinal elements of the TAT is the ability to forge an analytical team that meets the requirements of a given location or operation.

In many countries, TAT personnel help determine collection priorities or act as collection managers. However, TAT personnel do not conduct intelligence collection operations. Intelligence collection and drug investigations are the domain of the Drug Enforcement Administration (DEA) and other agencies.

Since I served in the TAT-Peru from January 1991 until late 1992, I will use Peru as an example. Unfortunately, space prohibits a detailed discussion of drug trafficking in the Andean Ridge. A variety of source materials exist that provide a good survey of this problem.[1]

Counterdrug Intelligence Support

Trafficking organizations in Central and South America range from the large cartels (like the Cali and Medellin) to small "mom and pop" cocaine paste labs found near coca fields. Successful drug traffickers must structure their organizations similar to many businesses. Traffickers need—

- ☐ A manager (i.e., the head trafficker) to direct operations.
- ☐ A production section to manufacture or buy drugs from a third party.
- ☐ An accounting section to track organization finances.
- ☐ A transportation section to meet ground and air transportation requirements.
- ☐ A security section to protect organization facilities and personnel.

In a small organization, several people may perform all of these tasks. However, in large organizations, specific individuals usually perform only one task. Often the traffickers retain lawyers to manage legal affairs and assist in an emergency (i.e., the arrest of a member).

There are several steps necessary to identify and target a trafficking organization. These techniques work equally well with human intelligence (HUMINT), imagery intelligence (IMINT), or SIGINT—the intelligence discipline is immaterial. Tactical counterdrug operations focus on a specific target, location, or event to disrupt a drug trafficking operation. Police process suspects they arrest during a tactical operation as required; however, the primary goal is to interdict the drug shipment. A good example of a tactical operation is a strike on a cocaine laboratory.

One innovation from the TAT-Peru was to integrate tactical operations into an overall strategy to attack the trafficking organization's structure and capabilities. Using the previous example, DEA and host-nation police might combine a strike on the drug laboratory with a search of the principal trafficker's home. The goal is to establish an evidentiary link between the lab facility and other individuals in the organization (so police can arrest and charge the trafficker). The optimum scenario is a "full court press" on all trafficking organization members and critical nodes to completely disrupt or destroy their production and shipping capability.

In Peru, the tactical intelligence support mission worked. There was a large volume of raw information that did not specifically support tactical operations. However, this intelligence did offer tremendous insight into trafficker personalities and operations. We established a system to screen incoming intelligence for law enforcement as well as tactical value. The TAT immediately passed perishable information to DEA so that host-nation police and the DEA could plan and execute joint operations against the drug target. TAT analysts separated information that was valuable for law enforcement support and processed it.

Law enforcement support requirements are broader and include information not necessary in pure tactical intelligence support. This support—

- ☐ Identifies the structure of the drug trafficking organization.
- ☐ Determines the identity and roles of key individuals.
- ☐ Locates and assesses the vulnerability of the organization's critical nodes.
- ☐ Charts the organization's links to other trafficking groups.

The TAT-Peru combined analysis with the use of the association matrix, link diagrams, and operational flow charts to expand our intelligence support.[2] Each technique provided part of the drug trafficking puzzle. When combined, these techniques produced a detailed picture of the trafficking organization and its tactics (operations methodology). Our analysis also provided intelligence support for tactical strikes against the trafficking organization's critical nodes.

The Analytical Process

The first step in the process was to identify individual traffickers, determine their associations, and place all individuals who apparently worked with a particular group in an association matrix. Matrix analysis was a tool to organize information in an orderly fashion and provide an initial indication of the organization's size and structure. Figure 1 shows a partially mature association matrix. Each time person A contacts person B, the analyst makes an

	Alex Cornejo	Angel Cano	Enrique Hinojosa	Manuel Padilla	"Kike"	Julian Alcalde	Marco Beltrán	César de la Torre	"Gordo"	"Tio"	Roberto Narvárez	"Zorro"	"Loco Juan"	Chávez	Alejandro	José Ramirez	Pedro Otárola "Viejo"	Cecilia Vásquez	Dr. Vinciente	Federico Alcalde	REMARKS
Alex Cornejo																					Aero Rapido
Angel Cano																					Autoworks
Enrique Hinojosa																					Lawyer w/Hinojosa Law Firm
Manuel Padilla																					Padilla Casa de Cambio
"Kike"																					Pilot
Julian Alcalde			X	X																	Owns Autoworks (car dealership)
Marco Beltrán						X															Colombian
César de la Torre						X															Peruvian in Colombia
"Gordo"					X																Cocaine lab operator?
"Tio"					X				X												In Campanilla, Peru
Roberto Narvárez						X															Works for small airline (not a pilot)
"Zorro"																					Lab
"Loco Juan"																					Pilot
Chávez						X															Peruvian in Colombia
Alejandro																					Pilot
José Ramirez			X			X															Ships money from Miami
Pedro Otárola "Viejo"						X								X							Colombia HCL producer
Cecilia Vásquez																					Autoworks Secretary
Dr. Vinciente			X																		Lawyer
Federico Alcalde	X				X								X		X						Autoworks, Transportes Suprafax, Aero Sants Fe

Figure 1. Alcalde Association Matrix.

entry in the matrix intersection. Contacts are cumulative in the initial matrix because this indicates a person's activity level and importance within the organization.

For example, in Figure 1, Julian Alcalde and Federico Alcalde are active members of this group—they are either the bosses or very busy workers. The analyst adds comments about specific individuals in the remarks section. The initial matrix was usually small and contained three to five names. As analysis tied more individuals to a specific organization some matrices became quite large.

Once analysts construct the initial association matrix, they prepare a link diagram. (Figure 2 shows a very mature link dia-

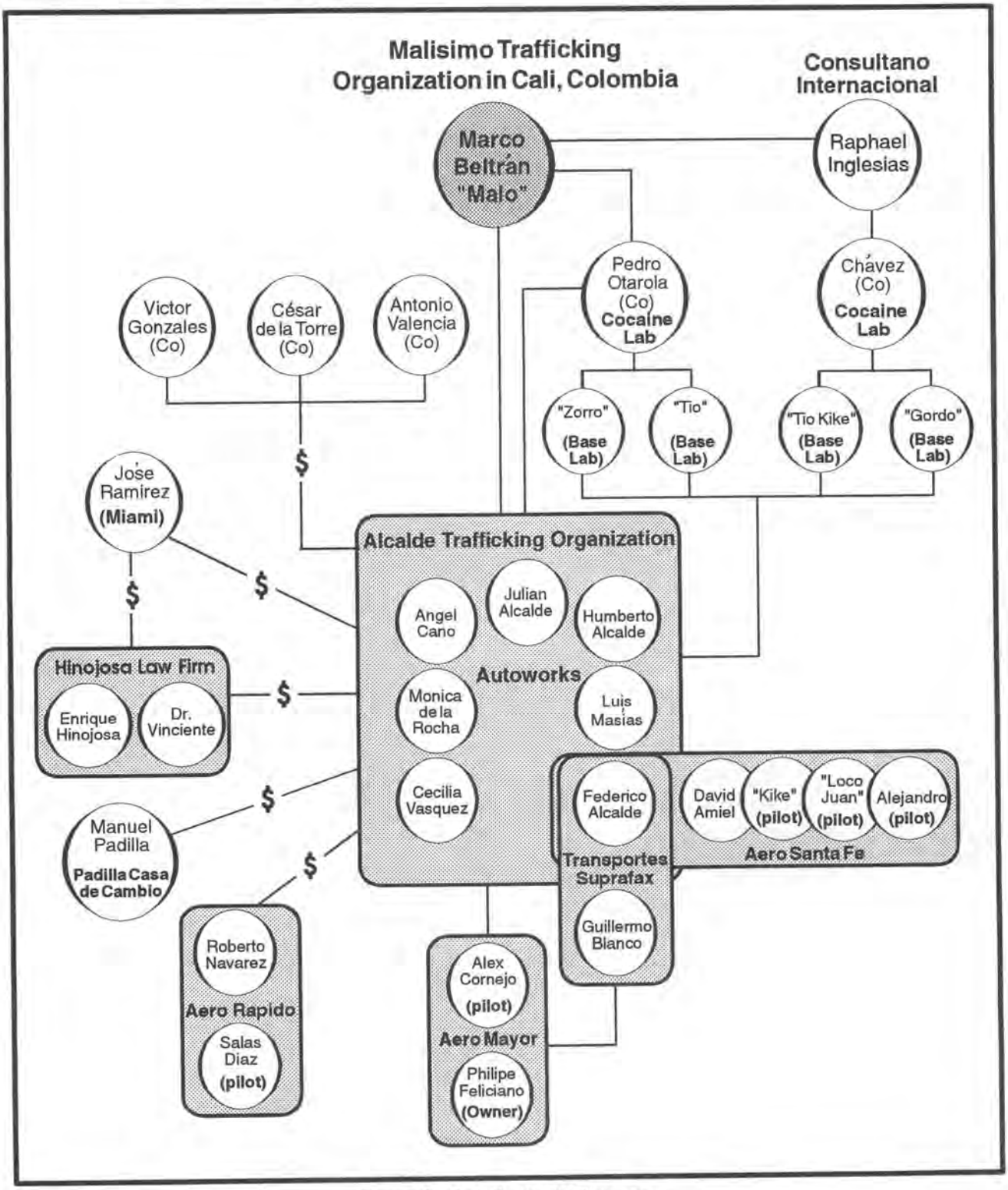

Figure 2. Detailed Link Diagram.

gram.) In the link diagram, a circle represents individuals and businesses or other organizations. The most active individuals occupy the center of the initial link diagram. The analyst places a box around individuals associated with a business or organization and indicates the type of activity (i.e., car dealership). The person's real name (if known) is placed in the circle with the nickname in quotation marks. If only a nickname is known, it is placed in quotation marks. Occupation, location, nationality, and other individual information are indicated in parentheses.

The analyst could develop a separate chart for finance, drug production and shipment, transportation, international contacts, etc.

Over time, the association matrix for an active organization may grow very large. At this point tracking the actual number of contacts is no longer necessary. Analysts should know who is who within the organization. Much more accurate information concerning specific individuals and businesses is usually available by now. We know that the Alcalde family owns the car dealership "Autoworks" and employs some people (Cecilia Vasquez for example) who may not participate in criminal activities. The analyst should remove those names once that is known.

As analysts refine the link diagram, they must make several decisions. Lines between individuals or organizations show regular contact or association. However, to avoid confusion the lines should not cross. This means the location of each element within the diagram is important. Placing Julian Alcalde at the top of the organization prevents any of his contact lines from crossing any others. It does not necessarily imply that he is the leader of the organization. If a link appears between two businesses, the analyst draws a line between them. Depict individuals associated with multiple businesses as shown in Figure 2.

Analysts assume frequent contact between core members of the organization; therefore, that contact is not shown. They place—

- ☐ Cocaine production and shipment contacts on the right.
- ☐ International contacts in the upper center.
- ☐ Financial or legal contacts on the left.
- ☐ Transportation contacts on the bottom right.

I found that placing the entire organization on one chart was helpful and made it easier to visualize the structure and scope of organization operations. I also discovered that use of the complete chart as a briefing aid occasionally caused problems—a link diagram becomes very "busy" when it tries to depict a large organization.

One extra benefit of the association matrix and link diagram is that you become familiar with your target's method of operating (tactics).

If a chart becomes unwieldy, the briefer can break it down into operational categories. The analyst could develop a separate chart for finance, drug production and shipment, transportation, international contacts, etc. These charts would act as detailed briefing aids that present different aspects of the trafficking operation one at a time. The complete diagram is still a valuable visual tool that shows the organization's complexity.

One extra benefit of the association matrix and link diagram is that you become familiar with your target's method of operating (tactics). This knowledge is the foundation for the third analytical technique—the operational flow chart. The operational flow chart shows the trafficking operation in graphic form so the analyst can identify critical actions and the stages of the operation that are vulnerable to intelligence collection or tactical interdiction.

Peruvian trafficking organizations use several paradigms for their operations depending on the degree of trust between the traffickers. Some traffickers sell their cocaine base on credit while others require immediate cash payment. Colombian buyers trust the quality of certain lab operators based on their reputation, but refuse to pay other operators for a shipment until their own chemist tests its quality. In this example, the Alcaldes—

- ☐ Require cash payment at the time of sale.
- ☐ Prefer to sell cocaine base to Otarola and Valencia, but will sell to others if their customers are not buying.
- ☐ Allow their Colombian customers to supply the aircraft for drug shipments.

The Alcalde Organization follows a task list to conduct its drug operations:

1. A Colombian customer contracts for a shipment of cocaine base and the price is established.
2. Julian Alcalde tells Masías how much cocaine base is needed.
3. Masías contacts the lab operators and determines who can supply the cocaine base and when.
4. Julian re-contacts his Colombian customer and sets up a tentative shipment date and method of payment.

Once the arrangements are in place, the drug trans-shipment operation begins:

- ☐ The Colombian buyer sends a plane that arrives at the shipment site at a specific time.
- ☐ The shipping organization secures the airstrip and prepares it for the operation.

- ☐ While the plane is in-bound, the shipping organization removes the drugs from storage sites and trucks them to the airstrip. (Traffickers time the operation so the drugs arrive minutes before the plane lands.)
- ☐ The plane lands and the pilots drop off the money to pay for the shipment while the ground crew loads the drugs. (Turn-around time can be as little as five minutes.) The plane departs and returns to Colombia.

Figure 3 uses an operational flow chart to depict activities discussed in this example. The ana-

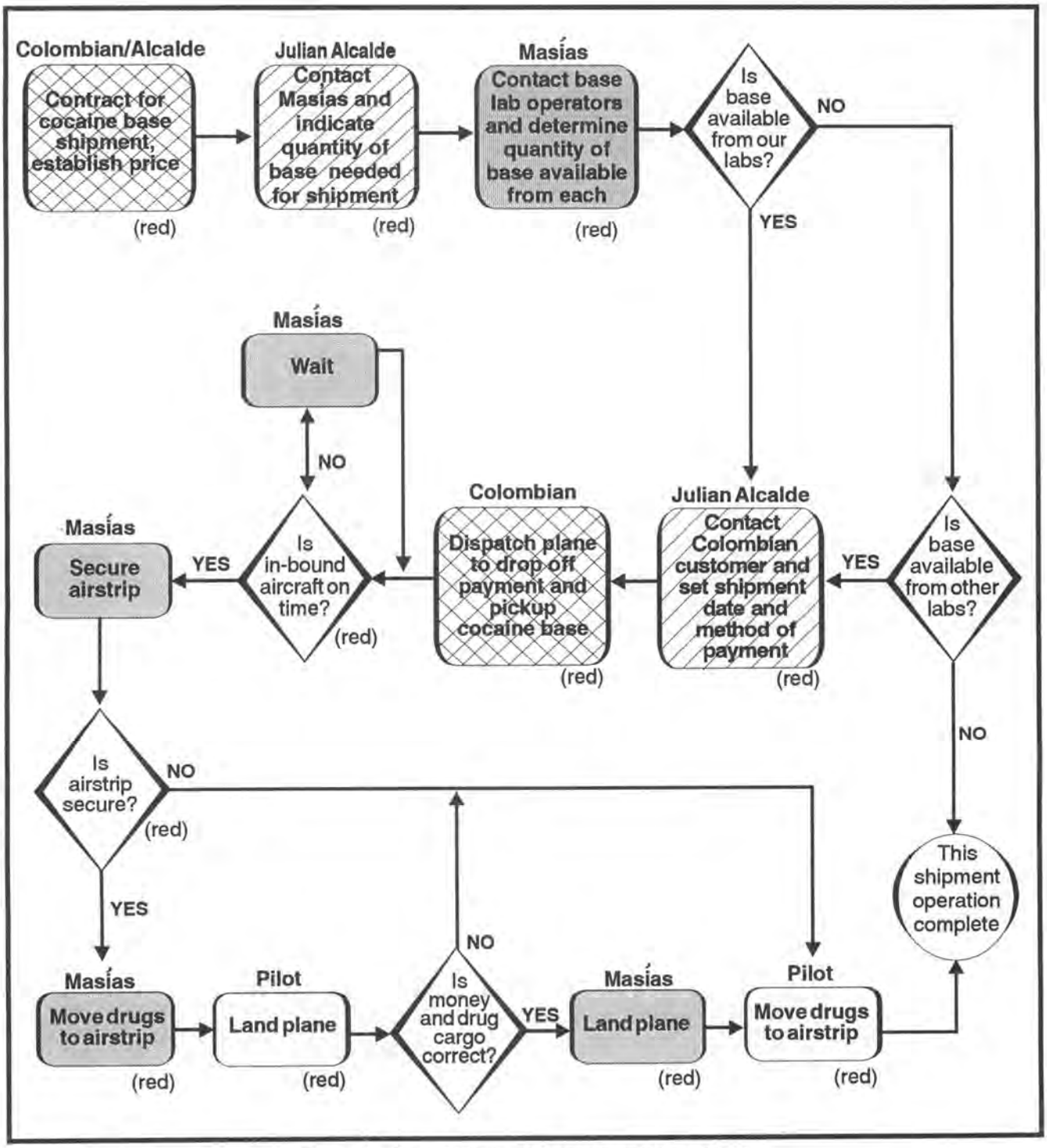

Figure 3. Drug Shipment Operational Flow Chart.

Photo provided by author

Peruvian Tucano departing for a counterdrug patrol from Santa Lucia, Peru. The Tucano's top speed is 270 mph.

lyst indicates trafficker decision points with a diamond, trafficker activity with a square or rectangle, the termination with a circle, and operational elements vulnerable to intelligence collection or tactical interdiction in red. Good computer graphics and spreadsheet programs can help maintain and update these documents.

Counterdrug Operations

In Peru, counterdrug operations reached skill level IV in integrating intelligence and operations. When we determined which stages of a trafficking operation were vulnerable to intelligence collection or tactical interdiction, we focused our efforts accordingly. A real-world example of this occurred 29 January 1992. Intelligence indicated that a cocaine base shipment would leave Pampa Hermosa, Peru, for Colombia on 1 February 1992. Analysis of all-source information indicated the day of the operation and the aircraft's expected time of arrival. The TAT passed this information through DEA to the Peruvian Air Force at the joint counterdrug base in Santa Lucia, Peru. The Peruvian Air Force dispatched a Tucano fighter to intercept the in-bound plane (see picture).

The Tucano pilot was successful and forced the Colombia registered plane to land at Santa Lucia. There, police arrested three Colombian nationals, confiscated the aircraft, and seized $150,000. The police did not find any drugs because the Tucanos intercepted the plane on its in-bound leg before the drugs were loaded. Timing of the intercept operation was critical due to the difference between the Tucano's speed and the speed of the aircraft that traffickers use for international shipments.

The TAT approach has proven to be a valuable addition to the counterdrug operational team.

The drugs were still available for purchase in Pampa Hermosa so the traffickers decided to try again on 3 February 1992. The TAT received word of the second attempt and was able to pinpoint the in-bound aircraft's expected arrival time once again. We passed the new information via DEA to Peruvian Air Force officials who dispatched Tucanos again. This time, the police at Santa Lucia arrested the Colombian pilot, confiscated the second aircraft, and seized $110,000.

Conclusion

The TAT approach has proven to be a valuable addition to the counterdrug operational team. The military can adapt the TAT method to support U.S. interests in other operational theaters. In my experience, personnel who served in a TAT acquired good all-source analytical skills and an ability to integrate intelligence support with tactical operations.

The techniques that the TAT-Peru developed...are viable tools for any difficult analytical problem.

The techniques that the TAT-Peru developed in 1991 and 1992 are viable tools for any difficult analytical problem. The solutions we applied to problems in Peru may not fit the exact conditions in another environment. However, I believe that analysts in other locations could adapt these tools to solve analytical problems in their environment.

Endnotes

1. The following references provide an overview of drug trafficking in South America: J. Giusti, "The Economic and Social Significance of Narcotics," **CEPAL Review**, #45 (Dec 1991); J. Laity, "Coca Economy in the Upper Huallaga" (AID supported Study No. PB90-261959), U.S. Agency for International Development; D. García-Sayán, **Coca, Cocaina, y Narcotrafico: Labertino en los Andes** (in Spanish), (Lima: Editorial Hipatia, S.A., 1989); M. Hayes, "Indians-Latin America," AP (12 Jan 1994); M. Hayes, "Valley of Hope," AP (27 Sep 1993); M.E. Hurtado, "Coca War Casualties." **South Magazine** No. 112 (Feb 1990); **Cocaina: Problemas y Soluciones Andinos** (in Spanish), (Lima: Asociación Peruana de Estudios y Investigación para la Paz, 1990). This is not an exhaustive list; there are many more good articles on the subject.

2. My primary source of information for the link analysis and matrix manipulation techniques is the Defense Intelligence College's Counterterrorism Analysis Course. Since that time, similar analytical methods have been described in many documents.

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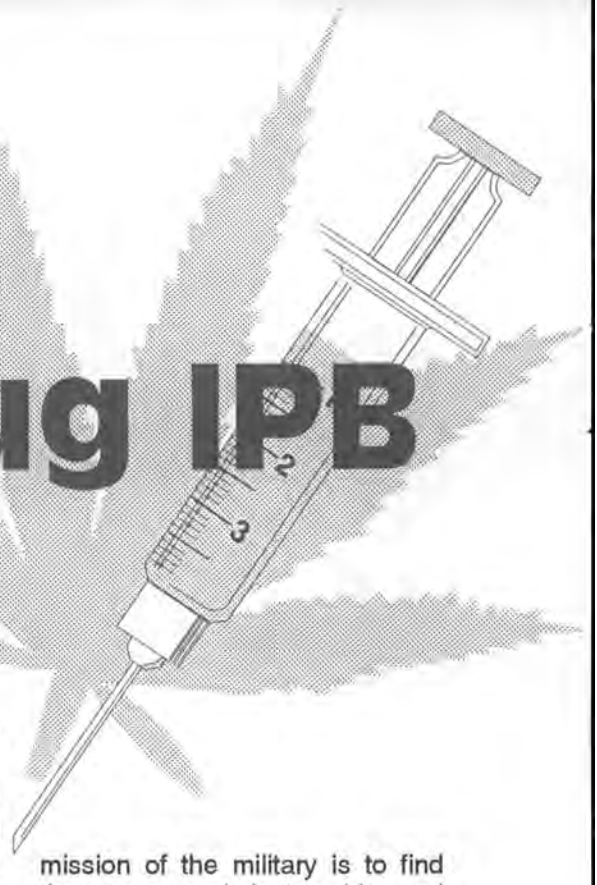
Intelligence During OOTW: Counterdrug IPB



by Major Christopher M. Schnaubelt

Doctrine cannot be static if it is to remain relevant to the everchanging strategic environment.

—General Frederick M. Franks, Jr.[1]

Intelligence preparation of the battlefield (IPB) in operations other than war (OOTW) challenges intelligence analysts. Nevertheless, they must generate products that meet the commander's tactical needs. To do this, they will have to modify IPB methodology. When the threat consists of rioters, natural disasters, drug smugglers, or mass immigration instead of motorized rifle regiments, how does an intelligence analyst develop IPB products?

This problem was the subject of Lieutenant Colonel William V. Wenger's and First Lieutenant Frederic W. Young's article, "The L.A. Riots and Tactical Intelligence" (Oct-Dec 92). Wenger and Young argued that most IPB products (such as modified combined obstacle overlay [MCOO], event template, doctrinal template, or decision support template) were not applicable to civil disturbance operations. Their assertion that much of the IPB process was irrelevant during the Los Angeles riots stimulated a debate in several letters to the editor in **MIPB**.[2]

Although some field manuals address IPB in the general context of OOTW,[3] there are many examples that show a specific application. The IPB process can be used during OOTW. The key, however, is to modify the various products to meet the commander's decision making requirements for a specific type of operation.

This article gives an example of a modified form of IPB adapted for counterdrug operations. While these operations are unique in many respects, this example could serve as a guide to IPB during OOTW.

Interagency Coordination and Intelligence

Like many other OOTW missions, counterdrug support requires interagency coordination and collaboration—often at the task force level or below.[4] Battalion and company commanders who provide counterdrug support frequently operate in direct support of a law enforcement agency (LEA). Effective operations require cross-cultural understanding between the military and the LEAs we support.

While law enforcement and military operations have many things in common, there are differences. Each of the two fields has its own particular training focus, target, and procedures.

One critical function of law enforcement, for example, is to arrest suspects and bring them to trial. This role requires maximum restraint in the use of force. Law enforcement officers are specially trained to protect lives and property and to collect and preserve evidence. Conversely, the primary mission of the military is to find the enemy and destroy him and his equipment.

The similarities and differences between law enforcement and military concepts are exemplified in intelligence. LEAs and military units typically have intelligence sections dedicated to collecting and analyzing information about the threat. Much law enforcement intelligence is reactive. It often depends on confidential informants. (MI analysts refer to this as human intelligence.) The purpose of most law enforcement intelligence is to bring a particular case to court and get a conviction.

On the other hand, MI tends to be predictive. The MI analyst looks for indications of future enemy actions. With this data, the commander can strike the enemy at the decisive time and location. Partly because of this predictive focus, MI analysis is in great demand by LEAs.

Counterdrug IPB

In traditional combat operations, IPB is the basic methodology analysts use to do many things including predicting where and when the enemy will be on the battlefield. With some modification, agents can use IPB in

counterdrug operations to identify the decisive time and location to interdict drug trafficking.

The IPB process is defined in **FM 34-130, Intelligence Preparation of the Battlefield**, and other sources. Therefore, this article will focus on elements specific to counterdrug operations. I will review some of the basic IPB elements to make the information useful to law enforcement personnel as well as to MI analysts.

