The Most Secret War

Army Signals Intelligence in Vietnam

"... field commanders in Vietnam, continue to say that this [signals intelligence] is the backbone of their intelligence effort. They can't live or fight without it. I want to stress to everyone in this room just how important this effort is ... I can't think of anything more important because they are just blind over there without this effort ..."

GEN Bruce Palmer, Vice Chief of Staff, US Army

The Most Secret War

The Most Secret War

Army Signals Intelligence in Vietnam

James L. Gilbert

Military History Office
US Army Intelligence and Security Command
Fort Belvoir, Virginia

In a ceremony held in May 1969 at Arlington Hall Station, Virginia, the noncommissioned officers of the US Army Security Agency dedicated a memorial in memory of their fallen comrades from three conflicts: Korea, Vietnam, and Dominican Republic. The statue is carved from white Italian marble and depicts a soldier in full battle dress with field radio. Today, the ASA Memorial stands at Headquarters, US Army Intelligence and Security Command, Fort Belvoir, Virginia.

TO THOSE WHO SERVED...

G DONALD D.DAUGHERTY 13 APR
CPT JAMES D STALLINGS 25 SEP
LT JOHN F.COCHRANE 24 OCT 19
SFC JOHN F.STIRLING 8 MAR 19
SFC ROBERT D.TAYLOR 26 NOV 19
GT DIEGO RAMIREZ JR 26 NOV
P5 MICHAEL P.BROWN 26 NOV
P4 JEFFREY W.HAERLE 13 MAY
HRISTOPHER J.SCHRAMM 13 M
P5 SAMUEL C.MARTIN 17 MAY

FOREWORD

The first unit to be deployed to South Vietnam belonged to the United States Army Security Agency (ASA) as did the first to be decorated. The first acknowledged casualty of the war was an ASA soldier. All of these milestones are reminders that from the beginning Vietnam was very much an intelligence war. The challenge for US advisors and later commanders in the field was to locate an elusive enemy in a hostile environment. Communications intelligence quickly emerged as the ground forces' primary source of targeting the enemy and for planning operations; it also aided in obtaining other valuable sources of information, such as captured documents and interrogated prisoners of war—all by-products of successful combat operations. Because Vietnam was the first air-mobile war, timeliness of information became as critical as accuracy, where minutes spelled the difference between success and failure. Here again, ASA direct support elements served as invaluable conduits through which communications intelligence flowed to the combat commanders on a real-time basis.

The motto of the Military Intelligence Corps is "Always Out Front." It was precisely because ASA was out front that signals intelligence enjoyed the success it did in Vietnam. Army Security Agency personnel deployed to Vietnam four years in advance of major ground combat elements. This allowed ASA the time to develop a new technique (airborne radio direction-finding) to pinpoint a concealed enemy, to assemble the necessary background data, and to gain the experience required to support US forces in the field. If there is an over-arching lesson learned through the years, it is that military intelligence needs to be continually engaged in order to be successful. One only has to contrast the absence of intelligence in the early phase of the Korean War with the constant flow of information awaiting combat elements upon their arrival in Vietnam.

Although security restrictions prohibit the telling of the intelligence story in full, hopefully, the picture history format will provide a window into an important aspect of the Vietnam War that here-to-fore has not been publicized. Its purpose is to outline the scope and type of support furnished by the Army Security Agency and to provide testimonial evidence of ASA's overall success as well as to note various shortcomings. The history is also the story of individual sacrifice and professionalism on the part of ASA soldiers that will continue to foster *esprit de corps* among future generations of military intelligence specialists.

KEITH B. ALEXANDER
Major General, USA
Commanding US Army Intelligence and Security Agency
Fort Belvoir, Virginia
23 January 2003

PREFACE

Early in his career, Colonel James P. Brown headed up a small history team sent by the Army Security Agency to Vietnam to document its role in the war. Reflecting back, COL Brown recalled a comment made by one of his subordinates: "After working for weeks, night and day to finalize, assemble all the photographs, and make the requisite number of copies of the 509th Radio Research Group historical report, Lieutenant Hunt surveyed the two desks piled high with all the volumes and with a sigh mumbled, 'God, I hope someday someone reads all that stuff!' Indeed!" This history represents a small down payment on the efforts by ASA historical officers in the field and the historians back at Arlington Hall Station to document the signals intelligence story. Once the US Army Center of Military History has completed its official history of Vietnam, it is hoped that declassification will have advanced to the stage that Army intelligence can supplement the work with a more detailed operational narrative.