Counterdrug intelligence preparation of the battlefield (CDIPB) is a valuable tool that MI analysts can bring to a counterdrug operation. CDIPB combines traditional analysis with the specific needs of joint military-law enforcement counterdrug operations. (Some civilian organizations prefer to substitute the word "operation" for "battlefield." Regardless of semantics, the process is the same.)

Although IPB originally focused on a predictable "Cold War" threat doctrine, drug trafficking is not as predictable, and does not lend itself to a standardized "smuggling doctrine." Still, drug trafficking involves moving people and material. This movement is subject to the constraints of terrain, weather, and the potential presence of counterdrug forces.

An analysis of these constraints provides clues to the location and activity of drug traffickers. The following section discusses CDIPB using the four steps of the IPB process:

- ☐ Define the battlefield environment.
- ☐ Describe the battlefield's effects.
- ☐ Evaluate the threat.
- ☐ Determine threat courses of action.

Define the Battlefield Environment

The counterdrug battlefield consists of the area of operations (AO) and the area of interest (AI) just like the battlefield during operations in war. Supported LEAs expect to conduct operations in the AO. It may coincide with all or part of an LEA's jurisdiction.

The AI, which extends beyond the AO, consists of areas in which analysts can develop information on smuggling or activities that affect the operation. For example: agents involved in an interdiction operation along the southwest border would have an interest in clandestine airfield activity in Mexico, even though they would interdict the plane in the United States. In this instance, potential drug trafficking airfields south of the U.S./Mexico border would be in the AI.

On a smaller scale, agents may participate in an operation to eradicate a particular marijuana garden in a rural area. The AO here might be the garden itself. The AI might be surrounding road networks used by either counterdrug forces or growers.

Describe the Battlefield's Effects

Two components of this particular step of the IPB process are terrain analysis and weather analysis.

1. **Terrain analysis.** This process determines how terrain will affect the movement of drug traffickers. Terrain factors such as vegetation, slope, and cross-country mobility affect every trafficker mode of travel. Analysts must evaluate each mode of transport. For example, rugged terrain impedes vehicles, but provides security for foot and pack animal traffic. Highways allow trucks to move, but they expose smugglers who travel on foot or by pack animal.

In CDIPB, the OCOKA factors (observation and fields of fire, concealment and cover, obstacles, key terrain, and avenues of approach) and mobility corridors focus on terrain as it relates to drug trafficking.

a. **Observation and fields of fire.** In drug trafficking operations, good observation helps traffickers avoid detection. Drug traffickers hide when they spot counterdrug personnel.

Electronic line of sight is also an important consideration in CDIPB. Drug traffickers often use electronic intercept equipment to detect the presence of counterdrug personnel. Smugglers use natural terrain features to maximize observation and communications and electronic monitoring equipment. They emplace day and night observation devices, radios, radar detectors, and scanners to provide early warning of law enforcement personnel.

b. **Concealment and cover.** This is the "flip side" of observation. For drug traffickers, concealment and cover are vital in avoiding detection. Smugglers move where vegetation and terrain offer the best concealment. Aircraft used in smuggling activities use low-level flight and nap-of-the-earth techniques to avoid radar detection. Maritime smugglers use remote beaches and harbors to off-load shipments. They may try to blend in with legitimate sea traffic.

Concealment and cover are also important in eradication operations. Marijuana cultivators hide their gardens from aerial observation by growing them under forest canopies or within the fog line of coastal areas. Smugglers increasingly use indoor operations to hide marijuana cultivation.[5]

c. **Obstacles.** Obstacles affect the movement of drug traffickers. The analyst must learn the location of obstacles to foot, horse, vehicular, maritime, and air movement. They must assess the affects on drug trafficking if agents remove, overcome, or bypass these obstacles.

d. **Key terrain.** This includes any feature that traffickers or counterdrug forces can use to their advantage. The most important terrain aspect to drug traffickers is a place they can use for logistical support and security. High ground overlooking a high speed avenue of ingress and egress is key terrain because smugglers can establish an observation post on high ground. Residences and

other structures that provide refuge from counterdrug forces or observation sites and a place to stash drugs are also key terrain.

e. **Avenues of approach (AAs) and mobility corridors.** These are roads, trails, rivers, and harbors; or for aircraft, valleys that allow low-level flight. Analysts evaluate drug traffic AAs in terms of expected modes of transportation, intelligence, and statistical history.

Using these factors, the analyst examines terrain aspects important to traffickers:

- ☐ Alternate routes. Availability of alternate routes to react to counterdrug forces.
- ☐ Escape routes. Availability of escape routes that provide quick withdrawal from crossing or stash sites.
- ☐ Security. Availability of routes with the greatest security. They avoid checkpoints and areas where counterdrug forces could interdict them.
- ☐ Crossing sites. Traffickers avoid rivers and open spaces. They prefer crossing sites where they can move fast and reduce their vulnerability.

Analysts evaluate counterdrug force AAs in terms of how counterdrug forces will interdict the smugglers. For example, counterdrug forces may be unable to move an arrest team by vehicle into rough terrain where traffickers use foot or pack animal transportation.

If analysts expect smugglers to travel on foot or by pack animal, the AAs are accessible trails that provide good mobility and concealment. Vehicular AAs are roads or flat areas between ports of entry where smugglers can sneak across the border. Maritime AAs include rivers or beach sites where traffickers can move loads to ground transportation.

Ports of entry (land, sea, and air) are avenues for the shipment of illegal drugs into the United States. The massive volume of legitimate traffic entering the United States each day hides loads of contraband. (Only a small portion of individuals, vehicles, and cargo containers entering or leaving the United States is inspected.) An important distinction between AAs in "Cold War" IPB and CDIPB is the potential for change in the mode of transportation.

Photographs provided by author

Soldiers and law enforcement officers conduct a reconnaissance for indications of drug trafficking or production.

For example, an armor division will not typically change into light infantry when reaching a severally restricted area, then change back into armor where the terrain is unrestricted. Drug traffickers, however, are more flexible. They move the drugs by truck to rough terrain between U.S. Customs ports of entry, unload and move them across the border on foot or by pack animal, then reload them into trucks on the other side.

f. **Other features.** When preparing terrain factor overlays, the analyst should pay particular attention to some features that do not normally appear on topographic or military maps:

- ☐ Long established smuggling routes.
- ☐ River width, depth, velocity, bank height, and river bed composition to determine crossing points and restrictions.
- ☐ Terrain features such as caves, abandoned mines, and structures to hide drug loads.
- ☐ Vegetation and irrigation ditches for hiding.
- ☐ Changes to terrain (such as roads and highways) and temporary features (such as Border Patrol checkpoints) over the years.
- ☐ Locations where "key terrain" (elements of the local population) provides drug traffickers logistical support. This includes access to river or border crossing sites, boat docks, private roads and structures, or landing strips.

g. **Intelligence and statistical factors.** These factors incorporate known or suspected information on trafficking activity with the terrain, including—

(1) Evidence of electronic surveillance or communications equipment used to monitor law enforcement activity and to coordinate smuggling operations. Confirmed reports of traffickers using surveillance and communications equipment are potential indicators of trafficking.

(2) Visual signs of trafficking such as abandoned or stashed loads, drug packaging or waterproofing debris, and vehicle or foot tracks crossing the border between ports of entry and in areas where legitimate traffic is unlikely.

(3) Drug seizures in a particular area or AA are obvious indicators.

(4) Logistical support factors, including—

- ☐ Transportation networks such as railroads and public and private roads that traffickers could access.
- ☐ Property (structures or land) that traffickers could use to store and move drugs, especially if controlled by trafficking organizations.
- ☐ Known or suspected stash sites and staging areas for shipments.

(5) For ports of entry inspections, analysts develop profiles or indicators to target traffic with the highest probability of smuggling activity.

2. **Weather analysis.** This process examines factors that affect drug trafficking, including temperature, visibility, precipitation, and light data. Extreme weather conditions affect personnel and equipment. Cold weather reduces the battery life of communications equipment. Hot weather reduces the life of electronic equipment and increases the amount of water people in the field need. Analysts use light data to determine the effects of illumination on both counterdrug forces and traffickers. Analysis of a particular AO may show that traffickers usually operate when there is no moon.

The MCOO is the basic product analysts develop from defining the battlefield area, terrain analysis, and weather analysis. The degree of detail shown on the MCOO depends on the time available and the size and location of the counterdrug operation.

An analyst uses the MCOO to determine the relative ease or difficulty of moving through an area. Analysts must consider the combined effects of weather and terrain on each mode of travel. Heavy rain does not affect vehicles on asphalt highways, but thunderstorms may prevent aircraft operations. (On the other hand, high winds aloft may ground aerostat radar platforms but not high-risk aerial smugglers.) Reduced visibility favors ground drug trafficking operations.

Evaluate the Threat

Threat evaluation is the analysis of drug traffickers. We use many of the same factors used in analyzing military forces: operations, tactics, capabilities, and equipment. Analysts develop a drug trafficker data base to build a picture of the threat and conduct continuous IPB. Information in the data base includes organizational structure, modes of operations, and personal data on smugglers.

To develop the drug trafficker data base, the intelligence analyst reviews the smuggling threat within an AI. Sources of information include—

- ☐ State and local law enforcement data bases and apprehension and seizure reports.
- ☐ El Paso Intelligence Center (EPIC) reports.
- ☐ U.S. Border Patrol intelligence reports.
- ☐ Drug Enforcement Administration data bases (NADDIS) and reports.
- ☐ FBI data bases (NCIC).
- ☐ U.S. Customs Service data bases (TECS) and reports.
- ☐ Regional Information Sharing System data bases.
- ☐ Department of Defense data bases (ADNET/Emerald II).
- ☐ Open sources.
- ☐ Confidential informants.

Military personnel must know the legal and policy restrictions on collecting and handling some types of information and intelligence.[6] During operations in the United States, military personnel may not target individuals for surveillance. Military organizations may not have or maintain files on private citizens. In certain instances, however, specifically assigned military personnel (augmentees) may help LEAs analyze and file information on suspects if the supported LEA retains the information. This is permissible only if the military provides direct support to an LEA and does not pass the information to a military entity.

To complete threat evaluation, the analyst creates a drug trafficking incident and situation map (INSITMAP). The INSITMAP is both an analysis tool and a means to brief the task force commander or other law enforcement officials. If there is heavy activity in the AI, the analyst may need to create two maps that show incidents and the situation separately.

The INSITMAP shows all permanent information on drug trafficking forces, such as known crossing sites, organization boundaries, clandestine airfields, staging areas, and established smuggling routes. Also shown are drug trafficking incidents—the transitory events usually associated with drug traffic:

- ☐ Isolated seizures.
- ☐ Cumulative LEA seizures in a particular area.
- ☐ Trafficker surveillance and scouting.
- ☐ Trafficker communications.
- ☐ Trafficker electronic monitoring of law enforcement.
- ☐ Suspected trafficking aircraft landings.

Once analysts plot drug trafficking incidents, the INSITMAP provides cumulative historical data that helps identify smuggling trends and patterns of activity. This information allows the intelligence analyst to make judgments about the intensity of drug trafficking in specific areas, the amount of support traffickers receive from the local population, and potential areas for trafficking activity.

Determine Threat Courses of Action

When developed properly, the INSITMAP is equivalent to a drug trafficking situational template. The INSITMAP also shows counterdrug force locations and operation plans. If the map shows counterdrug force information, limit access as necessary to maintain operations security.

Analysts use an INSITMAP reference chart to record and ex-

Reconnaissance team prepares to sling-lift marijuana and cultivation materials to a destruction site.

plain map entries. The chart includes: map symbols, entry item number, report number of information source, activity date and time, description, location, trafficking organization (if known), LEA case number (if applicable), and comments.

1. **Initial collection requirements.** Consistent with the intelligence cycle for any operation, analysts identify initial collection requirements and use them to drive initial collection planning and management. Examples of initial collection requirements include—

- ☐ What locations are drug traffickers likely to use as lookout positions?
- ☐ What routes are they likely to use?
- ☐ What weapons are they likely to possess?
- ☐ What electronic collection and countermeasures do they have (scanners, radar detectors)?
- ☐ What threats do counterdrug forces face (booby traps, natural hazards)?
- ☐ What are the traffickers' modes of operations (cultivation methods, trafficking routes and methods, security consciousness, weapons of choice, propensity for violence)?
- ☐ How are traffickers likely to respond to counterdrug operations (for example, change modes of operation, confront counterdrug forces, avoidance, cease activities)?

2. **The event template.** The analyst develops a drug trafficking event template with named areas of interest (NAI). In CDIPB, drug trafficking activity, or the absence of activity at NAI, confirm or deny the predictability of traffickers. Analysts develop NAI throughout the AI where significant trafficking may occur.

Intelligence personnel analyze significant drug trafficking activity and expected smuggling events on the template to provide trafficking indicators. The analyst can predict what traffickers will do next when they compare what traffickers are doing to what they can do.

The decision support template

The decision support template (DST) displays areas where significant trafficking activities will probably occur and target areas of interest (TAI) along trafficking routes where counterdrug forces can interdict the traffickers. In essence, analysts identify good locations for arrests and seizures. These locations include—

- ☐ Known drug trafficking river crossing sites.
- ☐ Trans-shipment points.
- ☐ Stash sites.
- ☐ Drug pickup points.
- ☐ Clandestine airfields with a smuggling history.

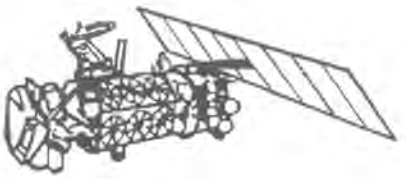
After analysts select the TAI, they identify decision points. These relate drug trafficking events to the decisions required to execute interdiction operations. They show the deadline for making those decisions. Agents must decide to launch an interdiction aircraft, for example, early enough for it to arrive at the drop-off point while the traffickers are still there. The decision support template can provide the link between intelligence and counterdrug operations.

Conclusion

Counterdrug IPB can help LEAs use their limited resources

(Continued on page 51)

(Editor's Note: The author's opinions are his own and do not reflect the opinions or policies of U.S. Strategic Command.)



Space Support to the Warfighter

by Lieutenant Colonel William A. Ross, USAF

Over the past several years, MI has championed the use of space-based assets. Intelligence personnel use space-related products routinely. However, the intelligence community has yet to develop a clear direction, policy, and doctrine regarding space application, system requirements, and training.

The need for this direction and doctrine is urgent. Often it is the intelligence professional who must interpret space-derived information for the warfighter. The intelligence professional will need to educate the warfighter on what space-based applications can do to support the mission.

Retired Air Force General Horner, Commander in Chief, U.S. Space Command, recently emphasized this dilemma in an **Air Force Magazine** article entitled "Washington Watch." He stated: "Without intelligence, operations is blind. Everything starts and ends in warfare with intelligence. On the other hand, without operations, intelligence is irrelevant. We don't need it."

General Horner also spoke of the need to break down the barriers between space community technicians and troops in fighting commands. To do this, he suggests, "we need a shotgun wedding."

The intelligence community could follow the Air Force's lead in promoting space warfighting. To encompass his vision of the future, Air Force General McPeak created a simple mission statement: "To defend the United States through control and exploitation of air and space."

This article will—

- ☐ Discuss how MI might develop a space warfighting direction.
- ☐ Stress space warfighting training.
- ☐ Review programs for space support to the warfighter.

Training and Doctrine

It is up to Department of Defense (DOD) and senior service decision makers to develop space support intelligence training, doctrine, and policy. As General Horner suggests, all intelligence professionals must understand how to use space assets and space-derived information to support the warfighter.

To illustrate the need for space warfighting training at all levels, consider General Horner's statement: "Desert Storm was a space war and quite frankly, many of us who went to Desert Storm were ignorant of what space could do for us....It was a tremendous learning curve."[1]

As Commander in Chief, U.S. Space Command, General Horner had the opportunity to learn what space systems can do for the warfighter. This knowledge is trickling down to the operational level. However, it is not going low enough, fast enough.

The information and training are not focused at the proper levels—the enlisted soldiers, sergeants, lieutenants, and captains at warfighting units at all service branches. These soldiers work with the operational planners and pilots who fly the air sorties and execute ground and sea operations.

An article in **Airman Magazine**, "Exploiting Space," provides an excellent example of the problem: "The company grade officers at Squadron Officer School receive only a 'fire hosed' 60-minute 'Introduction to Space Capabilities' lecture, while field graders at Air Command and Staff delve more into space systems and employment. Air War College attendees master space doctrine and strategy, and apply what they've learned in space planning during the school's 'national defense exercise' conducted at the end of the academic year."[2]

Moreover, a recent graduate from the Air Force Intelligence Training School attended an entire block of training on space mechanics. However, the block did not relate that space training to support the warfighter. This is the problem: the focus for concentrated space training is upside down.

The Air Force should focus training on soldiers who will use space products and systems daily—junior enlisted and company grade officers at unit level. Brigadier General Bob Stewart (U.S. Army, Retired) endorsed this idea at a December 1993 Space Support to the Warfighter Conference. He stated, "Without a change in the military education system and the military concepts which form the basis of war, new toys are of limited utility."[3]

The DOD and its services must acknowledge that intelligence systems have revolutionized intelligence support to the warfighter. Desert Storm was the "Lexington and Concord" of that revolution. Moreover, Desert Storm (the first space war) proved that space technology is a force multiplier. Desert Storm proved space-based capabilities are invaluable for threat warning and mission execution. There is no way that current or future MI professionals can perform their operational mission without understanding space capabilities.

Electronic Intelligence

Information systems, like CONSTANT SOURCE, have opened the proverbial "green door." CONSTANT SOURCE uses national sources supplemented with input from organic sensors to provide the tactical intelligence and operations staff with a correlated intelligence picture. Its functionality supports various missions including wide-area monitoring, tactical indications and warning, and over-the-horizon targeting.

A significant lesson learned from Desert Storm is the criticality of operational electronic intelligence (ELINT) analysis. Each major field unit must now conduct sophisticated ELINT analysis. Previously, this was done at headquarters or even national level. An intelligence shop must—

- ☐ Understand the systems that provide ELINT to CONSTANT SOURCE.
- ☐ Understand ELINT trends.
- ☐ Know when and how to filter incoming data.
- ☐ Use other sophisticated ELINT analysis concepts.

The introduction of these new systems places a renewed emphasis on training. Perhaps unit-level specialty codes need to be revised to ensure units get people who understand these new systems.

Some of these systems include "the Ground Positioning System (GPS) which provided precise navigation, crucial to every phase of the conflict. The Defense Support Program (DSP) gave early warning of SCUD attacks. The Defense Meteorological Satellite Program gave unprecedented weather data directly to forces in the field."[4]

Space assets provide vital intelligence information and valuable targeting support to future weapon systems. For example, GPS might steer 2,000-pound bombs from bombers to targets. Intelligence professionals must know how to provide space-related information to combat planners who design the missions and drop the 2,000-pounders. For instance, "U.S. and Air Force Space Command officials say that space systems will be relied upon even more in Korea in the event of a war than during Operation Desert Storm. The primary space systems in Korea are DSP and GPS."[5]

TENCAP

Since Desert Storm opened the heavens to space warfighting, U.S. Forces have made significant technical, organizational, and professional strides. Most of this progress falls under the Tactical Exploitation of National Capabilities (TENCAP) umbrella. TENCAP is the "granddaddy" of space support to the shooter.

The **Space Operations Orientation Course Handbook** defines the TENCAP program: "The TENCAP program was directed by the U.S. Congress in the 1970s for the purpose of establishing procedures for the DOD to exploit national systems capabilities. TENCAP was established by DOD as a mechanism for the Armed Forces to influence operational applications of national systems and programmatic or policy issues. The overall concept of the TENCAP program is to make national systems data available in a timely manner to the right user and in the right format for maximum employment. Consequently, TENCAP does not necessarily focus on developing equipment or systems. In many cases, it is merely a matter of changing procedures, doctrine, tactics, or organizational structure to take advantage of information that already exists. On the other hand, it may be necessary to develop some hardware or software to improve the processing or exploitation of data or establish a new communication process to disseminate the information to the user. The TENCAP office uses many ways to accomplish its goals. In addition to the methods mentioned above, the use of exercises to test 'good ideas' furnished from users has been an outstanding tool in the determining utility."[6]

Although those space support systems used in Desert Storm have improved tremendously, other TENCAP programs are being developed and fielded. For example, "U.S. military transport crews will soon receive space-based information as prototype Multi-Source Tactical Systems (MSTS) are installed in Air Mobil-

Photo by Charles Pinson, ISEC

Information Systems Engineering Command supported TROJAN SPIRIT-C intelligence communications links during Desert Storm.

ity Command (AMC) aircraft. MSTS will provide merged displays of satellite and aircraft derived imagery, intelligence, terrain, and navigation data to AMC transports en route to a theater destination."[7]

The MSTS are essential for AMC crews. It allows them to receive current information on possible landing zones when flying 14-hour deployment missions. They also provide vital information to the troop commander who will "jump" into an area in which the threat situation has changed considerably in the last several hours.

This capability would have served as a significant force multiplier during Just Cause. MSTS were operational during relief missions to Bosnia and exercises in Korea and Egypt. "Another important development program to become operational is TALON SHIELD. TALON SHIELD allows data from several support program (DSP) satellites to be processed and merged, providing better detection, location, and tracking of infrared targets."[8]

In addition, "DSP provided essential SCUD attack warning during Desert Storm and it is General Horner's vision that ballistic missile warning should someday go from satellites to foxholes, not from satellites to Colorado Springs."[9]

TALON HOOK will provide a superb solution to recovery of downed crew members. "TALON HOOK actually integrates a GPS receiver with military survival radios to speed rescue of downed aircrew members."[10] (Figure 1 illustrates how TALON HOOK works.) Air Force Space Command has many other programs under the TALON program. These will enhance space support to the warfighter on the ground, in the air, and on the sea.

Space Warfare Center

While intelligence develops its vision for space warfighting, an abundance of activity continues for space warfighting support. DOD continues to work on many space developmental efforts. DOD is also working on organizational developments that will simplify space support to the warfighter. For example, DOD formally began the Space Warfare Center (SWC) in December 1993.

The DOD created the SWC in response to deficiencies identified by a panel after the Gulf War. The purpose of SWC is to support combat operations through control and exploitation of space. "The official mission statement is underscored by the center's even more straightforward slogan: '**In Your Face from Outer Space.**' Most of SWC's efforts during its first year are devoted to integrat-

(Continued on page 53)

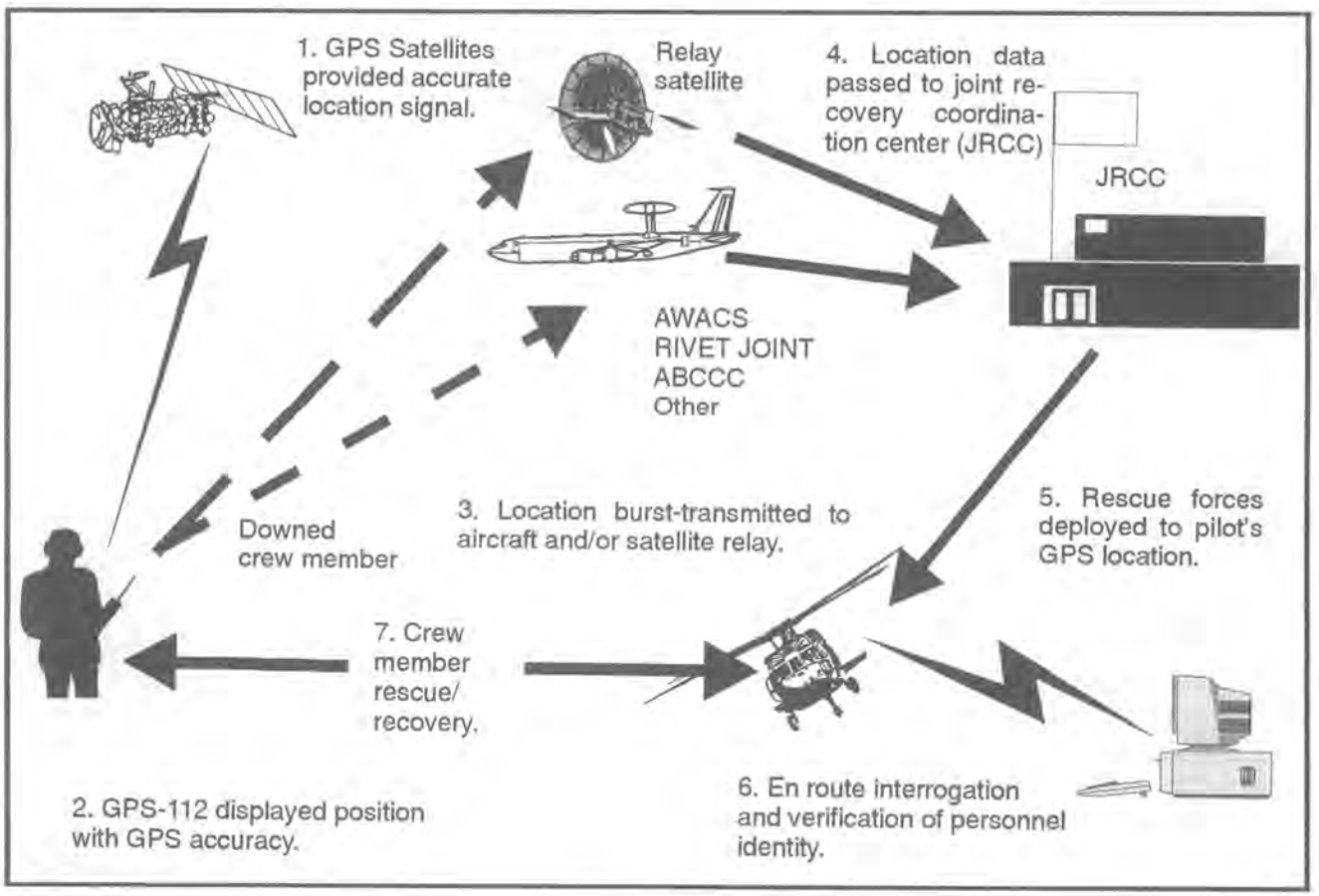


Figure 1. Talon Hook.

ASAS and 1st Cavalry Division

Analysts use the All-Source Analysis System within an analysis and control element at Fort Huachuca.

by Chief Warrant Officer Two Mark Ingram

As an order of battle (OB) technician, I was reluctant to give up my map, grease pencils, and "stickies." I have used predecessors to the All-Source Analysis System (ASAS) and other experimental computer processors to conduct analysis. Each of these systems had both good and bad characteristics. However, I still correlated information and conducted analysis with the map board and "stickies."

The ASAS has changed that method by combining the best of previous systems into a single tool. Two years' experience with this innovative system has convinced me to put my "old tools" on the shelf. They were slowing me down!

With the arrival of ASAS, tactical intelligence message processing and analysis in the 1st Cavalry Division are streamlined and faster. We recently completed highly successful division and corps Battle Command Training Program (BCTP) Warfighters. In each exercise, the ASAS-AS (All Source) was an invaluable analytical tool. During the III Corps BCTP, we processed over 29,000 messages in 5 days with ASAS-AS. In our most recent exercise, ASAS-AS processed over 27,000 messages in 52 hours.

Within 15 minutes of any event, we could easily provide the commander a graphic representation of the evolving battlefield. Analysts using the ASAS-AS needed only 15 minutes to—

- ☐ Receive and log a message.
- ☐ Correlate the data.
- ☐ Update the All-Source Correlated Data Base (ASCDB).
- ☐ Query the ASCDB.
- ☐ Display the intelligence picture of the battlefield.
- ☐ Produce a graphic intelligence summary (INTSUM).

According to a draft version of **FM 34-25-3, ASAS and the Analysis and Control Element (ACE)**, ASAS does not conduct analysis, nor does it replace analysts. The ASAS-AS is only as good as the soldier sitting at the workstation: it enhances a good analyst's abilities while highlighting a poor analyst's weaknesses. With ASAS-AS, a competent analyst can focus on analysis rather than process messages.

The "Old Tools"

Our division has excellent intelligence analysts, and we probably would have performed well on these exercises without ASAS-AS. However, we would not have been able to develop as complete a picture nor would the intelligence have been as current.

Before ASAS-AS, I worked as a technician in the manual mode. In those days, conducting analysis involved a central processing group (CPG)—six sets of analysts with three map boards (artillery, maneuver, and air defense) on two shifts, and a color-coded

sticky system that showed the source of the information at a glance.

The CPG consisted of the all-source production section (ASPS) officer in charge and an OB technician. The technician screened message traffic for targets, significant pieces of equipment and units, and those "golden kernels" of information that might answer the commander's priority intelligence requirements.

The CPG worked key information immediately, passing the remainder to the three map board sections. Each position—

- ☐ Correlated multiple reports on the same unit.
- ☐ Plotted and updated unit positions.
- ☐ Color-coded them based on the reporting source.

Periodically, the OB technician or senior analyst put the overlays together to get the complete enemy situation.

Because message flow was heavy, maneuver and artillery unit information was top priority at the expense of the rest. Compounding the problem was the tendency for analysts to work the latest information first, letting older information slip to the bottom of the pile. This often resulted in discarded or ignored traffic.

The ASAS-AS, which is faster, replaces the antiquated CPG without loss of information. The data base manager parses all message traffic into its component parts to fill fields that will populate a common data base. The situation development and targeting analysts developed imbedded message alarms. This allows the analyst to immediately access high value targets, priority units, key indicators, and crucial events before and after ASAS incorporates them into the data base. (See Figure 1.)

ASAS Innovations

The ASAS-AS correlation capability and speed far exceed human capability. However, humans are still involved in the process. The data base manager must decide if correlation is warranted when data falls within the established parameters but outside the correlation window.

Through predefined queries, the OB technician and senior analyst can access the same picture they would have developed using 3 maps and 12 analysts. The ASAS-AS quickly forms this picture with more detail, less probability of error, and fewer analysts.

Human error is always a factor when processing large amounts of data rapidly. Every OB technician can recall moments of anxiety when, after several shifts without sleep, the soldier who posts the map incorrectly plotted a unit using the wrong grid zone designator. Now, the situation development analyst can query the data base and accurately display the information on a computer map and eliminate errors.

This process takes only seconds using the ALPHA-Reduced Instruction Set Computer (RISC) processor. The 3800 series processor is as accurate but slower. Analysts can now spend their time displaying and observing intelligence report results instead of processing message traffic.

The ASAS-AS promotes a consolidated analysis effort. The situation analyst can display maneuver, artillery, and air defense units separately or as a consolidated product. In addition, because there is more time, analysts can fill intelligence gaps with previously ignored indicators, such as—

- ☐ Material support companies.

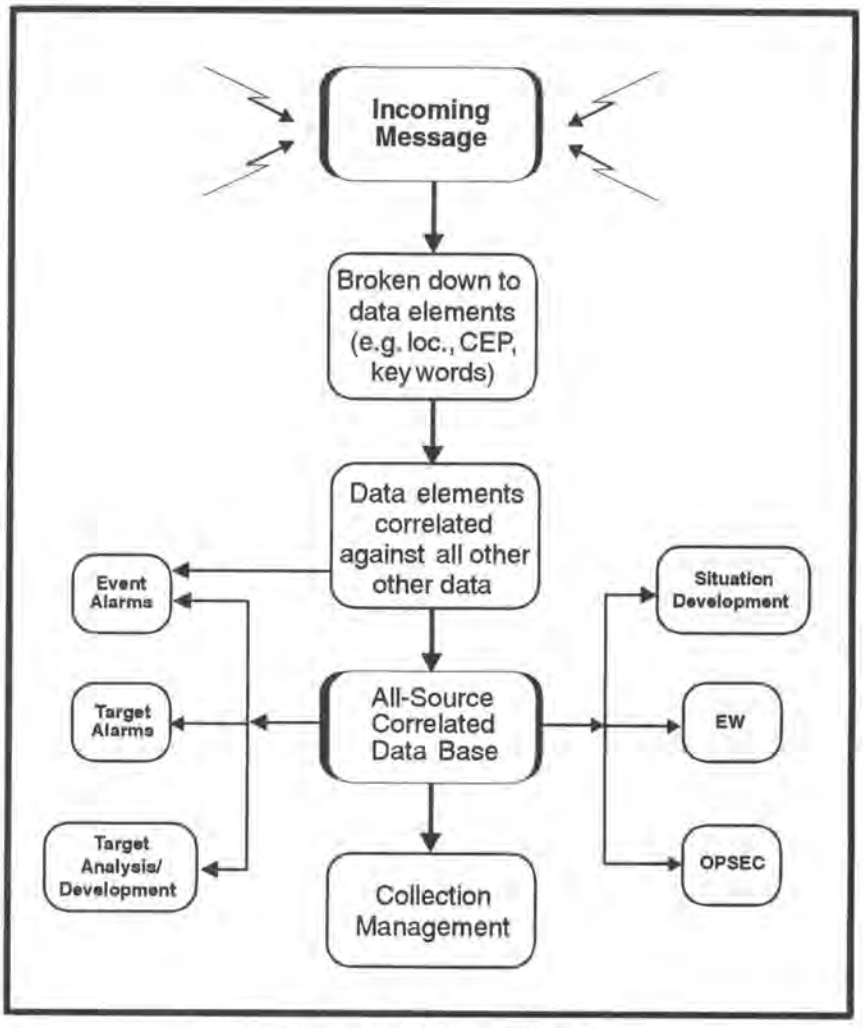


Figure 1. All-Source Fusion.

☐ Maintenance units.
☐ Fuel points.

ASAS-AS can display units by type or time and in a variety of colors and sizes.

Previously (because of the volume of traffic and emphasis on situational development), all-source analysts could not process every electronic intelligence (ELINT) report. Instead, they used key indicators to help find maneuver elements on the battlefield. Deep strike planners had to coordinate with separate, single-source reporting areas to get an air defense picture.

Because ASAS processes every message automatically, it permits "one-stop shopping" for aviators and the fire support element (FSE). The situation analyst and targeteer can display, in seconds, all reported air defense units and related equipment for specific periods. From this picture they can develop safer flight paths and more accurate targets for suppression of enemy air defense missions.

Many all-source sections conduct great analysis. However, they often fail to pass the information to their major subordinate commands (MSCs) or to provide the commander a clear, concise, and useful product during the decision making process.

A graphic INTSUM is a quick method to help the commander see and understand the battlefield. In the past, production of graphic INTSUMs was time consuming. Analysts spent inordinate amounts of time drawing pictures instead of conducting analysis.

Using ASAS-AS and a color or laser printer, the right map scale, and correct queries, one analyst can produce a real-time picture of the battlefield. The addition of graphics and text clarifies these products for commanders and staffs and provides a snapshot of the battlefield.

During the III Corps BCTP Warfighter, the 1st Cavalry Division ASPS produced a new graphic INTSUM every 15 minutes. The INTSUM showed all known unit locations in red symbols with grid coordinates. It displayed artillery units as bright points and highlighted air defense artillery units. ASPS personnel added other elements to these INTSUMs such as arrows showing direction of movement and enemy intentions.

We no longer use a map to conduct analysis.

In effect, the graphic INTSUM became the situational map as opposed to a simple graphic representation of the battlefield. The product worked so well that observer/controllers noted that the commander made decisions from the graphic instead of the traditional map. The ASAS-AS displays the same picture as the map. However, if analysts manipulate specific queries and display methods, they can reduce the normal clutter of the map and its multiple overlays.

ASAS-Remote Workstation (Collateral)

Analysts generate and pass written reports from ASAS-AS through the ASAS-Remote Workstation (Collateral) (ASAS-RWS) to the division's maneuver control system (MCS) network. Analysts pass these reports to the MSCs and separate battalions based on the unit area of interest and mission.

In reality, this does not always work. The MCS in its current version is unable to handle the volume of information ASAS produces. We need faster and better quality tactical facsimile machines to pass legible copies of the graphic INTSUM. Locating an ASAS at each MSC will alleviate the problem.

Unfortunately, the ASAS-RWS is not available at the maneuver brigade level yet. Until the rest of the Army's automated systems catch up with the speed and technology of ASAS-AS, dissemination problems will continue. Eventually, brigades will receive the same written and graphic intelligence displayed on the ASAS-AS enclave through dissemination of external data base coordination messages to the ASAS-RWS (Collateral).

Most of this article addresses the ASAS-AS enclave with 2.07 software and the prototype ALPHA-RISC processors. However, we used 2.07 software and the 3800 processors for most of the exercises I participated in. Although the 3800 processor is not as fast, we processed over 19,000 messages with this processor during our divisional BCTP. We had an 85% read of the battlefield with the ASAS-AS enclave with minor "work-arounds."

The picture analysts receive using the 3800 processor and the ALPHA-RISC is the same. Because the processor and correlation speeds are slower with the 3800 processor, the data base manager must manage intelligence more closely and remain proactive.

However, situation and targeting analysts can still receive "golden kernels" of information and high payoff targets immediately (before correlation). The 3800 processor still correlates messages faster than a human. If the data base managers are experienced, they can manipulate the message flow.

Moving Forward

As an OB technician, I was hesitant to give up the "old tools" of my trade. However, since receiving the ASAS-AS with ALPHA-RISC and a wide screen TV, I know that if I do not focus on running queries and conducting analysis from the wide screen, I run the risk of falling behind. We no longer use a map to conduct analysis. ASAS produces more current, usable, and accurate products for the commander and other consumers than ever before.

CW2 Ingram is assigned to the ACE, 1st Cavalry Division. He has extensive experience with ASAS predecessors MICROFIX, PAWS, IPAWS, FAISS, HAWKEYE, and WARRIOR.

ASAS Arrives

by Mark Jensen

In December 1993, the fielding of the All-Source Analysis System (ASAS) began when the 82d Airborne Division became the first unit equipped with ASAS. ASAS significantly increases an analyst's ability to process hundreds of messages per hour and to more accurately and quickly disseminate intelligence.

The difference between the processing capabilities of ASAS and other systems is substantial.

Many automated systems simply provide a generic data base management system, a word processor, or a spreadsheet to process intelligence. ASAS, on the other hand, can process more data much faster and more efficiently because of its automatic functions. This frees analysts from time-consuming, repetitive chores, so they can devote more time to cognitive and predictive tasks.

This article discusses the history of ASAS, its capabilities, functionality, characteristics, and future.

History

Significant events have taken place in the history of ASAS since the last ASAS articles[1] appeared in **MIPB**—"Intelligence Processing: the ASAS Connection" and "ASAS Intelligence Analyst and Operations Specialist" (Jul 88). In 1989, the ASAS Project Office delivered hardware and the initial software release to Fort Hood, TX. The 2d Armored Division and III Corps were the first units to test ASAS. Software development and testing of Version 2 software continued with the assistance of 1st Cavalry Division.

During 1991, the Artificial Intelligence Module Test Bed (Hawkeye), through technology insertion, became the basis for automated support for the Technical Control and Analysis Element (TCAE). Subsequently, the ASAS configuration changed to accommodate the consolidation of the TCAE and the Tactical Operations Center Support Element in the analysis and control element (ACE). In late 1992 and early 1993, the Army completed extensive technical and operational tests, paving the way for fielding in late 1993.

Automatic Features

ASAS has significant automatic features, some of which are illustrated in Figure 1 and the following paragraphs.

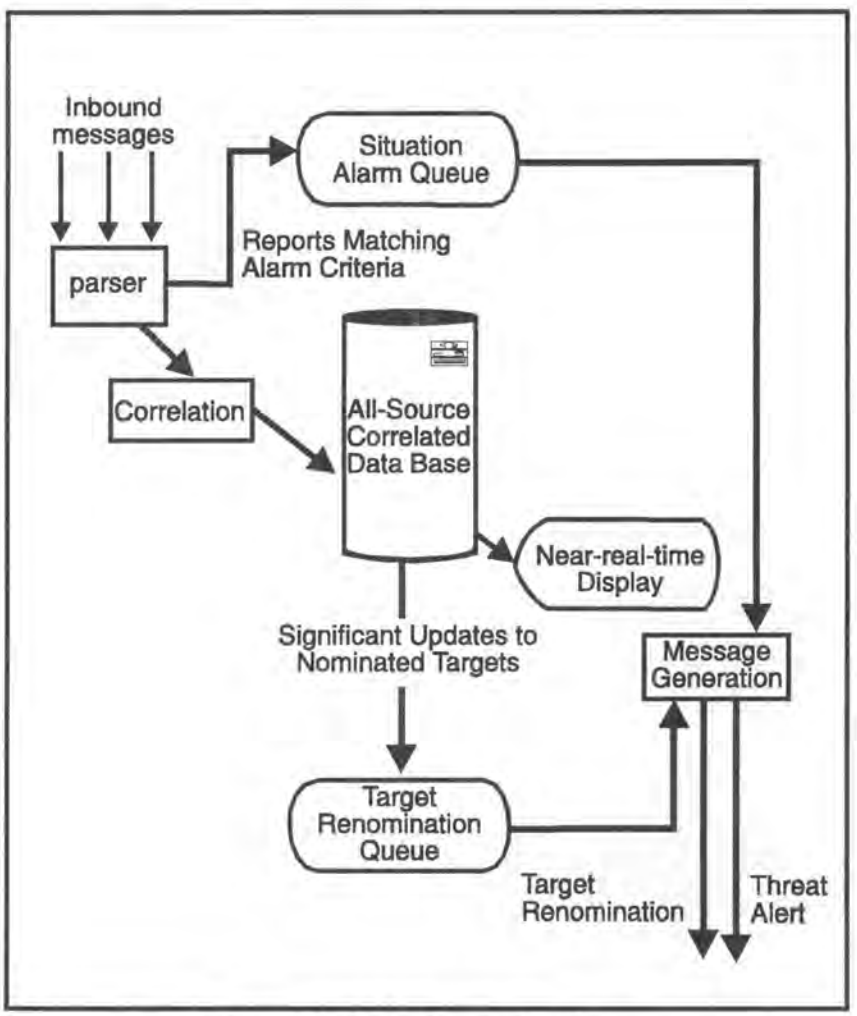


Figure 1. ASAS Automated Features.

1. Parsing. Three reports, each from a different intelligence discipline, are sent to ASAS which automatically parses them (or breaks them down into individual data elements).

2. Alarms. Information in one of the three reports matches alarm criteria set by the situation analyst. ASAS then forwards a copy of the appropriate data to the situation analyst's alarm queue. Upon review, the analyst determines to disseminate the information. The analyst presses a single button which automatically generates a threat alert message that contains the pertinent information and releases it to area communications (e.g., Mobile Subscriber Equipment).

3. Correlation. Simultaneously, the system determines (based on criteria already set by an all-source analyst) that the three messages are all reporting on the same entity (e.g., enemy unit, equipment, or installation). ASAS then automatically takes the best data from all reports, merges them with the existing record on that entity in the All-Source Correlated Data Base (ASCDB), and updates the near-real-time display.

4. Notices. Because the entity is one that the target analyst previously nominated as a target to the Fire Support Element, the system automatically calculates the significance of the update. Since the new information about that entity exceeds the analyst-specified threshold for change (e.g., a new location that is a certain number of kilometers away from its previous location), ASAS forwards a notice to the target analyst. If the analyst determines that the entity should be renominated as a target, the system autofills an outgoing Target Intelligence Data (TIDAT) message with the appropriate data before its final release by the analyst.

The System

The Army intelligence architecture consists of complementary responsibilities among echelons and within a joint or combined intelligence structure. Similarly, ASAS is a system of systems. It consists of three different suites of hardware and software. Figure 2 shows the configuration of each

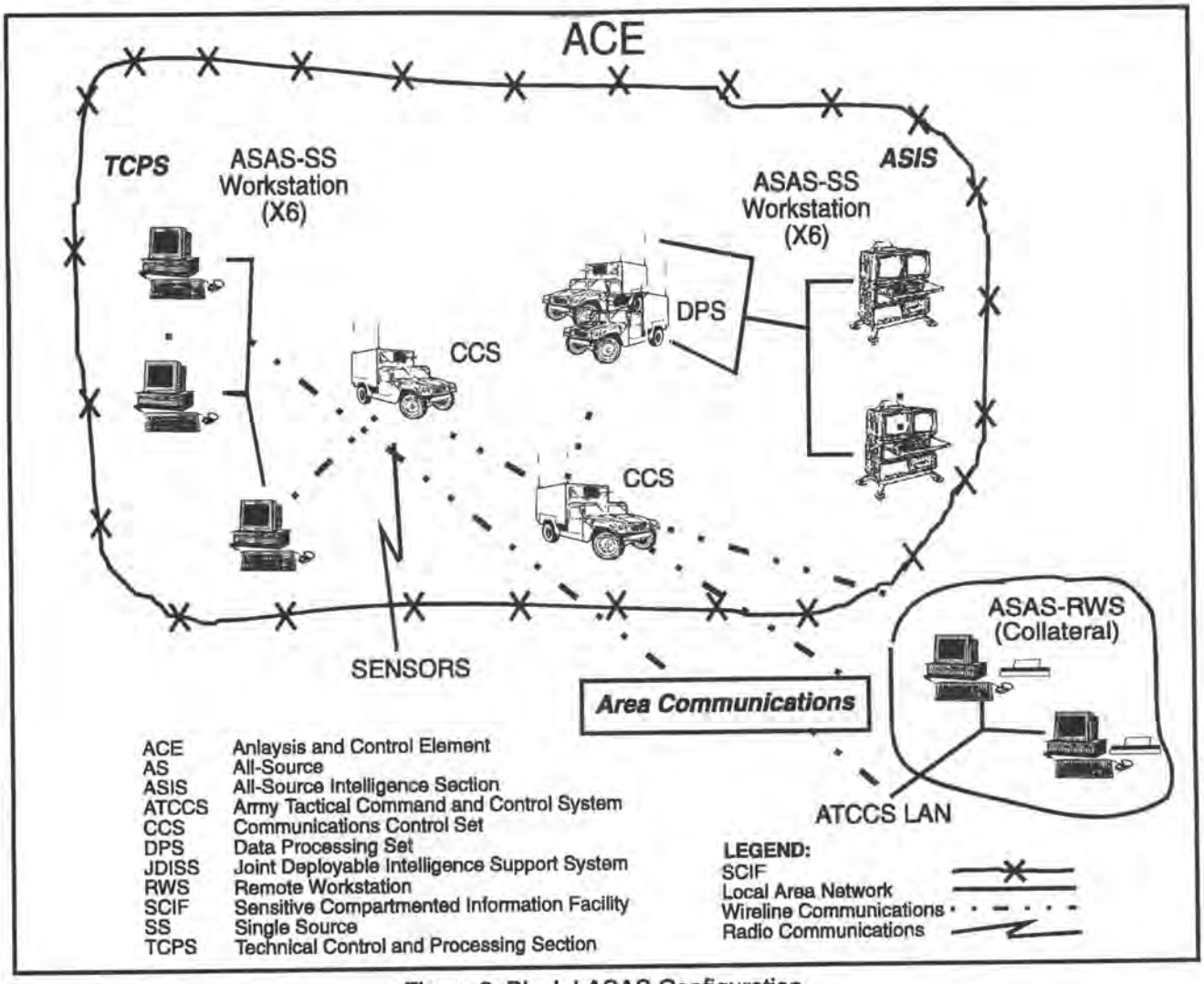


Figure 2. Block I ASAS Configuration.

suite in Block 1. Each suite has identical configurations for both corps and division. They are—

- ☐ ASAS-AS (All-Source).
- ☐ ASAS-SS (Single-Source).
- ☐ ASAS-RWS (Remote Workstation) (Collateral).

A remote workstation (sensitive compartmented information [SCI]) is in the planning stage.

Each suite has unique, yet complementary, functionality because of the section it supports.

ASAS-AS. The ASAS-AS consists of six dual-screen operator workstations that can operate in a tent, expandable van, or building. Truck-mounted supporting equipment includes two Data Processing Sets (DPS) and a Communications Control Set (CCS).

The ASAS-AS processes SCI-level intelligence in support of the All-Source Intelligence Section. ASAS-AS is split into 10 operating positions called Functional Identities (FIs). The four analyst FIs are—

- ☐ All-source analysis.
- ☐ Targeting analysis.
- ☐ Situation analysis.
- ☐ Intelligence collection management.

The other six application software FIs are—

- ☐ System supervisor.
- ☐ Automated data processing (ADP) operations.
- ☐ Functional manager.
- ☐ Message release authority.
- ☐ Security audit trail.
- ☐ Operational diagnostics.

These six application software FIs control the security, communications, and ADP aspects of the system.

The strength of ASAS-AS is its automatic functions—those which the system performs without human intervention....

An analyst may operate up to eight FIs at one time, depending on authorizations the supervisor assigns. Because of the ASAS-AS distributed processing architecture, the changes one analyst makes affect all other analysts using the same FI on other workstations.

The strength of ASAS-AS is its automatic functions—those which the system performs without human intervention (once the analyst sets the appropriate criteria). The major automatic feature of ASAS-AS is its ability to correlate and combine multiple reports on the same entity. Correlation is based on time, location, and the degree to which the report identifies the entity.

It is not necessary for the report to completely identify the entities in order for the ASAS-AS to automatically correlate them. For instance, it is possible for an unidentified infantry unit to automatically correlate with a battalion of unknown number and organization type. The resulting record reflects the entity as an infantry battalion with an unknown number.

If ASAS-AS does not automatically correlate the incoming report, it has two options:

- ☐ Record that entity in the data base as a newly discovered entity.
- ☐ Forward it to the analyst for resolution.

Analysts preset all of the thresholds relating to the above decisions.

The ASAS-AS stores enemy data in a single relational ASCDB, which all analysts use. Many types of messages can automatically update the ASCDB, which ASAS-AS can graphically display in near-real-time. ASAS-AS can automatically transmit these updates on a recurring basis to other ASAS workstations (even those in other units) through a mechanism called External Data Base Coordination. Analysts can also set various types of event alarms so critical information comes to their attention immediately.

ASAS-SS. The ASAS-SS consists of six workstations and the same CCS that ASAS-AS uses. The ASAS-SS workstation is a refinement of the Hawkeye system used during Desert Storm. It currently supports signals intelligence processing and asset management in the Technical Control and Processing Section. (The majority of functions the TCAE used to perform are now performed by this section.)

ASAS-SS products are primarily forwarded to ASAS-AS. The ASAS-SS local area network also includes a seventh workstation on which the Joint Deployable Intelligence Support System (JDISS) resides. This is a key system which facilitates interoperability among joint systems.

ASAS-SS strengths include graphics manipulation, report flexibility, and numerous utilities.

The ASAS-SS has many interactive tools which analysts use to perform intelligence functions. ASAS-SS strengths include graphics manipulation, report flexibility, and numerous utilities. The ASAS-SS does not provide automatic features to the same degree as ASAS-AS (which requires more predefined and structured data bases). Instead, it enables analysts to tailor the data base structures as needed.

In addition, ASAS-SS is based on an X-Windows user computer interface and a UNIX operating system. These are important computer features in future versions of ASAS.

There are six ASAS-SS functions:

- ☐ **Maps** allow an analyst to select and manipulate the map background and to calculate terrain effects.