The history is limited in scope and does not attempt to tell the story of the larger cryptologic effort of the war. It draws only upon Army records and those readily available to the INSCOM History Office. The final product is the result of the contributions of many individuals. Colonel William H. Marvin, Chief of Staff, and Mr. Daniel Scarfo, Chief, Strategic Management and Information Office, provided overall supervision to the project. As in every endeavor undertaken by the History Office, it could not have been possible without the advice and assistance furnished by Dr. John P. Finnegan, Historian, the editorial support of Mrs. Karen E. Kovach, and the detailed review of the manuscript by Mr. Thomas Hauser, Staff Historian. The final product was enhanced by the comments of Ms. Romana Danysh, Organizational History Branch, Center of Military History, and by various ASA veterans.

Photographic support for this volume was provided by Mr. Robert J. Bills and graphic support by Ms. Robin Crawford, both of the Office, Assistant Chief of Staff, G6. Unless otherwise noted, all photos are from the INSCOM collection. Credit for design of this publication belongs to Ms. Maureen Nugent, Office of Typography and Design, US Government Printing Office.

A special word of thanks is owed Mr. James D. Currie, Jr., INSCOM Publishing Management Officer, for his ongoing liaison and quality control throughout the production process. Also to Mr. Mark Bertram for the loan of his unit insignia collection and Ms. Laura Siedlarczyk, who coordinated the volume at Department of Defense. As always, the staff of the US Army Cryptologic Records Center was helpful and patient during the research phase. Simply put, the book would not have been possible without the efforts of numerous people both present and past. However, any mistakes, errors, and omissions are solely the responsibility of the author.

JAMES L. GILBERT
US Army Intelligence and Security Command

TABLE OF CONTENTS

Arlington Hall Station served as headquarters of ASA's worldwide organization. Formerly an exclusive women's college, the Hall was home to the Army's code-breaking activities during World War II.

"It has been my feeling in years past [prior to Vietnam] that we did not know too much about ASA. . . . If we did know much about it, maybe we felt they were working for authorities outside the Army, albeit important work."

LTG CREIGHTON W. ABRAMS, VICE CHIEF OF STAFF, US ARMY

In the closing days of World War II, US Army leaders began to turn their attention to planning for what would follow in the aftermath. High on their agenda was maintaining access to the Army's most important source of strategic intelligence—information derived from the intercept and deciphering of enemy communications. On 15 September 1945, the War Department established the Army Security Agency (ASA) with headquarters at historic Arlington Hall Station, Virginia. Building upon the legacy of its predecessor, the Signal Security Agency, ASA possessed a sweeping charter to conduct communications intelligence (COMINT) operations as well as to provide the Army with communications security (COMSEC). For the first time, all of the Army's signals intelligence (SIGINT) resources fell under one command. Organizationally, ASA was unique. It was literally an army within the Army. Due to its vertical chain of command, the agency replicated in miniature all the functions of the larger Army, ranging from personnel recruitment and training to research and development. ASA directed a worldwide organization consisting of theater headquarters in the Far East and in Europe and a series of fixed sites, or field stations. that encircled the globe and served as its collection arm.

Over time, ASA underwent a number of important mission changes. In 1949, the Joint Chiefs of Staff established the Armed Forces Security Agency, forerunner of the National Security Agency. In turn, the Army, Navy, and Air Force cryptologic agencies were forced to relinquish control of the signals intelligence system to the new Department of Defense organization. This realignment caused ASA to reexamine a previously neglected portion of its mission—COMINT and COMSEC support to the Army in wartime. The outbreak of the Korean War and subsequent buildup of US forces in Europe further reinforced the need for ASA to field tactical support units on a large scale. Soon groups and battalions became a fixture within the agency's force structure, and from 1950 to 1956, the number of such units grew from zero to nine. Other mission shifts included ASA assuming responsibility in 1955 for the Army's electronic intelligence (ELINT) and electronic warfare (EW) programs. However, both ELINT (intercept of noncommunications signals) and EW (denying the enemy use of his communications through jamming or deception) would largely remain in the background as ASA's primary focus continued to be communications intelligence.

In 1960, on the eve of US intervention into Vietnam, ASA was better prepared and better equipped than at any time to go to war. Although ASA's primary focus remained on manning its worldwide chain of field stations, the agency possessed the necessary doctrine for supporting combat troops, an R&D and materiel development capability geared to deploy new systems, and an efficient personnel system for recruiting, training, and sustaining a highly qualified force.