- **Data Base Utilities** manipulate and query data tables, build templates, and index records.
- **Communications and Message Utilities** allow the analyst to establish event alarm criteria, display incoming messages, review stored messages, and recall output message masks.
- **File Utilities** include a word processor and those functions necessary to maintain proper file management.
- **User Utilities** provide conversion routines and some printer and security functions.
- **System Administrator Utilities** allow a senior analyst to monitor system performance and health, to maintain security, and to manage user accounts.

ASAS-RWS (Collateral). ASAS-RWS (Collateral) (previously known as the Collateral Enclave [CE] or ASAS Collateral Workstation) supports G2 Operations and G2 Plans. Each section has one workstation. Both are connected via a local area network with the other nodes of the Army Tactical Command and Control System (ATCCS). Automated support for the five ATCCS nodes or Battlefield Functional Areas are provided by—

- ASAS.
- Maneuver Control System.
- Advanced Field Artillery Tactical Data System.
- Forward Area Air Defense Command and Control.
- Combat Service Support Computer System.

...the ASAS Project Manager has devised an evolutionary acquisition strategy to deliver improved products over time....

At division and corps headquarters, most of the detailed processing of all-source intelligence data takes place in the ACE. Through the External Data Base Coordination mechanism, ASAS-AS regularly forwards collateral ASCDB updates for automatic entry into the collateral ASCDB in the ASAS-RWS (Collateral).

This process ensures that within security constraints, the view of the enemy situation is synchronized among the ACE, G2 Operations, and G2 Plans.

ASAS-RWS (Collateral) helps G2 Operations and G2 Plans to—

- Keep the commander and his staff informed about current and projected enemy situations.
- Plan future operations through wargaming.

ASAS-RWS (Collateral) is similar to ASAS-SS in that it provides a collection of applications and tools for analyst use. Its strength is its ability to create, manipulate, and plot graphic overlays, particularly intelligence preparation of the battlefield (IPB) templates. ASAS-RWS tools include—

- Numerical and distance calculators.
- Coordinate conversion routines.
- File and text browsers.
- A gazetteer.
- A message key word feature which forwards selected messages into as many as 10 different queues.

The Future

As with any new system, ASAS does not yet have all of the desired capabilities. This is partly due to changes in the world situation, doctrine, technology, and requirements. With this in mind, the ASAS Project Manager[2] has devised an evolutionary acquisition strategy to deliver improved products over time:

- The Army is now fielding ASAS Block I.
- The ASAS Project Office will develop ASAS Block II through the late 1990s.
- ASAS Block III is the objective system.

Technology insertion and the efforts of the Joint Prototyping Office will also incrementally enhance ASAS.

ASAS Block II. A major ASAS Block II objective is for ASAS to operate on the same hardware and integrate the same common software developed for use by all five Battlefield Functional Areas within ATCCS. This will simplify maintenance and allow greater interoperability with many other ADP systems.

One of the key elements of the ASAS development strategy is the provision for capability packages.

One of the more significant functions under development for ASAS Block II is automatic sanitization. Some other additions to functionality include—

- Counterintelligence and human intelligence processing.
- Dissemination of secondary imagery and graphic overlays.
- Increased automatic processing for signals intelligence data.
- Multimedia processing and display.
- Enhanced collection management (Joint Collection Management Tools [JCMT] including the Intelligence Synchronization Matrix).
- Integrated use of digital terrain and weather data.

One of the key elements of the ASAS development strategy is the provision for capability packages. These are software updates (based on products the Block II contractor develops) that demonstrate capabilities and that may be retrofitted on Block I systems. They are developed through rapid prototyping techniques which encourage maximum user input. Lessons learned and capabilities developed are then incorporated into the mainline development effort.

Technology Insertion. The ASAS Project Office will also upgrade ASAS with new technology as it evolves. A prime example of technology insertion is the Alpha processor which is 30 times faster than the current ASAS-AS processor. Incorporating the Alpha not only speeds up processing but also eliminates the need for both DPSs in the ASAS-AS. When Alpha development and testing are complete, units equipped with ASAS will receive Alpha upgrades to enhance their ASAS-AS workstations.

...in order to provide ASAS functionality to more of the Army, the ASAS Project Manager ...has initiated ASAS-Extended.

The Alpha workstation makes possible an initiative known as ASAS-Extended. Because of funding constraints, the Department of the Army (DA) decided that only selected corps and divisions will receive Block I ASAS. Therefore, official fielding of ASAS Block I should be complete by the end of Fiscal Year 95.

However, in order to provide ASAS functionality to more of the Army, the ASAS Project Manager, along with the U.S. Army Intelligence Center, has initiated ASAS-Extended. This is a concept whereby many other Active and Reserve units from separate brigade and armored cavalry regiment to echelons above corps can obtain ASAS capabilities, only with fewer workstations. Based on successful completion of operational testing in fall 1994, DA has approved and will implement ASAS-Extended.

Joint Prototyping Office. The method for developing ADP systems, especially software, has changed dramatically over the past few years. The software development community now places more emphasis on prototyping. This involves rapid development of software (and hardware) modules that users experiment with and evaluate. Developers refine and eventually incorporate into "fieldable" products modules deemed useful.

This concept is similar to the Block II capability packages. However, it focuses on high value functionality not currently planned for Block II, emerging intelligence techniques, and technologically high-risk efforts.

The Joint Prototyping Office is responsible for this prototyping effort. Organizations involved in the effort include the—

- ☐ The ASAS Project Office.
- ☐ U.S. Army Intelligence Center and Fort Huachuca.
- ☐ Forces Command.
- ☐ Intelligence and Security Command.
- ☐ Program Executive Office for Command and Control Systems.
- ☐ U.S. Army, Europe.

The workstation used for prototyping is called Warlord (ASAS-WL). It is a combination of the initial Block II prototype efforts, ASAS-RWS (Collateral), and Warrior (ASAS-W). An **MIPB** article entitled "Warrior: The Future Intelligence Picture—NOW" (Jul-Sep 93) describes Warrior, a sister system to ASAS-SS.

Warlord is being developed for use on a Sun SPARC workstation. It is the platform which all BFAs will use as part of the Common Hardware/Software (CHS) program. Version 1 of the software was completed and delivered for Beta testing in late 1994. It will eventually replace all Warrior software currently in use. Warlord may also be provided to echelons below division or nonmaneuver units.

Conclusion

With ASAS, intelligence analysts will be able to process intelligence data and disseminate products better and faster than ever before. The use of paper journals and workbooks, acetate and grease pencils, and even generic "electronic shoe boxes" is becoming a thing of the past. However, even though ASAS enhances an analyst's ability to process intelligence now, its capabilities will continue to improve in the future.

The key to its value is the ability of analysts to use it properly. ASAS is a "crew-served weapon" and analysts must continually practice their individual and collective skills both in garrison and in the field. By doing so, they will support the commander with the best possible intelligence and win the information war.

Endnotes

1. Subsequent to the writing of this article, **MIPB** published another article on ASAS entitled, "The MI Revolution: The ACE and ASAS" (Jul-Sep 94).

2. In October 1994, the Program Executive Officer for Command and Control Systems redesignated the ASAS Project Manager as Project Manager, Intelligence Fusion.

Mr. Jensen works for Logicon Eagle Technology, a defense contractor that supports the ASAS Project Manager. He has served a total of 23 years in Reserve and Active Components. As a Reserve officer, he is assigned to the National Military Joint Intelligence Center.

The Intelligence Synchronization Sheet

by Major Gus E. Greene, Sr., and Captain Karen Hood

The 2d Armored Division (2AD), like most of the intelligence community, has struggled to synchronize the planning and execution of intelligence operations. A traditional approach was to develop detailed annexes and appendixes (that subordinate units rarely read). In addition, one had to search through many different annexes to find the operation's focus, collection priorities, and other important information.

It became painfully evident during the many training exercises leading up to our recent Warfighter Exercise that we needed a new way to present this information. In response to this need, 2AD developed the Intelligence Synchronization Sheet. This document clearly and concisely presents critical information the division commander, subordinate units, and analysis and control element (ACE) need.

As currently used in the division, the Intelligence Synchronization Sheet—

- ☐ Guides the G2 planner through the enemy situation and likely enemy actions discovered during wargaming.
- ☐ Captures the friendly course of action (COA) in graphic and written form on a single sheet.
- ☐ Gives the ACE enough information to transition into the future operation and to understand the division's mission.
- ☐ Acts as a quick reference that ensures all levels of intelligence and operations within the division operate on the same sheet.

Guides The G2 Planner

Initially, the G3 planners receive the operations plan (OPLAN), operations order (OPORD), or contingency plan (CONPLAN). Then the G2 planner, along with the division ACE, begins to analyze the enemy situation. The G2 planner uses the left side of the Intelligence Synchronization Sheet to guide his thought processes.

The first section is the **Enemy Objective** which is either deduced or given in the Higher Headquarters Enemy Situation paragraph of an OPORD.

After analyzing likely enemy activities, we identify certain events critical to the enemy commander's success.

The next section is **Likely Activities.** With sufficient time, the G2 planner conducts what we refer to as an "intelligence wargame." The G2 planner—along with the staff weather officer, terrain technician, and ACE senior analyst—analyzes the terrain and weather. Without knowing the division plan, the G2 planner performs reverse intelligence preparation of the battlefield, developing a template of likely COAs the friendly force will use.

Using this template and enemy doctrine, the G2 planner and analysts formulate an enemy plan and a detailed list of enemy activities that support the plan. The G2 planner then enters this list onto the Intelligence Synchronization Sheet.

After analyzing likely enemy activities, we identify certain events critical to the enemy commander's success. These are called **Critical Enemy Events.** For example, a likely activity is "to conduct reconnaissance to identify weaknesses in our defense." A critical event for the enemy is "to locate our reserves."

The G2 planner enters the critical enemy event on the Intelligence Synchronization Sheet. This identifies and highlights those activities that must be addressed in the wargame and focused on during the deep, close, and rear battles.

Finally, during the "Intelligence Wargame," the G2 planner builds a list of friendly targets that, if destroyed or suppressed, give the enemy an advantage. The G2 planner enters these targets into the block titled, **Key Targets.** This data keys our division to the assets that require additional protection.

Captures the Friendly COA

The second purpose of the Intelligence Synchronization Sheet is to capture the friendly COA in graphic and written form. We devoted the center of the sheet to this purpose. This area includes a brief description of the operation, a snapshot of friendly graphics over the enemy situation, and the focus for the deep, close, and rear battles.

The top center block defines the planned **Event.** It should be the CONPLAN name or a description of the operation, for example, "CONPLAN 5: **Focused Determination**, defense against the 8CAA(-)." Its purpose is to uniquely identify the document and plan. Under the center block is the "snapshot" of the assumed friendly and enemy situation. This diagram should serve as a simplified depiction of the initial enemy and friendly disposition.

INTELLIGENCE SYNCHRONIZATION SHEET

EVENT

CONPLAN 5: Focused Determination defense against the 8th CAA(-).

ENEMY OBJECTIVE

STRATEGIC: Secure the midland territory and industrial heartland.

OPERATIONAL: Destroy III (US) Corps; then secure southland border.

TACTICAL: Destroy the lead divisions of the III (US) Corps.

LIKELY ACTIVITIES

1. Recon attempts to find the Main Battle Area (MBA)/ weaknesses in the defense.
2. Remnants of the 4th Guards Motorized Rifle Division (GMRD) withdraw to company defenses N. of Kemnath.
3. Army Artillery Group (AAG) repositions north to support the attack.
4. Air Assault units inserted vic Vils River to support the attack.
5. 9th Tank Division (TD) and 79th TD attack from the march; initially in regimental columns, then battalion columns 8-10 Km from main defenses.
6. Engineer assets pushed forward in the eastern division to facilitate river crossings.
7. Persistent chemical to seal the flanks of the main attack.

CRITICAL ENEMY EVENTS

- Conduct aggressive recon to locate the MBA and identify the main effort.
- Protect the force from deep attacks.
- Locate and isolate reserves.
- Mass combat power at the strike sector.
- Destroy division reserves.

KEY TARGETS

- Attack Helos
- Artillery (MLRS)
- Q36/37 Radars
- Reserves

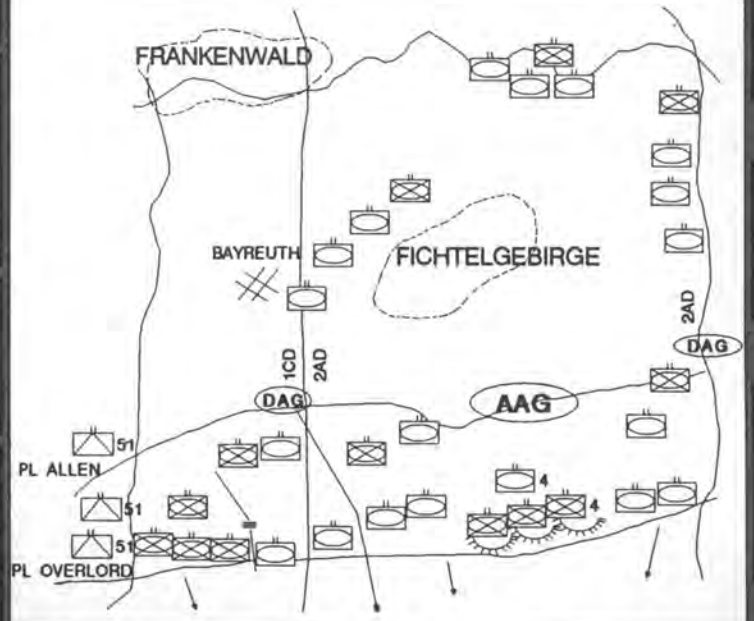
2AD CRITICAL INTEL ACTIONS

- Establish sensor baseline.
- Maintain comms with 1st Canadian Division (1CD) to track movement of 11th Guard Tank Army (GTA).
- Maintain links with Corps to track the 9TD and 79TD movement deep.
- Reposition Long-Range Surveillance (LRS) teams.

NOTES:

Enemy Situation H+52

9TD and 79TD at 90% strength



BATTLE FOCUS

- DEEP: Destruction of the AAG/DAG/RAGs supporting the 9TD and 79TD's 2d echelon regiments.
- CLOSE: Destruction of the 9TD and 79TD lead regiments.
- REAR: Air assault forces directed against rear area targets.

CONDITIONS

- 4MRD assumes defense at 30% strength vic PL OVERLORD.
- 9TD and 79TD attack to destroy 2AD.
- 2AD conducts defense south of PL OVERLORD.

PIR

1. Locate and track the lead maneuver battalions of the Eastern TD (DP2, DP3).
2. Locate and track the lead maneuver battalions of the Western TD (DP1, DP3).
3. Locate and track the DAG (2S19, BM21) supporting the Western TD in the 2AD sector (DP4).
4. Locate and track the 2d echelon regiment(s) of the Western TD (DP5,6).
5. Will air assault forces be used to secure crossings over the river vic TQ8792 (DP7)?
6. Will the CF/Airborne Bde be used to secure the crossings over the Lauterbach river vic Schmidmuhlen (TQ1260) (DP8)?

TARGETING PRIORITY

- RTSA of the 9TD and 79TD.
- ADA.
- AAG/AGRA, DAGs, and RAGs of the 9TD and 79TD.
- Maneuver battalions of the 9TD and 79TD.

KEY COLLECTION RESOURCES

2AD:
- UAV
- QUICKFIX
- Ground-based SIGINT
- LRSD

CORPS and EAC:
- LRSD
- SOF
- JSTARS
- ELINT
- GUARDRAIL
- UAV

PRIORITY OF INTEL SPT

- Initially, to 2-1CAV.
- Upon passage to 2d Bde/1st Bde/256th Bde in order.

Under the diagram is the **Battle Focus** that identifies the nucleus of our deep, close, and rear battles. This information is useful to the ACE collection manager when directing the collection effort. It also helps analysts decide what information is of immediate value and the priority for distribution.

During the actual wargame, the G2 planner, along with G2 operations, identifies specific intelligence actions necessary to support the maneuver plan. The G2 planner inserts these activities into the lower left block. They serve as a reminder to the G2 operations section and inform the MI battalion and ACE of critical requirements during the operation.

When the wargame begins, G2 and G3 planners define the assumptions for the plan.

An example of a critical intelligence requirement is "to establish liaison with a forward unit." This action is necessary to ensure the intelligence battle is handed over at the conclusion of a passage of lines.

Gives the ACE Transition Information

The third purpose of the Intelligence Synchronization Sheet is to give the ACE enough information to prepare for transition to the future operation. The right side of the Intelligence Synchronization Sheet defines the—

- ☐ Assumed conditions under which the division will conduct the operation.
- ☐ Priority intelligence requirements (PIR).
- ☐ Targeting priorities.
- ☐ Key collection resources.
- ☐ Intelligence support priority.

When the wargame begins, G2 and G3 planners define the assumptions for the plan. These assumptions include the **Conditions** we must create before we can execute the plan. Planners include this information in the Intelligence Synchronization Sheet. It provides the ACE the trigger for transitioning to the PIR also listed in the Intelligence Synchronization Sheet.

The commander generates intelligence requirements during the wargame. They are specifically tied to the decisions the commander must make during the operation. Planners include these on the Intelligence Synchronization Sheet to give the ACE an opportunity to develop the key reads and indicators that support the intelligence requirements. We develop the indicators into specific information requirements (SIR) and alarms that we input into the All-Source Analysis System (ASAS).

Once the commanding general approves a COA, he establishes his **PIR** and **Targeting Priorities**. Planners include these in the Intelligence Synchronization Sheet to provide a focus for the ACE targeting cell. Including this information also allows the targeting cell to cross-check the targeting priority against the PIR to ensure the collection manager tasks targeting requirements for collection.

Planners fill in the **Key Collection Resources** block on the Intelligence Synchronization Sheet to spotlight division intelligence resources. The G2 planner reviews the corps task organization to determine if any additional resources are available. The G2 planner then updates the **Key Collection Resources** block to provide information to the ACE and G2 operations on available assets.

The final block of information is the **Priority of Intelligence Support**. This block provides the ACE guidance on who gets priority for the distribution of information and unmanned aerial vehicle (UAV) support. After the decision briefing, the commanding general decides which units will conduct the specific missions and identifies the main effort. The G2 planner then enters those priorities into the Intelligence Synchronization Sheet based on the commander's decision.

Acts as a Quick Reference

The final purpose of the Intelligence Synchronization Sheet is to ensure all intelligence and operations sections are synchronized. To accomplish this, the G2 planner issues this document as part of the intelligence annex to the OPORD, CONPLAN, or fragmentary order. As such, it serves as a quick reference for the operation. This document, coupled with the enemy situation paragraph, gives subordinate units a clear, concise view of the future battle. As a result, intelligence and operations sections can use the same assumptions.

Summary

The Intelligence Synchronization Sheet has become an extremely useful tool throughout the division. Although the document alone is not a cure-all for intelligence and operations synchronization, it does, however—

- ☐ Reduce the volume of written material that soldiers must sift through to understand the intelligence strategy.
- ☐ Help the G2 planner analyze the enemy situation while capturing the friendly COA in graphic and written form on a single sheet of paper.
- ☐ Give the ACE enough information to begin the transition to the future operation, and give an appreciation for the division's future mission.
- ☐ Serve as a quick reference sheet to help ensure all levels of division intelligence and operations understand the planning assumptions.

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CPT Hood is the collection manager for 2AD. She is an Allegheny College graduate and holds a master's degree from St. Mary's College.

Wargaming With The ASAS-W

by Lieutenant Alexandra M. Hoffner

In February 1994, the G2, 2d Armored Division (2AD) tasked G2 Plans to integrate the All-Source Analysis System-Warrior (ASAS-W) into the decision making process. The wargame (an integral part of the decision making process) pits the most likely enemy courses of action (COA) against possible friendly COAs to determine the best COA.

The wargame is a fast-paced exercise that includes many participants. Because of its intensity, the staff can miss important details when the scribe records the results on the battlefield operating system (BOS) synchronization matrix. The G2 thought the ASAS-W could supplement the synchronization matrix by capturing details the matrix missed.

The Old Way

Normally, in wargaming, the G2 Plans Officer maneuvers enemy icons down the avenues of approach, or puts them into the defense. The G2 Plans Officer identifies various phases of threat fire support and locations of reconnaissance, first and second echelon forces, and reserve forces at different H-hours. Simultaneously, the G3 Plans Officer maneuvers friendly icons.

Representatives from fire support, aviation, chemical, service support, engineers, electronic warfare, psychological operations, deception, air defense, and military police identify their probable activities at various hours. The scribe tries to capture all this information plus the outcome of each engagement on a BOS synchronization matrix.

The BOS synchronization matrix is a valuable tool, but it is not perfect. Members of the G3 Plans Section say that after wargaming, when they attempt to build the COA decision briefing, it's hard to remember exactly how they maneuvered their icons throughout the wargame. They also point out that the BOS synchronization matrix does not provide enough detail to reconstruct the fight. Using ASAS-W helps solve this problem.

The ASAS-W is designed as an analyst's tool to display the current situation from incoming messages. Since the G2 Plans Section deals with unknown situations in future battles, 2AD's use of the ASAS-W deviates somewhat from this intent. Although ASAS-W was not designed to plan future battles, it is a valuable aid in the planning process, especially wargaming.

The New Way

Wargaming with the ASAS-W works basically the same as the old method. The analyst posts the map board with the projected locations of enemy and friendly units. The G2 and the G3 stand at the map, ready to conduct engagements between their icons. Representatives from various BOSs sit, waiting to contribute to the wargaming. The scribe stands ready to record this process on the synchronization matrix.

There is one difference, however. Sitting off to one side of the map is an ASAS-W computer that also contains the templated initial locations of enemy and friendly units. As G2 and G3 Plans Officers move their icons on the map, the ASAS-W operator moves the icons on the computer screen. As each side destroys units, the operator deletes the icon, while the G2 and G3 Plans Officers remove them from the map.

Advantages

One advantage of the ASAS-W over the map is the ability to save a screen as an overlay. When G2 and G3 Plans Officers finish wargaming a particular H-hour, the ASAS-W operator can label the correct hour on the screen and show the major activities. The operator saves the overlay to capture the picture of the situation at that point. Then the operator removes the labels from the screen and continues the process until the G2 and G3 Plans Officers establish the final set of locations for the next hour.

When the wargame is over, the operator can go to the overlays list and recall any hour of the battle. On the computer, the icons are saved exactly where they were at that point in the wargame; whereas, the map merely displays the end state. Without ASAS-W, the flow of the battle at each critical event was lost in the

(Continued on page 52)

Defense on the Rhine

by Major Justin L.C. Eldridge

It was still dark outside when General Alfred Schlemm awoke to a typically rainy day in his well-hidden forest cottage headquarters near Dorsten, Germany. General Schlemm, Commander, German 1st Fallschirm (FS) Army, faced an arduous day as he prepared his army to defend against the expected U.S.-British-Canadian attack across the Rhine River.

At 0600 Schlemm heard planes, then explosions as aircraft attacked his isolated command post. He had no time to escape. With unerring accuracy, Allied fighter bombers wrecked the cottage and severely wounded the general. When Schlemm regained consciousness the next day, he was blind and bedridden.

For three days he could barely move, unable to help his inexperienced army prepare its last defense of the Fatherland. On 24 March 1945, the 21st Allied Army Group plodded across the Rhine toward Schlemm's brittle defense. Having regained his sight, Schlemm rose from bed and ordered his chauffeur to drive him forward to survey the battle. Allied air superiority ensured his conspicuous vehicle received its fair share of attention; aircraft strafed his staff car off the road every 200 meters.

Once he reviewed the battle, he radioed his superior command, German Army Group "H," that this was the expected major Allied operation. Under the circumstances, Schlemm believed he had done all he could. His condition worsened and, with a temperature of 40 degrees Celsius, he turned his command over to General Blumentritt on 28 March.[1]

Regardless of the odds against the Germans in the last days of the war, Schlemm never lost faith that he could acquit himself and his soldiers well. Much of this confidence was generated by his own accurate picture of the Allied objective and intentions. Schlemm's most useful intelligence sources were not the technical collection methods of air reconnaissance and tactical signals intelligence (SIGINT).

After the Normandy invasion, Allied air superiority prevented German air reconnaissance. Tactical SIGINT, long ignored and incapable of tracking the rapidly changing situation, provided little useful information. The only useful source of SIGINT was Allied communications security (COMSEC) breaches.[2]

In the Third Reich's last dark months, commanders could not expect air reconnaissance or tactical SIGINT to provide much useful information. However, tactical human intelligence (HUMINT)—observations from the frontline troops, line-crossers, and captured documents—provided hints of Allied inclinations. Schlemm's battlefield experience and expert terrain analysis provided the rest of the picture.

The Setting

By the end of February 1945, the Allied Reichwald offensive had shoved Schlemm's forces against the Rhine's west bank. The Rhine's critical commercial and military traffic ensured Germany's industrial survival.[3] With his back to the great river, Schlemm ordered his Army to shorten the bridgehead. This secured the defense and strengthened his position against the rapidly approaching British, Canadian, and U.S. divisions along its flanks.[4] (See Figure 1.)

The smaller Rhine perimeter also allowed the German LXXXVI Corps (under General Straub) and XLVII Corps (under General Luettwitz) to cross the Rhine to the east and to begin organizing what the German high command would have considered a treasonous defense. They had ordered Schlemm to defend the bridges or lose his head.

On 3 March Schlemm saw he could no longer hold his west bank positions without risking the destruction of his force. Schlemm was denied permission to cross to the east bank, even though his divisions were only regimental size with barely 20 tanks each. Finally, under Schlemm's constant protests, the *Oberkommando der Wehrmacht* (OKW) (high command of the armed forces) reluctantly allowed a withdrawal across the Rhine on 9 March.

By the next day most of the Ist FS Army had crossed the river. At 0700 Schlemm demolished the Wesel bridges he had fought so hard to protect.[5] That night the last staff elements of the II FS Corps, under General Meindl, crossed to the East and replaced the XLVII Panzer Corps, which moved to rear assembly areas as the army group reserve.

By 10 March the Germans feared an immediate Allied pursuit across the river, but the Rhine's high water discouraged a hasty crossing and probably saved Schlemm's command from immediate annihilation.[6] The cancer of defeat infected his soldiers as they built defensive positions. Their training was poor, equip-

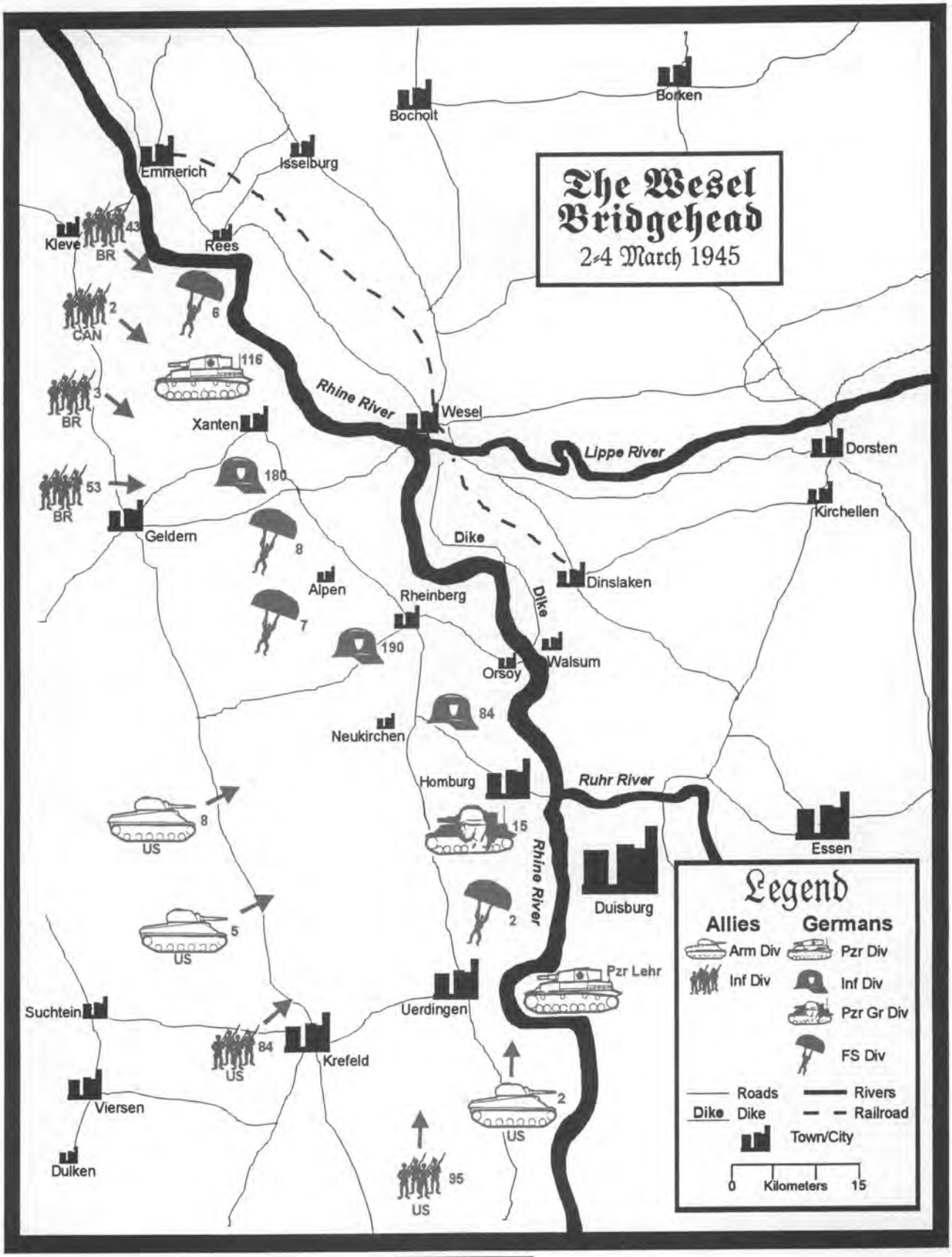
The Wesel Bridgehead
2-4 March 1945
Bocholt
Borken
Emmerich
Isselburg
Kleve
BR
43
Rees
2
CAN
6
116
Rhine River
3
BR
Xanten
Wesel
Lippe River
Dorsten
53
BR
180
Kirchellen
Geldern
Dike
8
Alpen
Rheinberg
Dinslaken
Dike
7
190
Walsum
Orsoy
84
Neukirchen
Homburg
Ruhr River
8
US
15
Rhine River
Essen
Duisburg
2
5
US
Pzr Lehr
Suchtein
Uerdingen
84
US
Krefeld
Viersen
2
US
Dulken
95
US
Legend
Allies
Germans
Arm Div
Pzr Div
Inf Div
Inf Div
Pzr Gr Div
FS Div
Roads
Rivers
Dike
Dike
Railroad
Town/City
0
Kilometers
15

Figure 1.

ment second-rate, and morale abysmal.

Few in his command could muster the fighting spirit necessary to defeat the increasingly confident Western Allies. Yet, Schlemm fought on in the vain hope of a separate peace that would free the German armies to face the Russians in the East.

German Dispositions

Field Marshal Kesselring, the newest commander of German forces in the west, had confidence in Schlemm's ability to defend the river. From north to south, Schlemm arrayed his Army from Emmerich to just south of Krefeld.[7] (See Figure 2.) In the North was the II FS Corps with the 6th, 8th, and 7th FS Divisions.

General Meindl thinly spread his corps between Emmerich to positions north of Wesel. The 6th FS Division covered the area from Emmerich to Rees and the 8th FS Division defended from Rees to Ober Mormter. The 7th FS Division supported the corps left flank from Ober Mormter to Mars. This corps would defend unsuccessfully against 2d British Army.[8]

Adjoining the II FS Corps' left was the 84th Infantry Division (ID) of the LXXXVI Corps (General Straub). To its south was the 180th ID, which covered the area from the Lippe River to the northern boundary of LXIII Corps' "Hamburg" Division. The LXXXVI Corps defended south of Wesel to just south of Walsum. This corps would face the 9th U.S. Army's two-division assault.[9]

General Abraham's LXIII Corps shielded the German Army's southern flank with the "Hamburg," the 2d FS, and the 190th ID. Army Group "H" placed their reserve, the XLVII Panzer Corps, between the towns of Silvolde, Halle, and Bocholt.[10]

Although confidently led, units positioned along the Rhine River were ill-equipped and undermanned. General Meindl's II FS Corps, the strongest in Ist FS Army, had only 11,000 men (division size). His supporting artillery had less than 50 rounds per gun, roughly one-fifth of their basic load. Only 500 artillery tubes opposed the British. Meindl's reinforcements were no more than children without battlefield experience.[11]

The divisions that challenged the 9th U.S. Army were in even worse condition. The 180th ID, LXXXVI Corps, defended almost 20 kilometers of front, south of Wesel, with only 2,500 men. At most, the Germans had 15 light artillery batteries, 7 medium artillery batteries, and 3 batteries of heavy caliber weapons opposing the entire XVI U.S. Corps.[12]

The linchpin of the German defense would be the commitment of their reserves, but the defending division's local reinforcements would not influence the battle. For example, the 6th FS Division, between Emmerich and Isselburg, placed two regiments with three battalions each along their front and maintained only local regimental reserves.

Since the division was in such poor condition, the commander stripped one regiment to reinforce two other regiments. The third battalion in each regiment was a *Volkstrumm* (People's Home Guard) unit, whose abilities varied from battalion to battalion.

The Army Group "H" reserve was little more than regimental size. The divisions in XLVII Corps (*116th Panzer* and *15th Panzer Grenadier*) crossed the Rhine at 35% strength in personnel and only 35 tanks between the two divisions. Though both were reinforced to 50% personnel strength, the new soldiers were young and inexperienced; neither division received additional tanks.[13]

The defenders held one advantage: the terrain. The Rhine's east bank was well-suited for defense, not only because the west bank was open (which facilitated observation), but the east bank held 60-foot-wide and 13-foot-high dikes and a railroad embankment that served as defensive barriers.[14]

The Rhine River alone was an imposing obstacle. Its width varied from 900 to 1,500 feet. In March the current ran at five miles an hour at a depth of not less than nine feet. To Montgomery's advantage, the river's sand and gravel banks were excellent anchors for his heavy bridging equipment. Despite Schlemm's efforts and the terrain, the German forces strength was too meager to stop the Allies.

Beginning with the 10 March respite, Schlemm's Army built hasty defensive positions consisting of camouflaged rifle and machine gun pits. In front of 9th U.S. Army, the German 180th Infantry and "Hamburg" Divisions constructed a forward line that ran along the dikes and railroad tracks parallel to the river from Wesel south to Dinslaken. In front of the dike, the Germans emplaced triple-strand wire obstacles and concertina with mines interspersed among the entanglements.

The first defensive line was dug in along the rear slopes of the dike with machine guns positioned to fire onto the west bank. Along a railway embankment were fighting positions, "...zig-zag trenches and many flak positions, plus some underground defensive bunker."[15]

The Allied Plan

Across the Rhine General Montgomery's powerful 21st Army Group—a combined force of British, Canadian, and U.S. armies—had won an almost uninterrupted series of battles. Montgomery's plan was characteristically straightforward. First, he would seize the key town of Wesel, expand the bridgehead north to Emmerich, and then encircle the Ruhr industrial region. This region was a vital economic objective to the Allies.

On 9 March Montgomery issued his final orders for the crossing. The 21st Army Group would cross with two armies between Rheinberg and Rees: 9th U.S.

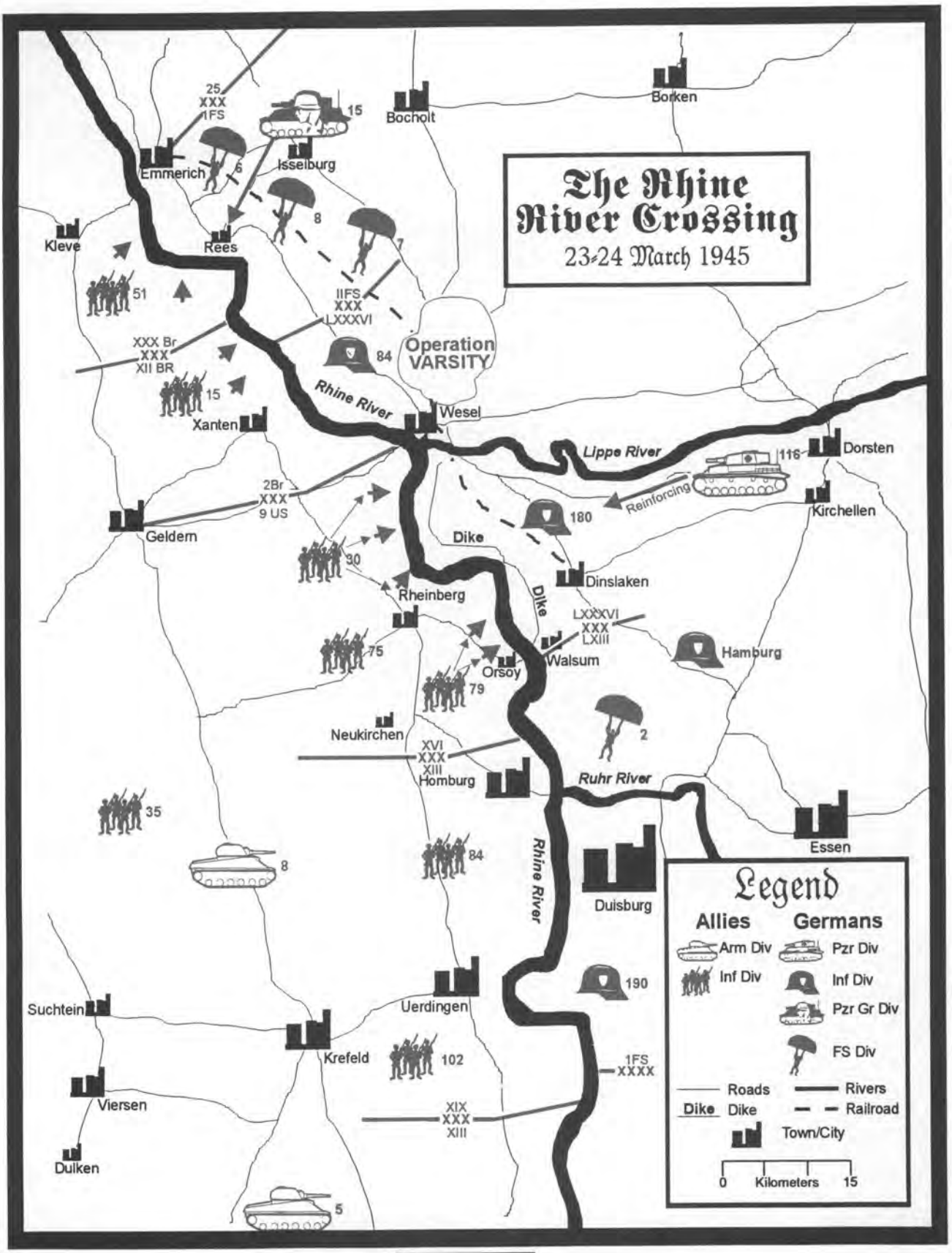
The Rhine River Crossing
23-24 March 1945
Operation VARSITY
Rhine River
Lippe River
Ruhr River
Dike
Reinforcing
Borken
Bocholt
Emmerich
Isselburg
Rees
Kleve
Xanten
Wesel
Dorsten
Kirchellen
Geldern
Rheinberg
Dinslaken
Walsum
Hamburg
Orsoy
Neukirchen
Homburg
Essen
Duisburg
Uerdingen
Krefeld
Suchtein
Viersen
Dulken
25 XXX 1FS
15
6
8
7
51
IIFS XXX LXXXVI
XXX Br XXX XII BR
84
15
2Br XXX 9 US
180
116
30
75
79
LXXXVI XXX LXIII
2
XVI XXX XIII
35
8
84
190
102
1FS XXXX
XIX XXX XIII
5
Legend
Allies
Germans
Arm Div
Pzr Div
Inf Div
Inf Div
Pzr Gr Div
FS Div
Roads
Rivers
Dike
Railroad
Town/City
0
Kilometers
15

Figure 2.

Army on the right and 2d British Army on the left. Their initial objective was to secure Wesel. Montgomery wanted 9th U.S. Army to establish its bridgehead far enough south to prevent a German counterattack from that direction.

Montgomery augmented the river crossing with Operation VARSITY. Operation VARSITY was a two-division airborne operation (with the 6th British Airborne Division and 17th U.S. Airborne Division under the command of General Ridgeway's XVIII U.S. Airborne Corps) to the north and northwest of Wesel.[16] This operation would disrupt German defenses north of Wesel, add depth to the bridgehead, ease the crossing of British forces, and facilitate the link-up with 9th U.S. Army.

Their main objective was German artillery positions in the *Diersfordter Forest*, key terrain that blocked Montgomery's axis of attack. The airborne assault would occur after the crossing began since airborne units needed daylight to make an accurate drop and the ground troops needed extensive artillery support during the early-morning initial assault. The close-in drop also avoided the problems encountered during the disastrous Operation MARKET-GARDEN.[17] The combined Allied force was now prepared to launch its last major offensive of the war.

The German Operational Intelligence Picture

On 23 March 1945, the 21st Army Group began to lumber across the Rhine. The key to the German defense was the timely commitment of reserves into the flanks of the initial and precarious Allied toe-hold on the eastern bank. However, German operational-level intelligence had wrongly estimated Allied strategic and operational objectives. As a result, Kesselring left General Schlemm and Army Group "H" alone to face Montgomery's steamroller while he moved his reserves south to cover the allied advances at the Remagen bridgehead.

On 7 March, Ist U.S. Army seized crossing sites at Remagen, while Patton's 3d U.S. Army smashed through the German defenses at Eifel and reached the Rhine several days later. On the night or 21 March, Patton's forces slipped across the Rhine at Oppenheim.

Montgomery's preparations along the Rhine did not receive the attention it deserved from German intelligence at either the OKW or the *Oberkommando des Herres* (OKH) (high command of the army). The politically sensitive relationship between intelligence and the OKW encumbered "...the transmission of intelligence and perhaps distort[ed] it as well."[18]

Hitler, convinced the key to German survival lay in the East, concentrated his personal efforts against the Russians. Both the OKW and OKH catered to Hitler's wishes and concentrated on the imposing Russian advance rather than the Western Allies. Kesselring focused on the American's seizure of the Remagen and Oppenheim bridgeheads rather than the 21st Army Group. German operational and tactical intelligence could not provide evidence or analysis suggesting Kesselring's conclusions were incorrect.

As early as 22 February 1945, OKW intelligence on the 21st Army Group was incomplete and inaccurate. For 9th U.S. Army alone, the Germans could not locate six divisions nor the boundary between the army's XIII and XIX Corps. Intelligence had not yet identified the XVI Corps.[19] By the end of February, estimates showed little improvement. The Germans still had not identified or correctly located 6 of 12 U.S. divisions.

In early March, the Germans could not locate the XIII U.S. Corps—one of three in 9th Army. On 7 March, they located the XIII Corps but lost the XIX Corps altogether.[20] Twelve days later German intelligence could not locate the U.S. divisions that would cross the Rhine south of Wesel.[21]

Two days before the assault, the Germans still could not locate the two U.S. divisions that would initially cross the Rhine. On 24 March, the day of the crossing, the OKW knew of only one of the divisions (30th ID).[22]

Though the intelligence system could not locate or identify half of the U.S. forces pouring through the breach in the German defenses, the OKW war diary reported with undeserved confidence: "...the large-scale enemy attempt to cross the Rhine was begun at Wesel, as expected, in conjunction with an airborne attack."[23]

The OKW's estimates, consistently and conspicuously incomplete, could not have provided field commanders with an accurate or detailed assessment of Allied unit locations and intentions. Kesselring also was aware of the situation near Wesel, but was more concerned with the Ist and 3d U.S. Army crossings south of 1st FS Army.

The German situation seemed intolerable. Army Group "G" was in jeopardy of encirclement and destruction. Kesselring impetuously rushed his remaining operational reserves to halt the Remagen crossings, which left him unable to help Army Group "H" when Montgomery attacked several days later. The OKW estimates on 21st Army Group gave Kesselring little help in determining an appropriate course of action.

Kesselring estimated the Allies had three options. First, they could exploit the Remagen bridgehead to either link up with the Russians or attack the Ruhr from the South. Second, they could encircle the Saar Palatinate and destroy Army Group "G." Third, the British could cross the Rhine near Wesel.

Kesselring's preoccupation with the Remagen bridgehead suggests he believed the southern crossings posed a greater threat

than Montgomery. Kesselring misread Allied tactical and operational intentions and never understood the strategic advantages to armored forces of the terrain in front of the British 2d Army.

Army Group "H" Counterattacks

Kesselring's incorrect judgment of the XLVII Panzer Corps' counterattack best illustrates his misunderstanding of Allied capabilities and intentions. He believed that Army Group "H" wasted their reserve corps in a premature and piecemeal attack. In reality, the tactical and operational situation dictated that any mass commitment of XLVII Panzer Corps would have led to its immediate destruction.

Since the German units had inadequate local reserves, Montgomery's only fear was the commitment of the XLVII *Panzer* Corps against his bridgehead. However, this German corps had to contend simultaneously with 9th U.S. Army and 2d British Army. Both Kesselring and the commander of the XLVII *Panzer* Corps believed the only effective commitment of the reserve corps would be en masse against the crossing sites. Ironically, both stuck with this conclusion even after it was clear that such an attack would have resulted in the immediate ruin of the corps.

When Montgomery's preparatory fires began late on 23 March, the commander of XLVII *Panzer* Corps received orders to divide his corps. He sent the 15th *Panzer* Grenadier Division to Rees to fight along side II FS Corps against Montgomery's main effort. The 116th *Panzer* Division was to engage the expected Allied airborne landing near Wesel. After the war, Kesselring condemned this decision. However, tactical reality provided no alternative.

By the time the orders to move reached the 15th *Panzer* Grenadier Division, it was already engaged near Rees. Transferring them to the II FS Corps was "...unavoidable."[24] Allied air supremacy would have made a division maneuver en masse impossible; air attacks would have mauled the command.

Commitment of the 116th *Panzer* Division would have been just as futile. After 24 March, the Germans knew they could no longer stem the Allied crossing, especially in the area of the 180th ID. Allied air supremacy also made the 116th *Panzer* Division's original orders to counterattack the airborne landings suicidal. The orders changed and the division reinforced the 180th ID south of the Lippe River. Kesselring was clearly unaware of Allied capabilities and the weakened condition of his own subordinate commands.

The commander of Army Group "H" and his operations officer believed Montgomery would cross the Rhine between Emmerich and the Ruhr River. This would have united British and American forces and ensured American (9th Army) participation. The operations officer believed the main effort would be at Rees but was, like Kesselring, unsure of Allied objectives.

General Luettwitz, commander of Army Group "H's" reserve corps, believed the Allied attack would come between Emmerich and Wesel. Army Group "H" concluded the main effort would be at Emmerich.[25] This inaccurate estimate was the result of different terrain evaluations and a misunderstanding of Allied options.

General Schlemm and His Subordinates

General Schlemm was in the best position to judge Allied intentions and translate his beliefs into a coherent estimate. Schlemm was the ground commander with insight into Montgomery's operations and because he was physically present he had a better appreciation for the terrain. His opinion that the main effort would be against Wesel, while Army Group "H" thought it would be

Emmerich, demonstrated his grasp of how the immediate situation supported Allied operational and strategic plans.

Schlemm also made good use of tactical HUMINT. The LXIII Corps, positioned south of Orsay, saw little crossing activity from the XIII U.S. Corps. This gave the clear impression that crossing locations would be further north, somewhere between Emmerich and Dinslaken.

A captured document provided insight into his assessment of the airborne operation north of Wesel. Previously, Allied forces conducted airborne operations against strategic objectives far in the German rear. Unlike earlier employments, Schlemm knew Montgomery would use airborne troops on tactical objectives near Wesel.[26]

Schlemm's conviction was the result of a captured Allied after-action report that criticized Operation MARKET-GARDEN for dropping paratroopers too far from ground units. Schlemm correctly interpreted this to mean the Allies would use airborne troops close to the Rhine.

This method would effect an immediate link-up between advancing ground units and airborne soldiers who would hold key terrain to aid the rapid assault. Unlike his higher command, Schlemm had an excellent appreciation of Allied intentions.

German corps and division commanders also had opinions on when and where the Allies would cross the Rhine. The 24 March attack surprised General Meindl, commander of II FS Corps. He expected the British at-

tack at Rees the following day. He held a good appreciation of the attacks' origins, but not its operational or strategic objectives—to envelop Wesel and the Ruhr.

General Langhauser of the 6th FS Division (subordinate to II FS Corps) knew a large-scale offensive was imminent, with the main attack toward Emmerich or Wesel. This agreed, at least in part, with Schlemm's evaluation and indicated that Langhauser may have had a better appreciation of Allied objectives than his immediate commander, General Meindl. As Langhauser concluded, the main attack was, as foreseen, toward Wesel.

General Fiebig commanded the German 84th ID that defended the area immediately north of Wesel. He expected an Allied crossing, but his estimate was too vague to be of much value. Fiebig believed the Allies would cross "...north or south of the Lippe [River]."[27] Since the Lippe River separated 9th U.S. and 2d British Armies, he merely stated the obvious.

1st FS Army Estimates

On 24 March, a captured German officer, probably from the 180th ID, supplied an overlay and insight into how the Germans viewed 9th U.S. Army deployments and intentions. According to the overlay, the XVI U.S. Corps had five divisions: the 35th, 84th, 95th, and 75th Infantry and the 8th Armored Divisions. The XIII Corps had the 79th, 102d, and 29th Infantry and 5th Armored Divisions.[28]

This estimate did not match the order of battle from the OKW and misidentified all but four U.S. divisions, losing the 30th ID completely. The OKW had located the 30th ID with the XVI Corps; however, this critical information did not filter down to subordinate commands. Yet the estimate did show that the Germans believed most U.S. Forces were with the XVI Corps and that they would cross the Rhine just south of Wesel.

Another captured German intelligence estimate, this one from LXXXVI Corps, accurately showed 9th Army's main effort toward Dorsten to help reduce Wesel. However, the estimate incorrectly stated that Allied airborne operations would occur south of Wesel.[29]

Despite differences between estimates within Schlemm's command, one common thread surfaced: the Germans knew 21st Army Group's main effort was the 2d British Army. They also knew 9th U.S. Army's objectives.

Without air reconnaissance, the Germans could not have located the crossing divisions' training along the Maas River, 25 kilometers to the west. Instead, the Germans monitored the buildup of engineer equipment at Millingen (three kilometers northwest of Rheinberg), an obvious staging site for river assault operations. Schlemm's conclusions resulted in the appropriate placement of the defending units.

Since Schlemm knew the main crossing would come between Wesel and Emmerich, he put II FS Corps, the strongest in Army Group "H," against the 2d British Army. He also knew XVI Corps would be the American's main effort and placed most of his remaining artillery across from Rheinberg and Millingen. Even with this prudent placement of units on the battlefield, Schlemm (the most able German general along the northern Rhine) could not halt Montgomery's advance.[30]

Conclusion

German intelligence fell far short of success and significantly hindered German efforts to halt Montgomery's assault. The major intelligence failure began not with 1st FS Army, but with Army Group "H" and General Kesselring. The OKH and OKW had to defer to Hitler's judgment on the Soviets. Kesselring and Army Group "H" were not so constrained.