From its inception, ASA was cloaked in an aura of secrecy. An early recruiting poster proclaimed, "...by the very nature of its work, this agency remains little known." The problem was that ASA also remained little known to the larger Army. Vietnam would test ASA's ability to educate a new generation of combat commanders as to the value of its products and to overcome the obstacle that classification restrictions placed on the sharing of time-sensitive information. And as the Army moved towards air-mobile warfare, minutes could spell the difference between success and failure.

South Vietnamese crowds line the street to greet then Vice President Johnson, whose visit to Saigon in May 1961 would precede ASA troop arrivals by only a few days.
(Library of Congress)

President Eisenhower and President-elect Kennedy both supported assistance to South Vietnam, but it was the latter who stepped up the deployment of military advisors. (National Archives)

"Vigilant Always"

MOTTO OF THE ARMY SECURITY AGENCY

Involvement in Vietnam

At the end of World War II, Vietnam was locked in a struggle between the aspiration of Vietnamese nationalists and the desire of the French to reassert political and economic control over its former colony. Following a failed attempt at a negotiated settlement, guerrilla warfare broke out. Soon the Viet Minh (League for the Independence of Vietnam) controlled large sections of the countryside while French forces ruled most of the cities. The fall of neighboring China to the Communists in 1949 and the subsequent flow of assistance from the Communist Bloc to the Viet Minh escalated the war from a local conflict to one having international implications. Various Communist states recognized the Democratic Republic of Vietnam as the legitimate government while the United States and Great Britain accepted the new "State of Vietnam" supported by the French.

The 1954 defeat of its forces at Dien Bien Phu, coupled with the costs of fighting a protracted war, finally ended France's involvement in Vietnam. The departure of the French created a vacuum into which the US poured an increasing amount of supplies to South Vietnam and assumed responsibility for training its army. Later that year, a Peace Conference convened in Geneva, Switzerland. Here delegates from the Soviet Union, Great Britain, France, and the United States proceeded to divide Vietnam into North and South, separated by a demilitarized zone along the 17th Parallel.

One of the first foreign policy issues facing newly elected President John F. Kennedy in 1961 was how to counter the escalating pressures by the North Vietnamese backed guerrillas undermining the Republic of Vietnam. In response to calls for assistance by President Ngo Dinh Diem and US officials in Saigon, the Kennedy administration took steps to strengthen South Vietnam's ability to win the political, military, economic, and psychological war against Communist-backed insurgency. Among the types of aid being sought by the South Vietnamese was help for their fledgling communications intelligence effort. The Vietnamese had established a small Technical Study Center in Saigon and Dan Nang for the purpose of monitoring the guerrillas' communications. To encourage Vietnamese direct support to its Army, the US provided 30 SP–600 Hammerlund radio receivers along with several AN/PRD–1 direction finders.

In February 1961, LTG Lionel C. McGarr, Chief, Military Assistance Advisory Group, Vietnam (MAAG–V) raised the stakes for COMINT assistance by asking for direct US involvement. Subsequently, MG John M. Willems, Assistant Chief of Staff for Intelligence (ACSI) at Department of the Army (DA), floated a proposal to provide training to the South Vietnamese and at the same time establish US intercept operations in country. On 20 March 1961, the Department of State informed Headquarters, Department of the Army, that it was politically feasible for the US military to conduct a small COMINT effort in South Vietnam. Based on this positive feedback, the ACSI alerted MG William M. Breckinridge, Chief, ASA, to begin planning for deployment of a unit to Southeast Asia. At the same time, reports were arriving in Washington, DC, that the South Vietnamese COMINT element was beginning to enjoy success. These glowing evaluations would later prove erroneous. However, for the moment, they were greeted by the ASA leadership as indicators that the command would have no problem in fielding an intercept unit of its own.

On the eve of Vietnam, ASA's main focus was support of its worldwide chain of field stations.