German technical intelligence provided few indications of Allied operational intentions. Kesselring thought that 1st and 3d U.S. Armies were the Allies' main effort. Air reconnaissance and tactical SIGINT failed to provide critical indicators.

Available HUMINT sources provided only tactical intelligence on the 21st Army Group and the airborne operation. Schlemm must also carry part of the blame. He never told General Straub that the Allies would target his division with an airborne operation.

German intelligence during the Rhine River crossing failed at the operational level of war. The Germans failed to collect information on Allied reserves and effectively disseminate available intelligence to those who needed it most.

Inadequate intelligence led Kesselring to make the biggest blunder. Without understanding the consequences, he dispatched German reserves south and abandoned Schlemm's Army to snap under the weight of the 21st Army Group.

Endnotes

1. See *General der Luftwaffe Schlemm* (SIR) (This denotes Canadian Special Interrogation Reports), 2-4, RG 24, Vol. 20.437, File 981.023(D6), Ottawa, Ontario, Canada, National Archives of Canada; CG 30th ID, "G-2 Periodic Report," 20 March 1945, 1, Record Group 407/Entry 427/Box 8740/330-2.1, Suitland, MD, National Archives.

2. See MI Division, **German Operational Intelligence** (Washington, D.C.: MI Division, War Department, April 1946), 8, 22, 122; Albert Praun, "Signal Services in World War II," MS P-041K, 34-35, Washington, D.C., National Archives, Foreign Military Studies Series; Gerhard Matzky, Lothar Metz, Kurt von Tippelskirch, "Army High Command Organization and Working Methods of the Intelligence Division," MS P-041i, 70, 71; P.E. Schramm, "The Wehrmacht in the Last Days of the War (Jan-May 1945)," Pt. 1, Chap. 1-4, MS C-020, 228.

3. See Matzky, et.al, MS P-0411, 43-47, "German Operational Intelligence," 11-12,105, 111-113,119.

4. General Fieldmarshall Albert Kesselring, **Kesselring: A Soldier's Record** (New York: William Morrow and Company, 1954), 292. *Fallschirm* were *Luftwaffe* (Air Force) ground units. *Panzer Grenadier* units were motorized infantry.

5. See General Alfred Schlemm, "First FS Army, 20 Nov 44 to 21 Mar 45," MS B-084, 11-13; C.P. Stacey, **The Victory Campaign Volume III: Official History of the Canadian Army in the Second World War** (Ottawa: The Queen's Printer and Controller of Stationary, 1960), 510.

(Continued on page 52)

Company Patrolmaster

by Major Stephen P. Perkins

The importance of reconnaissance cannot be overemphasized. There is typically a battle which precedes the battle—a confrontation of opposing reconnaissance units—and the winner of that preliminary battle is most often the victor in the main event.

—Rand Note on Tactical Reconnaissance, 1987

Intelligence is rapidly becoming the priority requirement on the battlefield. Of course, the need for combat power—firepower, maneuver, protection, and leadership—is important; but to apply combat power at the decisive point, we must locate the enemy. Rotation after rotation of soldiers and leaders learn this lesson at combat training centers around the world, specifically the National Training Center. Unfortunately, some have to learn it in combat when lives and mission success are at stake. How can intelligence professionals help these soldiers and leaders "get it right?"

The answer is to integrate trained intelligence personnel into the operations loop—the commander, operations officer, and supporting staff. Recent initiatives by the U.S. Army Intelligence Center and continued efforts by intelligence commanders and operations officers have helped improve intelligence training. So what is missing? I believe we lack an intelligence team member at the company level. I will refer to this team member as the "patrolmaster."

This article outlines the benefits of the patrolmaster concept, the responsibilities of a patrolmaster, and how to implement this concept.

Benefits

Wallace D. Moore, Office of the Deputy Chief of Staff for Intelligence, wrote a paper on intelligence lessons learned. In it, he suggests that the only way to win at the National Training Center is to conduct a thorough reconnaissance. Moore concludes, "...the friendly forces win those battles in which their R&S [reconnaissance and surveillance] is successful." The patrolmaster concept would help the reconnaissance effort and combat effectiveness of small units (and the Army as a whole) in four ways.

1. **Intelligence and information.** A designated patrolmaster at the company level can pass intelligence and information from battalion to company, company to battalion, and between companies. This would expedite the passage of combat information and intelligence through the system. To successfully execute the Intelligence Battlefield Operating System (BOS), this person must thoroughly understand—

- ☐ The intelligence architecture.
- ☐ The commander's priority intelligence requirements.
- ☐ Enemy indicators.
- ☐ Intelligence preparation of the battlefield (IPB).

2. **Company Training.** A designated patrolmaster at the company level can ensure company training programs include adequate intelligence training. Company intelligence training is more than just a quarterly class on the SALUTE (size, activity, location, unit, time, equipment) report format. It must address issues to include observation post (OP) duties, enemy tactics, and vehicle and weapon system recognition. In addition to working with the battalion S2, the patrolmaster can work closely with the battalion scout platoon leader to learn how the scout platoon operates. This will facilitate coordination between the company and the battalion's dedicated reconnaissance assets. This relationship also affords the battalion some redundancy in the scouting effort.

3. **R&S and counterreconnaissance planning.** A designated patrolmaster at the company level can help the reconnaissance and counterreconnaissance effort. A thorough R&S plan helps the commander identify enemy location, strength, and possible courses of action. Since the patrolmaster is part of the intelligence and operations plans, that soldier can make sure the staff integrates the two plans and dedicates adequate combat resources to counter threat reconnaissance assets and the main force.

4. **Leader development.** A patrolmaster skilled in threat tactics, techniques, and procedures (TTPs) has some of the necessary qualities of a combat commander. In the Infantry Officers Advanced Course, future company commanders receive only minimum instruction in intelligence and threat operations. Using the company executive officer as the patrolmaster allows tomorrow's company commanders to better understand the Intelligence BOS and how the threat fights.

Responsibilities

Units task infantry company commanders with a myriad of actions and responsibilities including supply, maintenance, training, and personnel administration. They receive assistance from a staff of commodity chiefs, including the—

- ☐ Communications NCO.
- ☐ Supply NCO.
- ☐ Maintenance NCO.
- ☐ Nuclear, biological, and chemical (NBC) NCO.
- ☐ Master gunners.
- ☐ Executive officer.
- ☐ First sergeant.

As the company commander analyzes the requirements and time available, he quickly determines what help he will need:

1. The first sergeant can assist with tactics, rehearsals, and inspections.

2. The commodity chiefs can assist with specific support activities and recommendations.

3. The executive officer as patrolmaster can work with the battalion S2 and adjacent companies to understand the threat (their capabilities and limitations) and the terrain and weather.

For continuous operations, the company first sergeant can help with the patrolmaster's duties. The first sergeant (or a platoon sergeant trained at the Battle Staff Course) knows the threat and threat doctrine and could help set priorities during continuous operations.

The patrolmaster can perform IPB or a more thorough version of METT-T (mission, enemy, troops, terrain and weather, and time available) analysis. He can check his analysis with the battalion S2 and give this information to the company commander. Depending on the situation, the patrolmaster can recommend times and compositions of patrols, locations of OPs, indicators of enemy intentions, and possible enemy actions upon contact. The list of patrolmaster activities is limited only by the imagination of the commander and his patrolmaster.

Implementation

Since the patrolmaster concept is so important and the designation of the patrolmaster is so easy, why is implementation so difficult? The answer is that someone must train and utilize the patrolmaster. Simply designating one more additional duty for the company executive officer is not good enough.

Since infantry officers receive only minimal instruction on threat doctrine, attendance at the Ranger Course is helpful. (However, even at the Ranger Course the emphasis is not on the threat and how he fights, what intelligence means to the commander, and how it affects the operation). Attendance at the MI Officer Transition Course or a division or corps run intelligence course allows the patrolmaster to acquire the "core" skills needed. These skills should include threat organization, equipment, and tactics.

Battalion and brigade training teaches the patrolmaster unit specific skills. Here the focus is on—

- ☐ Contingency regions and countries (where the unit is oriented).
- ☐ How the battalion and brigade Intelligence BOS operates.
- ☐ Available intelligence and electronic warfare assets and their capabilities and limitations.

Once trained, the patrolmaster can integrate the necessary intelligence training into the operational training the company commander usually focuses on. In addition to the battalion S2, the commodity chiefs assist the patrolmaster. Someone must train them on intelligence. The commodity chiefs' tactical expertise allows them to learn quickly. For example, NBC NCOs may not understand the way the threat uses chemicals or smoke, but they understand their properties and know how U.S. Forces use them. Often both sides use the same TTPs.

Since the patrolmaster already has the ear of the company commander, they will discuss the threat often (e.g. how to employ forces to counter threat actions and what intelligence products they need from battalion and higher). In addition, the executive officer has credibility with the company commander. With the lack of time and the need for accurate, timely support, the company commander needs the patrolmaster.

Finally, patrolmasters must integrate themselves into unit field training. When integrated with the fire support officer, the patrolmaster can help with targeting and synchronization of the Maneuver and Intelligence BOS. In this age of free-play competition in training, the patrolmaster is important. When the patrolmaster coordinates with the battalion S2 and attached brigade level assets, that soldier becomes a valued player in the game.

Conclusion

Twenty-five hundred years ago, Sun Tzu advised us, "Know the enemy, know yourself; your victory will never be endangered. Know the ground, know the weather; your victory will then be total." Asked today about the patrolmaster concept, Sun Tzu would probably agree that any effort to focus attention on getting and interpreting information on an enemy force is warranted.

Actions at the Combat Training Centers, confirmed during Just Cause and Desert Storm, reflect the need for timely intelligence at the company and battalion levels. The patrolmaster—the missing link in the process—can help us win the "confrontation of opposing reconnaissance units" and become "the victor in the main event."

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Doctrinal Field Manuals in Progress

by James J. Adams

Doctrine continues to drive how units train and fight. Therefore, we continue to write doctrine that focuses military intelligence on support to force projection operations. In this article I will provide the status of several key manuals and ask for your input to make our doctrine the best it can be. All manuals incorporate the doctrinal changes published in **FM 100-5, Operations** and **FM 34-1, Intelligence and Electronic Warfare Operations**. The expected completion date follows a brief description of each manual.

Field Manuals

FM 34-3, Intelligence Analysis and Synthesis, revises **FM 34-3** published March 1990. The revised manual describes the methodology, processes, procedures, and techniques used in analysis and synthesis. It focuses on the fusion of all-source intelligence during the decision making process. It also provides a framework for understanding situation development, indications and warnings, target development, battle damage assessment, and how analysis and synthesis apply to Army operations. Expected completion: June 1995.

FM 34-8-2, Intelligence Officer's Handbook, provides a compendium of doctrine, tactics, techniques, and procedures (TTP) and lessons learned to help an S2 succeed. September 1995.

FM 34-10, Division Intelligence and Electronic Warfare Operations, revises **FM 34-10** published November 1986. It provides doctrine and TTP for division intelligence and electronic warfare (IEW) operations and the employment of heavy, light, and air assault division IEW assets. December 1995.

FM 34-25, Corps Intelligence and Electronic Warfare, revises **FM 34-25** published in 1986. It provides doctrine and TTP for corps IEW operations and the employment of the MI Brigade. December 1995.

FM 34-25-1, Joint Surveillance Target Attack Radar System, provides doctrine and TTP to support the use of this system. December 1994.

FM 34-25-2, Unmanned Aerial Vehicle, provides the doctrine and TTP governing the employment of the UAV in support of U.S. Army forces and other services. December 1994.

FM 34-25-3, All-Source Analysis System and the Analysis and Control Element, provides doctrine and TTP for the deployment, employment, and training of the ASAS and the ACE. June 1995.

FM 34-25-7, Special Electronic Mission Aircraft Survivability, provides the doctrine and TTP for Special Electronic Mission Aircraft platforms performing survivability maneuvers. December 1994.

FM 34-55, Imagery Intelligence, updates and supersedes **TC 34-55** published October 1988. It establishes the doctrinal foundation for Army imagery intelligence operations and describes the channels, procedures, and considerations for requesting imagery support. June 1995.

FM 34-40, Electronic Warfare Operations, updates and expands doctrine in **FM 34-40** published 1987. It revises the doctrine and TTP required to prepare for, plan, train, and execute offensive tactical electronic warfare operations. December 1995.

FM 34-60, Counterintelligence, updates **FM 34-60** published 1990. It provides doctrine and TTP, at all echelons, for countering the foreign multidiscipline intelligence collection threat. September 1995.

FM 34-81, Weather Support For Army Tactical Operations, updates **FM 34-81** published 1989. It provides weather support doctrine and TTP during war and operations other than war. This is a multiservice manual. September 1995.

How to Order Manuals

Military organizations order field manuals through STARPUBS. Use DA Form 12-11E, block number 1117, to order your copies from the U.S. Army Publications Distribution Center, 2800 Eastern Blvd., Baltimore, MD 21220-2896.

Civilian agencies order field manuals from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001.

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Point of contact is Jim Adams, Commercial 602-533-2676/3266 or DSN 821-2676/3266.

Mr. Adams is Chief, Doctrinal Literature Branch, Directorate of Operations, Training, and Doctrine.

Predator: MI's First Advanced Concept Technology Demonstration

by Captain R. Cash Snively

The unmanned vehicle today is a technology akin to the importance of radar and computers in 1935.

—Edward Teller, 1981

During congressional testimony on 8 March 1994, Mr. Larry Lynn, Deputy Undersecretary of Defense for Advanced Technology, made the following statement regarding the current DOD acquisition process. "The approach evolved during the almost half century of the Cold War is today excessively expensive and slow for the dynamic situations we face now. My function is to marry the maturing technologies emerging from the science and technology programs with critical military needs and to develop the processes which will respond more rapidly to these military needs at substantially reduced cost."

Acquisition Reform

Mr. Lynn was describing acquisition reform's newest tool: the Advanced Concept Technology Demonstration (ACTD). What exactly is an ACTD? ACTD programs have arrived, and MI is involved in a **big way**, starting with the Predator ACTD.

The Predator ACTD is officially known as the Medium Altitude Endurance Unmanned Aerial Vehicle (MAE-UAV) program. It is an integration effort designed to assemble and demonstrate a significant, new military surveillance capability. The ACTD is based on advanced technologies and is designed to clearly establish the operational utility and system integrity of Predator. It is MI's first ACTD program, and is one of six original ACTDs under this new acquisition strategy.

An Intelligence Shortfall

The Predator program is primarily the result of operational requirements identified during Desert Storm. Commanders needed a platform that could provide long dwell, near-real-time reconnaissance and surveillance of the battlefield.

The Defense Airborne Reconnaissance Office (DARO) completed an "Integrated Airborne Reconnaissance Strategy" study early in 1994. The study noted that we employed over 85% of our reconnaissance assets during Desert Storm. The DARO study also stated: "It is obvious that future requirements will exceed our current capacity to collect, process, and exploit information."

The ACTD management plan for the MAE-UAV describes the intelligence shortfall driving the Predator program as follows: "Current, national, theater and tactical intelligence collection assets are insufficient to provide for urgently needed, critical, worldwide, releasable near-real-time intelligence information on fixed and mobile targets for the in-theater Commander-in-Chief, Joint Force Commander, and the National Command Authority. No system exists which can provide continuous all-weather coverage of worldwide targets. National sensors cannot provide long dwell coverage of small mobile or fixed targets. Existing theater airborne assets are limited by endurance of less than 8 to 12 hours, limited numbers, and possible loss of air crew over hostile areas. Other than the MAE-UAV, there is no endurance UAV that will be available to military commanders in the near future."

The MAE-UAV provides a cued reconnaissance capability designed to fill this collection shortfall. It provides long dwell coverage for a variety of surveillance missions. Multiple sensor packages include electro-optic and infrared (E-O/IR) sensors, as well as a synthetic aperture radar (SAR) system.

An Ambitious Program

General Atomics-Aeronautical Systems, Inc. (GA-ASI) is the prime contractor for the MAE-UAV program. GA-ASI works closely with other contractors to integrate the complex components of the Predator system. Some other contractors providing key technology include—

- ☐ UNISYS for the Ku-Band datalink.
- ☐ Westinghouse for the SAR payload.
- ☐ VERSATRON for the E-O/IR payload.
- ☐ Boeing for data exploitation and mission planning systems.

The DARO, as responsible agent for developing and managing the airborne reconnaissance architecture, provides funding and oversight at the Office of the Secretary of Defense level. The UAV Joint Program Office is the executing agent for the ACTD, providing daily program management.

The MAE-UAV detachment is staffed with a mixture of personnel from all services. Soldiers provide the bulk of assigned personnel, with most coming from the Military Intelligence Battalion (Low Intensity) in Orlando, FL. The detachment has integrated Air Force, Navy, and Marine personnel providing a true joint environment.

The MAE-UAV detachment is designed as a unique system to support the Joint Task Force commander. The Joint Staff provides tasking for operational deployments in support of joint operations.

Because costs continue as a major driver in equipment acquisition programs, the Predator ACTD is designed to maximize each dollar spent. The entire 30-

month ACTD budget is just over $92 million, and includes delivery, testing, and training on—

- ☐ Ten air vehicles.
- ☐ Three Ground Control Stations (GCSs).
- ☐ Three TROJAN SPIRIT II systems.
- ☐ Various payloads and supporting equipment.

The Predator ACTD is an ambitious program, with tight timelines, integration requirements, and unforeseen challenges. The contract called for delivery of the first air vehicle and GCS just six months from the date of contract award. The actual contracting process, usually cumbersome and lengthy, was completed in only 40 days!

While details were being worked out at the contracting table, GA-ASI was completing design work on the Predator air vehicle and its supporting systems. When Predator was first proposed, nothing existed except the plans, drawings, and concepts for how it would operate. Although the design was based on an earlier GA-ASI design (GNAT-750), Predator was a huge leap forward in many areas.

The effort required to take the Predator design from blueprint to flyable air vehicle was phenomenal. The fact that it was accomplished in **just six months** makes it even more incredible.

On 31 August 1994, Predator was officially presented during a ceremony at El Mirage, CA. At the ceremony Major General Kenneth Israel (USAF), Assistant Deputy Undersecretary of Defense for Airborne Reconnaissance, said: "Predator is the first and biggest success among the Defense Department's Advanced Concept Technology Demonstration programs. This is the kind of capability that this nation sorely needs at this point in time."

A Different Approach

The Predator does many things other UAV do, but Predator does them better, longer, higher, and for less money. Operational altitude for the air vehicle is situation dependent, but can reach up to 25,000 feet above sea level. Normal missions place the air vehicle from 5,000 to 15,000 feet above ground level. This places Predator out of small arms range. At these altitudes, it is almost impossible to detect or track the air vehicle due to its low heat and sound emissions. Although low observability and a small radar cross-section were not requirements for the MAE-UAV, they both are resident in Predator. Predator meets both requirements due to the composite materials used and the operational loiter speeds.

The GCS holds equipment, imagery analysts, payload operators, air vehicle operators, and a variety of mission essential gear. Predator air vehicle operators are currently all rated military aviators or civilian pilots. They sit at a console similar to a commercial aircraft cockpit. The operator sees through a nose-mounted camera, allowing a view of the runway for take-off and landing operations. A sophisticated mission tracking system also shows the air vehicle location overlayed on a digitized map display. Payload operators sit at an identical console, with the joystick controlling the E-O/IR cameras. Data exploitation takes place at a separate console, where two imagery analysts manipulate and annotate imagery.

Predator will be the first UAV with a true over-the-horizon (OTH) capability. A SATCOM data link allows the air vehicle to operate at ranges of several hundred miles from the GCS, effectively breaking the line-of-sight (LOS) tether other UAVs operate with. The only factors that limit Predator's OTH range are fuel considerations and integrity of the satellite links.

Missions

Predator is designed for detailed observation of specific areas rather than broad area search operations. The E-O/IR systems provide high resolution imagery ideally suited for—

- ☐ Battle damage assessment (BDA).
- ☐ Indications and warning (I&W).
- ☐ Cueing.
- ☐ Route reconnaissance.
- ☐ Support to rapid restrike missions.

Flexibility within Predator's mission planning system allows for pre-programmed routes. This mission profile and the immediate responsiveness of the system to operator commands via the SATCOM data link make Predator ideally suited for route and point target reconnaissance.

To maximize the UAV's ability to locate targets, operators will normally cue Predator from other systems such as Joint Surveillance Target Attack Radar System (Joint STARS), U-2R, or national systems.

The entire MAE-UAV system is designed to deploy via C-130 or C-141 aircraft. Depending on mission requirements, A Joint Task Force can move the system to a new location and prepare it for operations within six hours of arrival. Operators transport the air vehicles, with wings and tail removed, inside 30-foot long "bird boxes." These unique fiberglass storage containers provide a climate-controlled environment and protect the air vehicle during shipment.

Endurance and High Performance

The ability to remain over a target area for long durations has always been a concern for reconnaissance platforms. Predator provides new meaning to the phrase "long dwell time." The launch and recovery site could be up to 500 miles from the target area. Predator could transit the 500 miles, stay in the target area for 24 hours, and then return to the recovery site. In fact, Predator should stay airborne for up to 60 hours on a single fuel load.

The ROTAX 912 engine that powers Predator is the same powerplant used in many ultra-

light aircraft. GA-ASI adds their own fuel injection system to optimize performance and increase fuel efficiency. A variable pitch propeller made from composite materials is undergoing final testing. It will save weight and allow improved performance from the ROTAX engine at all altitudes.

The entire airframe structure, less fuel, electronics, and payload, weighs under 350 pounds! Achieving high performance from such a lightweight structure requires three things: careful engineering, advanced composite materials, and specialized construction techniques. Manufacturing and assembly techniques are similar to those used in making high performance sail planes.

Predator's long, tapered wing design provides performance similar to a high performance sail plane. Retractable landing gear, attention to drag reduction, the extensive use of composite and lightweight materials, and an unusual shape maintain the aircraft's efficiency (especially compared to other UAVs). Even the process of applying the grey paint to the Predator saves weight.

Extremely strong, lightweight materials such as carbon fiber, kevlar, stranded quartz, structural foam, and honeycomb allow the UAV to achieve superior strength to weight ratios. The structure also includes some less exotic materials, although the wood used for specific applications is of aircraft grade. The entire structure is bonded together rather than riveted or screwed. Some components are cured using heat and pressure. This greatly increases the strength and reliability of critical components such as landing gear spars, bulkheads, and wing spars.

GA-ASI uses a Computer Aided Design (CAD) system to design and manufacture many of the pieces that make up Predator. Computer controlled machine tools allow the construction of complex pieces to exacting standards in a fraction of the time normally required. The CAD system also allows great flexibility. GA-ASI can modify designs in the CAD system and then send these designs directly to the computer controlled machine tool.

Unclassified Imagery

The MAE-UAV program is designed to provide unclassified, releasable, and high-quality imagery (E-O/IR and SAR). The use of commercial, off-the-shelf sensor technology allows the entire system and its capabilities to remain unclassified. This includes the SAR capability to provide one-foot resolution imagery. The off-the-shelf approach to sensors simplifies handling imagery products, reduces costs, and eliminates concerns if sensors are lost during a mission.

Predator has the ability to provide high resolution imagery, transferred in near-real-time, to users almost anywhere in the world. It does this by passing information through the Joint Defense Intelligence Support System (JDISS) terminal mounted in the TROJAN SPIRIT II, into existing C^4I systems.

Satellite Control

Satellite control of the air vehicle, sensors, imagery, and data flow is tied to a two tiered SATCOM program. The initial fielding will use a narrow band UHF SATCOM data link. The UHF data link is an interim fix while a wideband Ku-band data link is perfected. The UHF data link is not capable of supporting SAR imagery, but it will be retained to provide a backup link for the wideband Ku-band system and to increase mission flexibility.

The wideband Ku-band SATCOM link is a commercial system which supports data and video transmission at a rate of 1.544 Mbps (the U.S. standard T-1 data rate). Due to the large volume of data associated with video transmission, the Ku-band SATCOM link supports several selectable compression rates to support near-real-time imagery transmission. It supports black and white and color imagery transmissions while maintaining a National Imagery Interpretation Rating Scale (NIIRS) quality of 6.

Schedule

The 30-month ACTD schedule is progressing through several specific steps. During the ACTD, Predator is scheduled to take part in several tests, two major deployments, and constant integration of technologies such as the SAR and wideband SATCOM data link. The first operational deployment of the system is scheduled for early this year.

At the end of the ACTD, GA-ASI will have delivered—

- ☐ Ten air vehicles.
- ☐ Three GCSs.
- ☐ E-O/IR and SAR payloads.
- ☐ Supporting equipment.

Other residual capabilities include three TROJAN SPIRIT IIs and a joint cadre of trained personnel.

Since Predator is not a normal acquisition program, there are several options for the system upon completion of the 30-month ACTD. It could grow into a full acquisition program, continue as a one-of-a-kind unit, or join other systems that are "put away" for later use. At this point it seems clear that Predator will add a much needed capability to the dwindling supply of surveillance platforms. This fact alone should ensure Predator remains busy long after the ACTD is completed.

It is not often we have a chance to do things smarter, faster, and still save money. The ACTD process and Predator show us we can do all of these things. Intelligence professionals continue to push the "envelope" of unmanned surveillance and the acquisition process. Predator is an exciting project with great promise for the future of Military Intelligence.

CPT Snively is currently serving with the Concepts Division, Directorate of Combat Developments, U.S. Army Intelligence Center and Fort Huachuca. He served as Detachment Commander, MAE-UAV during its initial six-month start-up.

MI CORPS HALL OF FAME

From time to time, OCMI offers insight into the people who have contributed, past and present, to the history of MI. The following biography depicts significant contributions to the signals intelligence community by Mr. Herbert S. Hovey, Jr., a pioneer of electronic warfare systems. As a result of his distinguished 33-year career, he was inducted into the MI Corps Hall of Fame in July 1991.

Herbert S. Hovey, Jr.

Mr. Herbert S. Hovey, Jr., was commissioned a second lieutenant in the Army in 1957. He served on active duty for two years with the Signal Corps and U.S. Army Security Agency (USASA). Upon completion of military service in 1959, he joined USASA as a civilian project engineer. During the next 10 years, Mr. Hovey personally directed the development and fielding of initial and follow-on airborne systems such as the LAFFING EAGLE, QUICKFIX, and GUARDRAIL.

This body of work distinguished Mr. Hovey as a leader in, if not the father of, Army airborne radio direction finding. In Southeast Asia, he assisted in the development and fielding of ground-based systems such as AN/TRD-23, AN/TRD-15, and specially configured versions of AN/PRD-5 and AN/PRD-6.

From 1970 to 1977, Mr. Hovey served as the Deputy Chief of Staff for Research and Development, Headquarters, USASA. He directed the refinement of the systems and equipment he had developed and fielded earlier. Mr. Hovey also guided the research, development, and acquisition effort of the Army's intelligence and electronic warfare requirements. His efforts resulted in the fielding of systems such as TRAILBLAZER and TACJAM.

In 1977, Mr. Hovey became Director, U.S. Army Signals Warfare Laboratory. This newly formed organization became part of the U.S. Army Communications-Electronics Command Center for Signals Warfare. He served as the director until his retirement in 1990. Mr. Hovey is acknowledged worldwide as a pioneer in the development of signals intelligence and electronic warfare systems.

MI Corps Hall of Fame Nominations

The OCMI provides information on nomination procedures. If you wish to nominate someone, contact OCMI, U.S. Army Intelligence Center and Fort Huachuca, ATTN: ATZS-MI (CPT Kirby Daras), Fort Huachuca, AZ 85613-6000; or call DSN 821-1180 or 602-533-1180.

DRUGS

(Continued from page 22)

more effectively. Through the CDIPB process, intelligence analysts provide important MI support, an important force multiplier, in the nation's counterdrug efforts. Better yet, the military can train law enforcement personnel on CDIPB. The lessons developed from counterdrug support may also prove useful in other OOTW activities. By adapting IPB to the needs of the field commander, MI can help meet the challenges of OOTW.

Endnotes

1. Robert L. Pfaltzgraff, Jr., and Richard H. Shultz, Jr., eds., "Army Doctrine and the New Strategic Environment" in **Ethnic Conflict and Regional Instability: Implications for U.S. Policy and Army Roles and Missions**, Strategic Studies Institute, U.S. Army War College, 1994, 275.

2. My own observations during the riots was that the MI cycle stopped because of uncertainty over how to adapt it to the situation. At least one brigade commander said MI was "irrelevant" to the situation. Most deployed brigades and battalions cannibalized their S2 sections to provide liaison officers, journal clerks, and drivers. As the examples provided in LTC Wenger and 1LT Young's article show, most MI section products merely involved a repetition of local LEA information. Also, there was a distinct difference between the military and law enforcement's concepts of intelligence. Almost all law enforcement "intelligence" was merely information and involved little or no analysis.

3. **FM 100-20, Military Operations in Low Intensity Conflict; FM 7-98, Operations in a Low Intensity Conflict**; and **FM 100-19, Domestic Support Operations**. A draft of this article was used to develop the CDIPB annex in **Joint Pub 3-07.4, Joint Counterdrug Operations** (March 93 Final Draft).

4. In "A Power Projection Army in Operations Other Than War," **Parameters** 23 (Winter 93-94) 4-26, MG S.L. Arnold and MAJ David T. Stahl point out the importance and complexities of interagency coordination. They suggest that during OOTW you must consider external coordination as an additional battlefield operating system.

5. While the presence of cover may be less of a consideration in counterdrug operations than it is in combat operations, the analyst should consider the presence of cover.

6. As Mr. Hawkins pointed out in his letter to the editor (Apr-Jun 94), the following apply: **Executive Order 11905, U.S. Foreign Intelligence Activities**; **EO 12333, U.S. Intelligence Activities**; **DOD Reg 5240.1-R, Procedures Governing the Activities of DOD Intelligence Components That Affect U.S. Persons**; and **AR 381-10, U.S. Army Intelligence Activities**. Also, see **FM 100-19, Domestic Support Operations**, 3-5.

MAJ Schnaubelt is on an Active Duty Special Work Tour as acting Chief, Research and Analysis Division, National Interagency Counterdrug Institute. During the L.A. riots, he was the liaison officer from the JTF Los Angeles to the LAPD's Operations West Bureau. He has a master's degree from San Diego State University.

Defense on the Rhine

(Continued from page 44)

6. See Meindl, "Commitment of the II Parachute Corps (Part IV)," MS B-614, 2-3; Obst iG Geyer, "Report on the course of the fighting in Army Group [H]," MS B-414, 1; B.H. Liddell Hart, **History of the Second World War** (New York: G.P. Putnam's Sons, 1970), 678.

7. Charles B. MacDonald, **The Last Offensive,** U.S. Army in World War II, The European Theater of Operations (Washington, D.C.: Office of the Chief of Military History, U.S. Army, 1973), 301; Field Marshal the Viscount Montgomery of El Alamein, **Normandy to the Baltic** (Boston: Houghton Mifflin Company, 1948), 315-316.

8. See *General der Luftwaffe Schlemm*, SIR, 14, RG 24, Vol. 20,437, File 981.023(D6), Ottawa, Ontario, Canada, National Archives; General Eugen Meindl, SIR, 12; Ernst Blauensteiner, "Employment of the II *Fallschirm Korps*," MS B-327, 1; Blumentritt, MS B-354, 8; Geyer, B-414, 4-5; CG 30th ID, "G-2 Periodic Report," 21 March 1945, 1, RG 407/Entry 427/Box 8740/330-2.1, Annex 1, Suitland, MD, National Archives; Stacey, 533.

9. See Schlemm, SIR, 14; CG XVI Corps, 21 March 1945, "G-2 Periodic Report," RG407/427/4964/216-2.1, 3; CG XVI Corps, 22 March 1945, "G-2 Periodic Report," RG407/427/4964/216-2.1, 2; CG 30th ID, "G-2 Spot Report," 23 March 1945, 1, RG407/427/8740/330-2.1; MacDonald, 304.

10. See Schlemm, SIR, 14; Generallieutenant Steinmueller, "Infantry Division Hamburg," MS B-314, 1-3; MacDonald, 301,305; Luettwitz, MS B-198, 4; Stacey, 533.

11. See Meindl, SIR, 12; Meindl, MS B-614, 2; Montgomery, 318; MacDonald, 301; Stacey, 533; Ernst Blauensteiner, MS B-327, 1.

12. See CG, 9th U.S. Army, 4 April 1945, "G-2 After-Action Report, 16-31 March 1945, Inclusive Enemy Situation, Operations, Dispositions, and Capabilities," 1, RG407/427/2905/109-2. CG, XVI Corps, 21 March 1945, "G-2 Periodic Report," 2, RG407/427/4964/216.2. CG 30th ID, 20 March 1945, "G-2 Periodic Report," Annex 1, RG407/427/8740/330-2.1; MacDonald, 301.

13. Generalmajor Rudolf Langhauser, "The fourth commitment of the 6 Fallsch Jg Div from about 11 March to April 1945," MS B-453, 1; see General Heinrich Freiherr von Luettwitz, SIR, 8; Blumentritt, MS B-354, 9. In 1941, German Panzer Divisions had almost 250 tanks each.

14. See Montgomery, 315; See MacDonald, 297-298; Theodore W. Parker and William J. Thompson, **Conquer: The Story of Ninth Army, 1944-1945** (Washington: Infantry Journal Press, 1947), 201-202.

15. See CG XVI Corps, 21 March 1945, "G-2 Periodic Report," 1; CG XVI Corps, 22 March 1945, "G-2 Periodic Report," 1; CG, XVI Corps, 23 March 1945, "G-2 Periodic Report," 1, RG407/427/4964/ 216-2.1.

16. See **History of the XVI Corps**, 36; MacDonald, 298. For a more complete account of VARSITY see Gerard M. Devlin, **Paratrooper!** (New York: St Martin's Press, 1979), 612-637.

17. See **The War in Western Europe**, 98; MacDonald, 299-300. The best and most popular work on MARKET-GARDEN is Cornelius Ryan's **A Bridge Too Far** (New York: Popular Library, 1977).

18. Kahn, **Hitler's Spies**, 421-428.

19. See Washington, D.C., National Archives, German Document Collection (Microfilm), Roll T78/Series 136/Frame 6065918; T78/136/6065915-16; MacDonald, Map VII.

20. See T78/136/6065914; T78/136/6065911; T78/136/6065912; MacDonald, Map VII; 9th Army, 051800 March 1945 Operational Situation Map; 9th Army, 061800 March 1945 Situation Map; 9th Army, 071800 March 1945 G3 Situation Map; RG407/427/2915.

21. See T78/136/6065898; 9th Army, G3 Situation Map, 191800 March; 9th Army, "Report of Enemy Actions From 16-31 March 1945," Some authors have wrongly attributed problems with German intelligence to 9th U.S. Army's deception plan. German intelligence misidentified and mislocated U.S. divisions long before the deception plan began. See Justin L.C. Eldridge, "The Blarney Stone and the Rhine," **Intelligence and National Security** 1, No. 3 (July 1992): 211-241.

22. See T78/136/6065897; T78/136/6065895; 9th Army, G3 Situation Map, 211800 and 241800 March.

23. See Schramm, MS C-020, 232; T78/136/6065893; T78/136/6065894 T78/136/6065909; 9th Army, G3 Situation Map, 251800 March 1945; MacDonald, 307-308; 30th ID, "G2 Periodic Report," 24 March 1945, RG407/427/8740/330-2.1; **History of the XVI Corps** (Washington, D.C.: Infantry Journal Press, February 1947), 45-48.

24. See Luettwitz, B-198, 1, 3-4; Blauensteiner, B-327, 2; Meindl, B-674, 9. Obst Geyer, Army Group "H" Operations Officer, made this comment in notes added to Luettwitz's account.

25. See Geyer, MS B-414, 9-10, 12; Luettwitz, MS B-198, 4. Luettwitz recalled increased Allied bombing activity beginning 19 March and increased artillery preparatory fires 21 March. Both indicated an imminent attack.

26. See Fiebig, MS B-843, 16-17; Geyer, MS B-414, 11. Allied targeting of German antiaircraft weapons made the use of airborne soldiers obvious.

27. See Fiebig, MS B-843, 14,16-18; MacDonald, 302.

28. CG XVI Corps, "G-2 Periodic Report," 24 March 1945, 4, RG407/4964/427/216-2.1.

29. CG 30th ID, "G-2 Periodic Report," 26 March 1945, Annex 2, 1, RG407/8740/427/330-2.1; CG XVI Corps "G-2 Periodic Report," 27 March 1945, Annex 1, RG407/4964/427/216-2.1.

30. See Schlemm, SIR, 1; Bauer, 2115.

MAJ Eldridge is currently Assistant S3, HHC, 204th MI Battalion, Augsburg, Germany. He has one master's degree from the University of Nebraska and another one from the Defense Intelligence College.

ASAS-W

(Continued from 37)

pile of removed enemy and friendly stickers.

The ASAS-W further helps the planning process by printing a hard copy of each H-hour. Thus, G3 Plans Officers can examine each hour or critical wargame event and use the snapshot in the COA decision brief. The G2 Plans Officer can use the hard copies to help create a time line of enemy activities.

The operator can also recall each overlay in the data base and create a digitized slide from the screen. Once the operator creates the slides, he can animate them in chronological order. The result is a moving picture of the battle as icons move and engagements occur. This provides a clear, concise picture of how the G2 and G3 Plans Officers executed the battle.

Operators can also send the digitized slides to subordinate units electronically. This allows planners at all levels to call them up and discuss planning assumptions.

The ASAS-W is a valuable tool in the G2 Plans Section. It increases efficiency and effectiveness and, most important, develops a common picture of the battlefield for every level.

LT Saboe is Assistant Plans Officer, 2AD. She is a 1993 graduate of the U.S. Military Academy.

(Continued from page 25)

ing space into military operations, training, and exercises. Although the Air Force typically controls space assets, all services use them."[11]

While the SWC is the military service conduit to space warfighting support, the Operational Support Office (OSO) is the national representative. The OSO orchestrates and delivers tailored support to DOD, national, and other users of national-system products and services in concert with appropriate agencies and officers.

The OSO provides a single point of entry into the national systems community for comprehensive national system support to joint or single service exercises. One of OSO's charters is to promote advanced cooperation with the Joint Chiefs of Staff, Defense Intelligence Agency, National Security Agency, Central Intelligence Agency, and each service's TENCAP office.

With dynamic action and planning for the next war or deployment, MI personnel will discover "that space has beaten them there. GPS will tell them their exact position within meters. DSP will warn of ballistic missile launches. Imaging satellites will give them highly accurate terrain maps and notice of troop movements and secure communications satellites will bounce their conversations to home headquarters and back. About the only thing space systems will not do is fight the war, but they might be able to do that someday, too, according to General Horner."[12]

In the next conflict, hopefully, we will use space-based assets to solve some of the problems the intelligence community experienced in Desert Storm. We need to solve the problems that General Schwarzkopf identified when he said after the war: "Warfighters need immediate responsive intelligence capabilities, they did not have them for Operation Desert Storm."[13] Space support organizations like OSO and SWC, working with the services, will make these solutions possible.

The single most important way to fully exploit and understand space warfighting support is to put the tools in the hands of users and operators. The key is to give the lowest ranking personnel training and experience. Two roadblocks to this solution are security and prioritization:

- ☐ Most daily users do not have the security clearance level required for space-based systems, nor do they always need this level of clearance. However, they always need to know how and when to apply these capabilities to operations.
- ☐ When MI professionals solidify space doctrine and direction, training must go below the War College level to the units and intelligence schools and centers. Adequate training will require several days of space warfighting application training to teach space application to junior intelligence professionals. Moreover, OSO and SWC should form mobile training teams to go to intelligence and tactical warfighting units throughout the services.

Meanwhile, all MI professionals must begin to understand space warfighting support and how they can apply this information to operational planning. There is a large volume of unclassified literature available. All leaders of intelligence functions at the tactical unit level should train their subordinates on space application.

Conclusion

Space warfare arrived with Desert Storm. Space assets provide invaluable intelligence information to MI professionals. However, those professionals currently lack the necessary tools and understanding to effectively support the warfighter with space intelligence. To do this, the MI community needs to—

- ☐ Define space warfighting doctrine and visions.
- ☐ Implement a robust and dynamic intelligence-wide training program from the highest to lowest levels of MI.

Organizations like SWC and OSO are there to help once we state our requirements. Finally, in the classical sense, space is the ultimate high ground. It is interesting to examine our former opponent's military writings as applied to space warfare. Noted Soviet military authors G. Sibirykov and A. Khabarov said: "Whoever can seize control of space, that main area of future wars, will be able to change the correlation of forces so decisively that it will be tantamount to establishing world supremacy."

Endnotes

1. CPT Becky Colaw, USAF, **Airman Magazine**, "Coming of Age: Warfighters and Space," June 1993, 29.

2. CPT Robyn A. Chumley, USAF, **Airman Magazine**, "Exploiting Space," June 1993, 30.

3. BG Robert Stewart (USA Ret), Space Support to the Warfighter Conference Speech, 15 Dec 1994.

4. Colaw, **Airman Magazine**, "The New Frontier," June 1993, 23.

5. Steven Watkins, **Air Force Times**, "Relying More on Satellites: Space Command Sends Briefers to South Korea," 2 May 1994, 38.

6. MAJ Ronald L. Morse, USAF, **Space Operations Orientation Course Handbook**, 2nd ed., Tactical Exploitation of National Capabilities, 1 Jan 1991, 117-120.

7. William B. Scott, **Aviation Week and Space Technology**, "Space Systems to Benefit AMC Crew," 4 April 1994, 34.

8. Jeffrey M. Lenorovitz, **Aviation Week and Space Technology**, "TALON SHIELD Readied for DSP Operations," 4 April 1994, 31.

9. James W. Canan, **Air Force Magazine**, "Space Support for Shooting Wars," April 1993, 30.

10. Scott, **Aviation Week and Space Technology**, "Space Warfare Center Supports 'Warfighters,'" 28 March 1994, 64.

11. Ibid.

12. Neff Hudson, **Air Force Times**, "Space Warriors Eye Final Frontier," date unavailable, 14.

13. William Matthews, **Air Force Times**, "Schwarzkopf Details Military Weaknesses," 24 June 1991.

LTC Ross is Chief, National Systems and Requirements Branch, U.S. Strategic Command, Offutt Air Force Base, NE. He has a master's degree from State University of New York. He was published in the January-March 1991 issue of **MIPB**.

PROPONENT NOTES

Enlisted Notes

Merger of MOSs 98D and 98H into Career Management Field (CMF) 98. Last April, the Chief of Staff, Intelligence and Security Command, and the Deputy Commanding General, U.S. Army Intelligence Center and Fort Huachuca, formally agreed to merge MOS 98D with MOS 98H. Intelligence Center personnel continue to work toward this goal. The MI proponent forwarded a proposal to Headquarters, Training and Doctrine Command, requesting a total training time of 28 weeks 4 days for the new 98H10 course. If approved, the school will conduct training in two phases:

- ☐ Phase I combines the current 231-F30, Basic Morse, and the 98H10, Advanced Morse courses.
- ☐ Phase II trains all required 98D10 and specifically identifies 98K10 collection skills.

The new 98H10 course begins October 1996 according to current plans. At that time, the proponent will redesignate soldiers from MOS 98D to 98H. Subject matter experts from the Intelligence Center's Directorate of Operations, Training, and Doctrine will provide transitional training for soldiers already holding MOS 98D or 98H.

MOS 96H. The 96H MOS designation stays the same but everything else has changed. The new title is Imagery Ground Station Operator (IGSO). The duties and responsibilities now relate to the Joint Surveillance Target Attack Radar System (JSTARS) instead of the Mohawk. All soldiers currently holding 96H MOS must complete the new Advanced Individual Training (AIT) Course. The first class of the revised course began last September. The second class starts this January. Most of the soldiers attending these first two classes will also participate in the Joint STARS Multi-Service Operational Test and Evaluation.

Soldiers who currently hold MOS 96H should already have ASI Y2. Soldiers who have not been awarded ASI Y2 should contact their servicing military personnel office. The Y2 identifier indicates that the soldier needs to attend the revised AIT course. Upon completion of the revised course, ASI 1B will replace Y2. ASI 1B also shows that the soldier has completed the old Aerial Intelligence Course. Soldiers attending the revised course acquire a service-remaining requirement, in accordance with **AR 614-200**. The first IGSO Basic NCO Course starts in September 1995.

MOS 96U. MOS 96U, Unmanned Aerial Vehicle Operator, is the newest CMF 96 MOS. The proponent will conduct AIT in three phases over 34 weeks. Soldiers wishing to reclassify into this growing MOS should refer to **AR 611-201** for minimum MOS qualifications.

Update to MOS 97L, Translator/Interpreter. Since October 1993 (when the MI proponent established Reserve Component MOS 97L), the Intelligence Center has successfully completed three MOS 97L transition courses in Spanish, German, and Japanese. Reserve Component soldiers who attend the 97L transition courses have scores of R2-L2 or above on their Defense Language Proficiency Tests. The MI proponent plans to expand our transition course training to Fort Bragg and the 300th MI Brigade (Linguist), Utah National Guard. We anticipate having to use Defense Language Institute instructors when local instructors are not available. This year, we will use two instructors and one assistant instructor per transition course. (In 1994 we used only two instructors per course.)

Following is the schedule for 97L transition courses for FY 95:

- ☐ Fort Huachuca: 18 Jun-1 Jul, Spanish; 2-15 Jul, Korean; and 16-29 Jul, Russian.
- ☐ Fort Bragg: 16-29 Jul, Spanish.
- ☐ 300th MI Brigade (Draper, UT): 6-19 Aug, German.

The 97L AIT courses for FY 95 are all at Fort Huachuca:

- ☐ 2-27 Oct and 30 Oct-24 Nov, Spanish.
- ☐ 8 Jan-2 Feb 96, Japanese.
- ☐ 5 Feb-1 Mar 96, Russian.
- ☐ 4-29 Mar 96, Chinese Mandarin.
- ☐ 1-26 Apr and 29 Apr-24 May 96, Korean.
- ☐ 29 Jul-23 Aug 96, Persian Farsi.
- ☐ 26 Aug-20 Sep 96, Arabic.

Warrant Officer Notes

The MI CW5 population grew with the release of the warrant officer promotion list last September. The warrant officers selected for promotion to this prestigious grade will serve as advisors to the senior commander in planning and policy making at major commands—Department of the Army, Department of Defense, and joint staff positions. It is, therefore, imperative that commanders understand regulatory requirements for the assignment of CW5s.

AR 611-112 contains the guidelines for the assignment of CW5s. It—

- ☐ Provides guidance for the designation of duty positions for warrant officer incumbency and the management and

classification of warrant officers.

- ☐ Authorizes MOSs and special qualification identifiers (additional skill identifiers).
- ☐ Guides the use of these codes in the classification of warrant officer positions and personnel.

The Standards of Grade (SOG) tables, contained in **AR 611-112** and **DA Circular 611-94-1**, list warrant officer positions and specifications for each MOS or branch. The SOG tables dictate how commanders will assign warrant officers.

The proponent for **AR 611-112** is the Office of the Deputy Chief of Staff for Personnel. The Office of the Chief, Military Intelligence (OCMI) is the controlling agency for the SOG tables. The OCMI is responsible for changes and additions to the SOG. Due to the state of flux in Army structure, SOG tables are under constant revision.

Warrant officers and their commanders may want to change or upgrade a position to CW5. Major command resource management offices request staffing through OCMI. The OCMI will evaluate your request. If approved, OCMI will request a change to the SOG. After proponent approval, commands should submit a DA Form 2028 to change their Tables of Organization and Equipment (TOE) or Tables of Distribution and Allowances (TDA).

Because of downsizing, the Army may not approve new positions. Someone must pay the bill for each new position. Bill payers are positions that currently exist and that the Army can upgrade (CW4 to CW5), or commissioned officer positions that the Army can downgrade (LTC/MAJ to CW5). The Army authorizes the MI Branch to grade 3.5% of its total warrant officer positions as CW5 positions.

U.S. Total Army Personnel Command (PERSCOM) will pinpoint warrant officers in grade CW5 to specific duty positions coded CW5. The Director, Office of Personnel Management Directorate, PERSCOM, has given the Warrant Officer Division the authority to assign CW5s to the structure as described in the new Grade Tables and Positions listed in **AR 611-112** and **DA Circular 611-94-1**.

The release of Headquarters, DA, Washington D.C. (DAPE-MPO) message "P221145Z FEB 94, SUBJ PINPOINT ASSIGNMENTS OF CHIEF WARRANT OFFICER FIVE (CW5)" further clarifies this assignment policy. This message made PERSCOM responsible for the pinpoint assignment of CW5s in order to make the best use of the Army's trained and most experienced warrant officers. Requests for orders will contain specific assignment and duty position instructions for CW5.

If possible, CW5s will fill CW5 positions on TOEs and TDAs. This, of course, depends on the availability of CW5s in each MOS. In cases where no CW5 is available to fill an authorized position, the PERSCOM MI Warrant Officer Career Manager may fill the position with a senior warrant officer (CW4). The PERSCOM will not approve name requests for any warrant officer grades that conflict with the SOG tables.

MI commanders and CW5s must ensure that complete and accurate job descriptions exist for each CW5 position. This helps the MI Warrant Officer Career Manager at PERSCOM and the Warrant Officer Professional Development (WOPD) Manager at OCMI to properly manage CW5s and maintain MI CW5 SOG authorizations.

These job descriptions need to stress that the CW5 is the command's senior warrant officer in that MOS and that he serves as the commander's senior advisor in that discipline. OCMI is compiling a list of CW5 job descriptions. To assist in this task, CW5s should send their job descriptions to the Commander, USAIC&FH, ATTN: ATZS-MI (WOPD Manager), Fort Huachuca, AZ 85613-6000.

Point of contact is CW4 Jeff Platt, OCMI WOPD Manager, DSN 821-1183 or Commercial 602-533-1183.

Reduced MI Officer Basic Course

TRADOC directed the Intelligence Center to reduce the MI Officer Basic Course from a PCS course (23 weeks and 2 days) to a TDY course (18 weeks) by October 1995. The Commanding General, U.S. Army Intelligence Center and Fort Huachuca, decided to implement the reduced course starting 7 February 1995. In the training risk assessment we found no major impact to training as a result of the reduction. We answered yes to two critical questions:

- ☐ Can we maintain the integrity of the course (for example, will we train all critical tasks)?
- ☐ Can we accomplish the required training in the time available?

We preserved the integrity of the course by cutting only a small percentage of most major subject areas. However, we will not have time to present as much supporting material, provide as much practice time, and evaluate training as frequently as we would like.

The bottom line is that we will continue to provide the commander an MI officer that is **well trained in all critical tasks**. Point of contact is Mr. Billie J. Holloway, Intelligence Training Supervisor, G3 Training Division, Directorate of Operations, Training, and Doctrine, at DSN 821-5406 or Commercial 602-533-5406.