Request for Assistance

The Army Security Agency's ability to quickly respond to DA's tasking to deploy a mobile intercept unit to South Vietnam demonstrated the strengths of its vertical command structure. The agency was able to draw upon expertise from its theater headquarters, USASA Pacific, for insights on the anticipated targets. Based on this input, Mr. Jimmie Garrett, a member of the Operations staff back at Arlington Hall, labored late into the night putting the finishing touches on Operations Plan (OPLAN) 7–61 (nicknamed WHITEBIRCH) and OPLAN 8–61 (SABER-TOOTH) that listed the equipment and personnel skills required. WHITEBIRCH established a 78-man ASA operational element to target local Communist guerrillas, and SABERTOOTH fielded a 15-man team to train South Vietnamese COMINT specialists supporting the Army, Republic of Vietnam (ARVN) at division and below. When the National Security Council met on 29 April 1961, President Kennedy formally approved the deployment of ASA personnel. Because HQ USASA controlled its own personnel assignments and training, the agency was able to quickly identify the individuals needed for WHITEBIRCH/SABERTOOTH and within 3 days had assembled them at its Training Center and School located at Fort Devens, Massachusetts. At the same time, ASA logisticians lined up the equipment to be shipped; any piece not already in the inventory was taken from a unit lacking an immediate requirement for it. This shuffling of

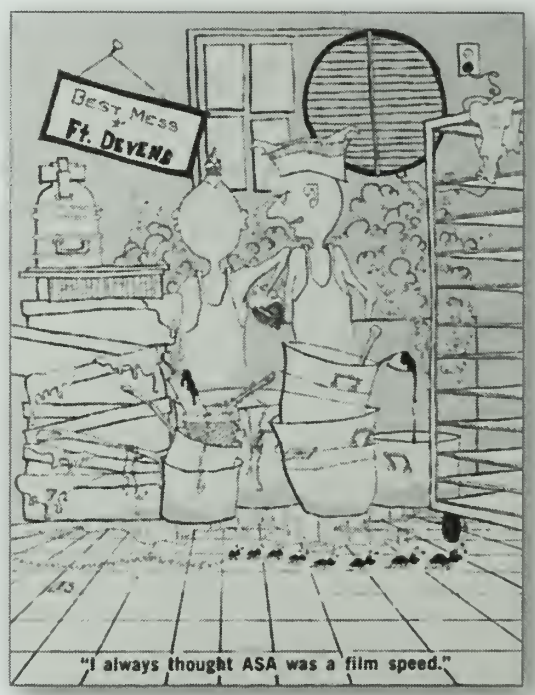
"The greatest contribution Vietnam is making—right or wrong is beside the point—is that it is developing an ability in the United States to fight a limited war, to go to war without the necessity of arousing the public ire."

ROBERT S. MCNAMARA, SECRETARY OF DEFENSE

personnel and assets to accomplish mission priorities was an art form that ASA had perfected over the years.

As it awaited further orders, the ASA contingent organized itself into the 400th USASA Operations Unit (Provisional) with a cover designation as the 3d Radio Research Unit (RRU). (Throughout the Vietnam Conflict, ASA would designate all of its units as "Radio Research" to shield its presence.) As part of this low visibility status, the first ASA personnel were required to carry US passports, wear civilian clothes, and if asked, indicate that they were military advisors attached to MAAG–V. A local post exchange remained open late one night so that the 3d RRU soldiers could select civies. However, because there was so little variety to choose from, it became the standing joke that the ASA personnel might just as well have been issued uniforms since they were all wearing clothes of a similar style and color.

The first members of ASA to arrive in Vietnam were COL Robert T. Walker, Chief of USASA–PAC, and LTC Robert W. Williams, designated Commander, 3d RRU. The two officers were there to make final arrangements for ASA's pending deployment and to identify possible operational sites. On 9 May in response to a query from the White House, the Army indicated that its ASA element was poised for departure. Three days later, Republic of Vietnam officials formally agreed to a cooperative COMINT effort between its armed forces and those of the United States, but with the understanding that shared information would be limited in content and scope. Upon learning of the agreement, COL Walker immediately flashed word back to the 3d RRU that all systems were "Go."



A cartoon from ASA's publication, The Hallmark, captures the thoughts of many a new recruit to the agency.

Dressed in civilian clothes and carrying weapons, soldiers of the 3d RRU manned the remote direction-finding site at Ha Tien.

"If injured or killed in combat, report as training accident in the Philippines."

STAMPED ON MEDICAL RECORDS OF 3d RRU PERSONNEL

On The Ground

On 13 May 1961, 92 personnel of the 3d RRU landed at Tan Son Nhut Air Force Base, located just west of Saigon proper. Here they were greeted by COL Walker and LTC Williams. Throughout the next week, C–124s and C–119s continued to bring equipment contributed by ASA units worldwide. (The 3d RRU's entry marked the first time that an entire Army unit had deployed to South Vietnam; previously only individual advisors had been assigned.) The headquarters and processing elements of the 3d RRU immediately found a home in an empty warehouse near the airfield. Personnel were billeted at the Majestic Hotel in Saigon, but the need to economize soon led to a search for new quarters. Enlisted men eventually occupied six floors of a new building located at 39 Hai Ba Trung, while the officers settled into four small bungalows located in a nearby residential area.