TOTAL FORCE

MI RC Officer Life Cycle Model

We get a lot of questions here at the U.S. Army Intelligence Center and Fort Huachuca regarding officer career planning in the Reserve Component (RC) environment. Ideally, the Active Component (AC) and RC would have the same life cycle model. However, the RC world offers special challenges and even a few opportunities not found in the AC.

The model outlined below provides guidance across time and rank both for assignments and military education. Circumstances will almost certainly cause you to deviate from the assignment model. This is to be expected. Even in the AC, it is difficult to follow the "perfect track." The most important thing is to do your best, take advantage of opportunities as they present themselves, and be flexible. There is less excuse for not following the model as it details military education requirements. Failure to meet education requirements is a certain career stopper.

RC MIOAC in 1995

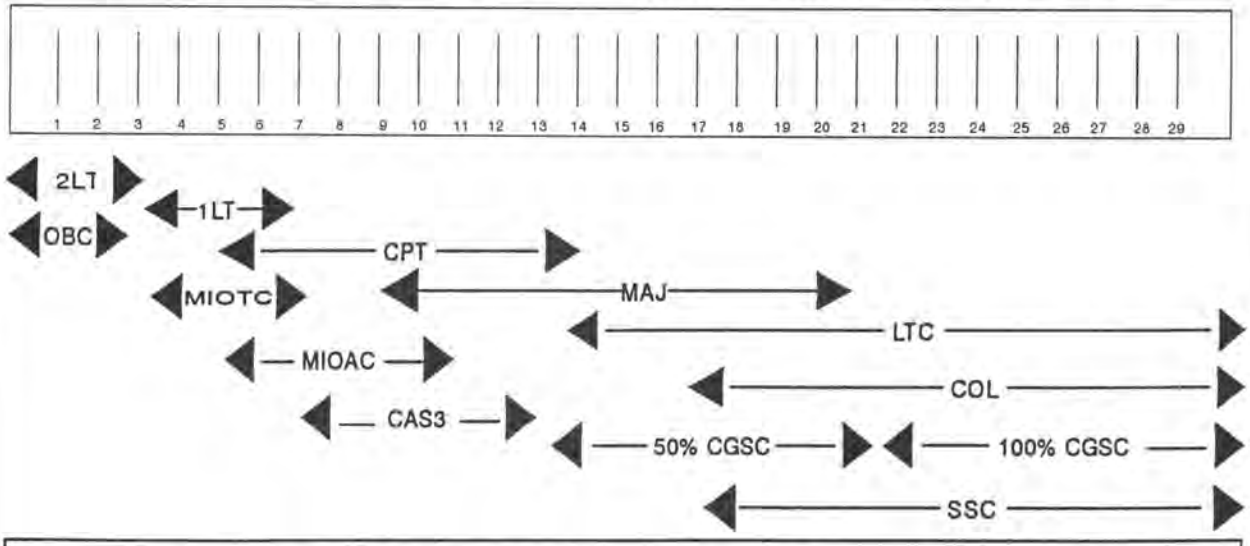
The RC MI Officer Advanced Course (MIOAC) is offered four times this year at Fort Huachuca. The AC training department of USAIC&FH will conduct the training instead of its RC counterpart, the 6th Reserve Forces-Intelligence School.

The current RC MIOAC covers two phases. Phase I consists of nine correspondence subcourses which must be completed before attending Phase II. Phase II is two weeks of resident training conducted at Fort Huachuca. In order to attend the RC MIOAC, officers must graduate from either the MI Officer Basic Course or the MI Officer Transition Course.

These are the dates for RC MIOAC Course Number 3-30-C23: Class 501 runs from 5 to 17 March and can accommodate 34 students; Class 502, 23 April to 5 May, 34 students; Class 503, 9 to 21 July, 34 students; and Class 504, 10 to 22 September, 35 students.

Point of contact for RC MIOAC queries is RC Training Coordinator, Captain Tom Bergfeld, DSN 821-2085 or Commercial 602-533-2085.

Military Intelligence Reserve Component Officer Life Cycle Model



MI Assignment	MI Assignment	MI Assignment	MI Assignment	MI Assignment
Asst S2/BICC	Bn S2	Bde S2	G2	G2
Plt Ldr/Tm Ldr	Cdr	S3/XO	Bn Cdr	Bde Cdr
Intel Staff Off	Intel Staff Off	Intel Staff Off	Intel Staff Off	IMA Position
IMA Position	Plt Ldr/Tm Ldr	Cdr	IMA Position	Intel Staff Off
	IMA Position	Dep/Asst G2	Sr Intel Off	Sr Intel Off
		IMA Position		Commandant

(Continued from page 4)

would want to acquire more responsibility—to keep the agency viable. Like any other organization (or bureaucracy) it is seeking more missions to attract more money. The CIA provides excellent data and information, as both raw and finished intelligence products. Unfortunately, due to proprietary concerns (unlike the Defense Intelligence Agency, which rarely classifies its products "originator controlled/ORCON"), the information is useless due to its limited distribution.

Third, warning is a process and not an event. Mr. McGuire points out that contrary to military leaders and policymakers' perceptions the CIA warned of Iraq's invasion of Kuwait. However, further in the article, he chastises the military for failing to develop a strategy preventing the invasion. I'm confused; or is the author failing to admit that maybe the CIA did not get the information to the right people due to its overconcern with security, or as some have claimed, to make sure it got "full credit." In warfare, as in peacetime, information must be readily available to the proper personnel for it to be useful. This is important if the CIA is to be a major player within the military intelligence community at the tactical level, as well as at the strategic level.

Fourth, contrary to the author's conclusion, the military already cooperates with the CIA in a global warning system to anticipate events worldwide. This system is called the "Defense Warning System," and it is operated from the Pentagon, which is probably why Mr. McGuire never heard of it.

Jan Goldman
Washington, D.C.

To the Editor:

LCDR Dan Smith, USN, wrote a very interesting article on "Doctrinal Issues in Joint Targeting" (Oct-Dec 1994). While I don't take issue with the substance of what he wrote, I did take note of what he failed to mention. I'm referring to his omission of Multidiscipline Counterintelligence (MDCI) Analysis as a targeting tool in joint operations and joint doctrine. This omission is disturbing because it suggests that serious thought is not being given to this vital MDCI analysis discipline and its enormous value as a targeting tool, and combat multiplier, for the friendly commander. If so, our joint doctrine writers are unforgivably remiss. The omission of MDCI analysis as a targeting tool and combat multiplier could needlessly increase friendly force casualties.

I encourage LCDR Smith, and all other leaders in the joint service intelligence community, to read my article, "The MDCI Analysis Void" (Jul-Sep 94). He/they need to get up to speed on the enormous value of MDCI as a targeting tool in a hurry. This is especially important for intelligence professionals in our sister services (i.e. Navy, Air Force, Marines). While understanding of MDCI as a targeting tool is dangerously lacking in the Army, it is practically non-existent in our sister services and joint commands.

Although in need of revision to incorporate reverse templating, MDCI doctrine and training is currently available. It is cheap in terms of dollars and manpower and, most important, it can save countless friendly lives while simultaneously inflicting monumental casualties on any enemy. This is a verifiable fact! Hence, it is disturbing, and even shocking, that joint service commands, joint doctrine developers, and joint targeteers have not embraced this vital MDCI analysis targeting tool.

How long must the MDCI analysis void persist? How many friendly lives could needlessly be lost if the MDCI analysis void is not filled? Answer: countless lives. I am sure LCDR Smith is a very bright officer, but he needs to complete his important work. His article is very good, but it is not complete. He needs to include MDCI analysis in any discussion or article concerning doctrinal issues in joint targeting.

MAJ (Ret) Ed Coet
Copperas Cove, TX

To the Editor:

Reference "Intelligence Support to the Logistician in Somalia" (Oct-Dec 94). As a former deputy director of the CENTCOM Intelligence Support Element (CISE) in Somalia, I had the opportunity to work closely with Captain Brand, Sergeant Bryson, and Specialist Lopez. I must compliment them on an excellent and accurate article and, more important, their innovative and very professional efforts in Somalia.

The natural tendency in intelligence is to concentrate on support to "shooters" often to the detriment of "non-warfighters." We need to control this tendency, particularly in operations other than war, in situations where the primary contact with the population (friendly or otherwise) is not by combat units. After the TF Ranger operation on October 3, shooters were almost completely relegated to static security roles, seldom leaving U.N. compounds or guard posts.

In contrast, the soldiers of Captain Brand's 507th CSG were out in the countryside, interacting with Somalis on a daily basis. Also, the mission of Captain Brand's unit had far more impact on the daily life of the average Somali than the mission of the warfighters. Seemingly mundane decisions such as which Somali contractor was chosen to fill potholes along a stretch of road directly influenced the next day's hostilities, or lack thereof.

The upshot of my comments is that in any given situation we need to evaluate who is actually on the pointy end of the spear. In Somalia, it was generally the logistician. Captain Brand, Sergeant Bryson, and Specialist Lopez showed how it can be done and their experience should be used

as a basis for future intelligence support to logistic units.

MAJ Fritz J. Barth
Alexandria, VA

To the Editor:

Compliments to Major Deakin and Sergeants First Class Brock, Maggay, Weed, and Monson for their excellent article, "EW Tactics: Massing Electronic Bullets" (Jul-Sep 93). They present one of the best and most compelling, lucid, and easy-to-understand explanations of electronic warfare as a combat multiplier that I have seen in a long time.

COL (Ret) Don E. Gordon
State College, PA

To the Editor:

I am responding to Major Keith Ryan's article, "The Analysis and Control Element (ACE) and the All-Source Analysis System (ASAS)" (Jul-Sep 94). When he states that the 82d was the "first unit equipped" with the ASAS system, he implies that they were the first unit to receive this equipment under any circumstances.

In reality, it was America's First Team, the 1st Cavalry Division and "Hell On Wheels," the 2d Armored Division that were instrumental in testing the first several prototypes in the ASAS series. Our job as intelligence analysts, was to test the system and work with contractors by submitting suggestions for modifications and improvements. Our work would then result in the distribution of a workable model to be fielded throughout the Army.

The Army Tactical Command and Control System and the ASAS test bed has been located at Fort Hood since 1986. In the fall of 1986, the 2AD received the first ASAS prototype "Microfix." In the summer of 1989, 2AD started work on the ASAS prototype software "Microvax 2." The 1st Cavalry Division started initial testing of the "Microvax 3" (or the 3800 Series as it is more commonly known) in the fall of 1992. In September of 1993, the 1st Cavalry Division received the Block 1 update of ASAS (referred to as "Alpha RISC") and we're currently working with a commercialized version.

Hopefully, this will clear up any misconception about the fielding of this highly valuable intelligence tool.

SSG Cheryl McElroy
Fort Hood, TX

PROFESSIONAL READER

Ultra in the Pacific: How Breaking Japanese Codes and Cyphers Affected Naval Operations Against Japan, 1941-45 by John Winton (London: Leo Cooper, 1993), 247 pages, £17.50.

This book is a good examination of the challenges and success of code breaking in the Pacific theater during World War II. John Winton presents code breaking not as a single event, but as a succession of small victories for Allied signals and communications intelligence specialists. Only by piecing together clues from a wide variety of message and coded traffic could a picture of the location and intentions of the enemy be developed.

The author presents this detective work so well that you come away with a real sense of the skill and devotion that code breakers brought to their work. They overcame many obstacles and, to a great extent, were responsible for the Allied success in the Pacific Theater.

The author describes what information was developed into ULTRA messages, how it contributed to a particular engagement, and how the experience fit into the war effort. He follows the war in the Pacific, touching on all the great engagements, and even includes a special segment on submarines.

This is not a book heavy in technological details; but rather, it is a balanced work that will appeal to the crypto fan and the historian. Winton presents the material directly to the point, and that is the book's appeal. He saves the detail for where it really counts, and that keeps the focus on the subject.

Interestingly, there were many levels of sophistication to the Japanese cryptologic apparatus, with each level presenting its own challenge to Allied code breakers. The Japanese constantly changed their codes and guarded against compromise. Their tendency to fall into familiar patterns helped the Allies "read the mail." The Allies closely guarded ULTRA-specific material, but unlike their operations in Europe, they used it at every opportunity to help turn the tide. Good operations security would have alerted the Japanese that there were just too many encounters to attribute the losses to coincidence. They did not think the unthinkable, but continued to believe that their codes were completely secure until the end of the war.

This is a quickly read presentation of the ULTRA story and will be useful to anyone interested in code breaking or Pacific theater history.

Thomas Daley
Sierra Vista, AZ

Policy and Process, 4th Edition, by Amos A. Joddam, William J. Taylor, and Lawrence J. Korb (Baltimore: Johns Hopkins University Press, 1993), 540 pages, $22.

This has been a standard text at the Joint Military Intelligence College for years. With its unique historical overview, it may be the best source volume for the process of developing national security policy. The authors describe not only the policy development process but also the players in various branches in and out of government.

I found the chapter entitled "Defense Planning, Budgeting, and Management" particularly interesting and helpful. This chapter can be of particular use to leaders in trying to help their young officers and soldiers understand the complicated military budget development process. Issues such as nuclear strategy and limited warfare surface. The book includes a short and general discussion of volatile and transient regional challenges the United States faces. The volume concludes with an updated perspective of challenges for the 1990s. It also has a serious discussion of the comparatively new U.S. ventures into international peacekeeping in combined operations.

As former Cabinet-level deputies or assistants, the authors have excellent credentials. (One is a former director of international studies at the U.S. Military Academy.) Their professional experience coupled with over 10 years of continuously revising this text make this book even more valuable.

This is an excellent reference and the extensive footnotes can be used as a springboard for deeper research. I recommend **Policies and Process** to students of international affairs or U.S. foreign policy.

MSG Carl G. Wells
Fort Bragg, NC

To the Gates of Richmond: The Peninsula Campaign by Stephen W. Sears (New York, NY: Ticknor and Fields, 1994), 468 pages, $15.

For students of the War Between the States and military professionals, Sears' account of the ill-fated Federal attempt to end the conflict by capturing the Confederate capital is a valuable reference. The author, through his vivid discussion of strategic aims, tactics and maneuvers, confirms the description of the war as the first "modern" war. Of particular interest to the MI professional are the accounts of intelligence activities both sides pursued throughout the campaign.

Sears details McClellan's intent, planning, and execution of the campaign. He describes Confederate defensive operations and, ultimately, General Lee's counteroffensive. Throughout his account, the author weaves a tale of use and misuse of intelligence assets. Among chapter titles are battlefield deception, ground surveillance, "disinformation," aerial observation, covert operations, communications interception and deception, reconnaissance in force, and counterintelligence operations.

Some examples include: (1) Confederate General John Magruder's successful deception at Yorktown convinced McClellan that the defensive works were fully manned. In reality, Magruder was well below strength and McClellan could have forced the line any time. (2) Professor Thadeus Lowe used a balloon to provide aerial surveillance of the battlefield for the Federal command. This enabled corps commanders to position forces more effectively. (3) Confederate Secret Service agents exposed a Union agent and his net in Richmond sending "disinformation" back to McClellan. (4) False deserters sent by Lee and Jackson to Federal lines misled McClellan and convinced him that CS troops numbered 200,000—nearly twice their actual strength.

Analysts on both sides labored to keep current situation maps and order of battle reports available to their commanders. Sears cites many other examples of intelligence operations during the campaign, all of which would be at home on the modern battlefield.

The author's use of maps, photographs, and illustrations enhances his narrative. Of particular interest are the detailed tables of organization for both forces. Sears updates the tables for each of the three major battles of the campaign. His extensive use of primary and secondary reference sources, such as original orders, reports, and soldier accounts, lends an air of authority to his conclusions.

I highly recommend **To the Gates of Richmond: The Peninsula Campaign** to both MI professionals and students of the War Between the States. It is a thorough, even-handed account of McClellan's failure and Lee's ultimate success.

SGM Curtis E. Tipton
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U.S. Military Forces in Europe: The Early Years, 1945-1970, edited by Simon W. Duke and Wolfgang Krieger (Boulder, CO: Westview Press, 1993), 400 pages, $44.

This is a fact-filled, yet readable study of the evolution of the U.S. military presence in Europe in the 25 years following World War II. The collection of 14 essays was written primarily by scholars in countries where U.S. Forces are or have been based. Their works reflect the concerns of the host nations and, therefore, bring a unique perspective to the early years of U.S. involvement in post-World War II Europe. Their analysis of why and how early NATO organizations were formed may also provide some insight into how future multinational military operations will be prosecuted.

The first four essays address the political, technological, and legal factors that shaped command structures, basing requirements, and force composition of the United States and NATO. Chapter 1 is perhaps the most difficult to read as it discusses in minute detail the political maneuvering and compromises that divided NATO headquarters on military and national grounds.

Chapter 2 contains interesting observations on the technological reasons for the way U.S. reconnaissance and surveillance facilities were located in specific countries. Chapter 4 lays out the legal grounds upon which we established and operated bases in Europe. Particularly interesting is the discussion of whether U.S. Forces can legally execute operations, including intelligence activities, without the prior consent of the host nation. In addition, intelligence activities and use of nuclear weapons are covered in some detail in this chapter.

Chapter 4 will be the most interesting for soldiers who served in Germany. In this chapter, Hans-Jurgen Schraut discusses the devastating impact the rapid drawdown of U.S. Forces following V-E Day had on the readiness and morale of Army units. He covers the Army's decline down to one poorly trained combat division and the subsequent hard climb to a combat ready force consisting of two corps, five divisions, and three armored cavalry regiments. This is definitely a chapter worth reading given the course of our current drawdown of units in Germany.

The remainder of the essays are about the NATO countries of Britain, Belgium, the Netherlands, France, Italy, Portugal, Spain, Greece, and Turkey. These chapters focus on the reasons U.S. Forces were initially based in each county, the impact of U.S. presence on the local population, and the issue of national sovereignty, particularly in the area of nuclear weapons.

U.S. Military Forces in Europe is a valuable reference book for anyone interested the Cold War and in understanding the historical factors which shape our multi-national military arrangements.

SFC Michael C. Taylor
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The Bridge on the Drina by Ivo Andric translated from the Serbo-Croat by Lovett F. Edwards (Chicago: University of Chicago Press, 1977), 314 pages, $15.

Most Americans form their opinions and beliefs about the former-Yugoslavian situation from CNN and other media sources, so they see a one-sided conflict. The monstrous, aggressive Serbs are hunting down the would-be peaceful Moslems in droves, raping and murdering them at will. The Moslems are unarmed, and all they can do is cower and flee, or die in place.

While much of this is true, it is not the complete truth. The Serbs could have already completed their pogrom against the Moslems had they received no resistance. Evidently, someone is shooting back at the Serbs from within the besieged enclave. As always with Bosnia-Herzegovina, the truth is not simple, and has deep roots in the troubled history of the region.

The Bridge on the Drina highlights typical village life in this war-torn country over a period of centuries. It shows that Bosnian-Herzegovinan society is divided in terms of religion, not politics or ethnicity. It has always resisted domination by powerful empires—whether it be Roman, Ottoman, or Austrian.

To fully understand Bosnia-Herzegovina, one needs to look at the influences of the various religions: Islam, Orthodox Christianity, Roman Catholicism, and even Bogomil. (This was the only indigenous religion in Bosnia. It was wiped out centuries ago, having been suppressed by the Roman Catholic Church and dissipated through Islamic conversion.)

When the Ottomans controlled Bosnia-Herzegovina, the Moslem Turks or Moslem converts were societal favorites, the Orthodox Christian serfs led a life of typical serf oppression, and the Jews and Catholics were somewhere in between. The Ottoman Empire did not recognize ethnic divisions. A Moslem of any color was a Moslem, and a Christian of any racial type was a Christian. Everyone in the village vaguely considered themselves Bosnians, but did not differentiate themselves into Serbian Bosnians or Croat Bosnians. they thought of themselves first as members of a certain religion, second as members of a community (village), and third as members of a large and nebulous empire.

The Bridge on the Drina follows the life of a typical village on the River Drina. It chronicles the existence of its great bridge as an expression of the town's personality. The book's scope is so broad that the characters are not individual people so much as groups of people—Moslem Turks, Catholics, and Christian Serfs.

Early in the 20th century, the bridge's central square and supporting columns were completely destroyed by the Austrian army retreating from a Serbian insurrection. The one permanent feature of the town was gone. This is what the 20th century has done for much of former Yugoslavia. It has destroyed any vestige of permanence in the people's lives.

Reading this book, one should not lapse into the easy role of judge. It is, however, an excellent beginning for those who would study and attempt to understand Bosnia-Herzegovina.

Captain Woodrow O. Carsky-Wilson
Fort Huachuca, AZ

中國情報部

Chinese Intelligence Operations by Nicholas Eftimiades (Annapolis, MD: Naval Institute Press, 1994), 192 pages, $30.

Nicholas Eftimiades provides a broad brush overview of China's intelligence community in Chinese Intelligence Operations. He uses the doctrinal intelligence cycle to logically deduce the responsibilities, roles, and relationships of China's intelligence organizations. He also closely examines Chinese human intelligence (HUMINT) operations. Although the book lacks documentation and details, it is interesting and readable. It is a useful background book for those dealing with HUMINT, but only of passing interest to intelligence professionals.

Eftimiades begins with China's uses of intelligence and information objectives. China's intelligence objectives are to support policies by acquiring foreign technology and identifying foreign policy trends., while monitoring dissident groups. With these in mind, he analyzes functions, authority, and methods of the Ministry of State Security, MI Department, Ministry of Foreign Affairs, and the involvement of the Chinese Communist Party. The author specifically addresses foreign and domestic operations. Unlike the United States, domestic operations are extremely important to the Chinese government due to the closed nature of Chinese society.

While Eftimiades adroitly addresses the organization of China's intelligence community (similar to U.S. tactical and strategic organizations), the most interesting portions of the book are the detailed accounts of Chinese HUMINT operations. Recruiting methods for foreign and domestic agents are discussed at length. Eftimiades also provides case studies of the recruiting of a long-term agent (mole) and a short-term Chinese student agent. China's extensive use of commercial, academic, illegal, and legal covers is well treated.

The author's conclusion is that the Chinese intelligence community does not work well, but is so large that a low success rate can reap large benefits. Specifically the system is inefficient, corrupt, bogged down in red tape, rife with poorly planned and executed operations, and suffers from extremely poor operations security procedures. However, the large numbers of agents has allowed China to be quite successful in extracting information from foreign private and government organizations. China's intelligence community has also been successful in suppressing political opposition. By targeting mid-level technology, Chinese intelligence activities have remained below many government's "Threshold of concern." China's collection strategy is to give explicit acquisition tasks to many agents, ensuring that at least a few will succeed.

Eftimiades predicts that Chinese intelligence services will adapt Western intelligence methods and become more sophisticated with increased Western contact. Due to continued political dissent, China's government will continue its emphasis on controlling Chinese society. Western nations need to chance their traditional views of HUMINT and overcome the handicap of limited knowledge about China's government, language, and society to correctly analyze Chinese intelligence operations in the near future.

David Shade
Wahiawa, HI

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500th Military Intelligence Brigade

Army Intelligence units use Oriental blue on their unit crests. The Republic of Korea's red and blue taeguk indicates service in Korea. A white sun, which appears on the flag of the Republic of China, alludes to service in Taiwan. Mount Fuji's silhouette commemorates the unit's long service in Japan. Palm trees represent service in the Philippines and bamboo trees represent service in the Republic of Vietnam. A Siamese headdress refers to service in Thailand. "Scientia Potentia Est" is the Latin translation for the unit's motto: "Knowledge Is Strength."

ESTABLISHED: Activated as the 500th Military Intelligence Service Group on 1 September 1952, in Tokyo, and assigned to the Far East Command. On 16 October 1987, the Department of the Army (DA) redesignated the 500th MI Group as the 500th MI Brigade.

LOCATION: Camp Zama, Japan.

PERSONNEL: The Headquarters and Headquarters Detachment has 185 soldiers and 160 DA civilians. The brigade has a total of 585 personnel.

MISSION: The mission of the 500th MI Brigade is to conduct multidiscipline counterintelligence collection, analysis, and reporting. It also conducts counterintelligence operations and services in U.S. Army. Pacific Command as directed by U.S. Army, Pacific; U.S. Army, Japan/IX Corps; national tasking authorities; and service agreements.

HONORS: The 500th MI Brigade received two Meritorious Unit Citations for exceptional service during the Vietnam Conflict. On 16 October 1987, the Army Chief of Staff awarded the brigade the Army Superior Unit Award for its contributions in 1986 and 1987.

HISTORY: On 1 January 1977, the U.S. Army Intelligence Agency, along with the 500th MI Group, was reassigned to the newly formed U.S. Army Intelligence and Security Command (INSCOM). The group was subordinated to Headquarters, INSCOM, in October 1977. In April 1978, the unit received the distinctive designation "Pacific Vanguard." The 500th MI Group assumed a greater multidiscipline role in October 1979, with the assignment of other INSCOM units.

DA established the 500th MI Brigade to provide echelons above corps and echelons corps and below intelligence and electronic warfare support to Army units in the Pacific Theater. The only exception is Korea, which the 501st MI Brigade supports. INSCOM commands the 500th MI Brigade. However, since 1987, U.S. Army Pacific and its predecessor, U.S. Army Western Command, have exercised operational control of the 500th MI Brigade.

During Operations Desert Shield and Desert Storm, 13 soldiers from units within the brigade in Japan and Hawaii volunteered to deploy to Saudi Arabia. They filled critical shortages in MI and Special Forces units. An additional 47 brigade soldiers participated in Operation Desert Storm.

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