On 15 May at 1015 hours, operations were up and running. Inside shelters parked alongside the Tan Son Nhut airstrip, ASA soldiers tuned their receivers in search of manual Morse signals. A month later, at the encouragement of the ARVN Chief Signal Officer, the 3d RRU moved its vans to the nearby Vietnamese Joint General Staff Compound (Trai Tran Hung Dao), which was located in Saigon proper and also served as the headquarters of South Vietnam's own intercept effort. By having US COMINT operations close-at-hand, the South Vietnamese were suspected of wanting to

extract more concessions in terms of equipment and information sharing. In the coming months, considerable finesse and diplomacy would be demanded of US officials in deflecting requests from their hosts for added support and increased access.

By 28 May, site surveys for establishing the WHITEBIRCH direction-finding net were completed. The net would stretch along the coastline, running from Ha Tien in the southwest to Cap Saint Jacques east of Saigon and finally to Nha Trang in central Vietnam. Within a month, all of the sites had become operational. At the more isolated Ha Tien site, ARVN soldiers provided security, and ASA operators were instructed to carry weapons at all times and not to travel at night.

The SABERTOOTH School occupied a building at the Joint General Staff Compound and used equipment and instructional material donated by the 3d RRU. In July, ASA advisors began week-long classes to familiarize ARVN SIGINT specialists with various pieces of equipment, but delays in logistical support pushed the formal opening of the school back to early September. Students in the first class completed some 528 hours of instruction, covering such subjects as manual Morse intercept, direction-finding, communications, and maintenance.

No sooner had the 3d RRU settled in country, than efforts were underway to increase its size. At the beginning, only 17 hours of daily coverage were necessary because the Viet Cong ceased operations between 1600 and 2300 hours, but the emerging need for around-the-clock monitoring soon required the Chief, USASAPAC to come up with an additional 52 spaces. At the same time, the National Security Agency looked unfavorably upon ASA's growing commitment to the ground war in South Vietnam, expressing concern that ASA was robbing resources from its other missions within the Pacific theater. No one could have envisioned that within 6 years ASA's in-country strength would be nearly 6,000 personnel.

The Direction-Finding Problem

Dating as far back as World War I, the US Army had utilized direction-finders (DF) to locate enemy transmitters and, in turn, enemy forces. Upon acquiring a signal, direction-finding (DF) stations within a DF net would simultaneously take bearings on the transmission. The point where three or more lines crossed would result in a "fix." Unlike earlier conflicts, the task of finding an elusive enemy would take on an even greater sense of urgency in Vietnam.

ASA arrived in Vietnam fully expecting that its direction-finding mission would be accomplished. (ASA's optimism was due in part to erroneous reports it had received of early success by the South Vietnamese.) Plans called for a medium-range direction-finding (MRDF) net to be established at semi-permanent sites. The net would pass general targeting locations to mobile direction-finding teams using AN/PRD–1s. Operating from locations 5–15 miles away from an enemy transmitter, the mobile teams could then produce the necessary refined fixes. Once an enemy unit was sufficiently pinpointed, South Vietnamese forces could then engage it.

Located entirely within the targeted area, the WHITEBIRCH Net was initially thought to represent the ideal situation because of the closeness of substations to their targets. However, the insurgents waging mobile warfare in mountainous regions and possessing limited resources utilized hand-generated, low-powered radios for means of communications. Instead of attempting to broadcast by direct or ground waves that couldn't travel beyond 5 to 15 miles, enemy communicators employed horizontally radiating antennas in the high-frequency band. By this means, the signals were bounced off the ionosphere to receiving stations. DF operators could normally calculate bearings from sky waves. However, in Vietnam, targets located 15 to 150 miles away produced sky waves with unusually steep angles (greater

A PRD–1 mounted on a ¼-ton vehicle.

"The principle of airborne direction-finding appears to have possibilities for generally improving DF effectiveness on the Viet Cong problem. Recommend that equipment be assembled and concept tested in CONUS...."

LTC WILLIAM J. COCHRANE, JR., CDR, 3d RRU

than 45 degrees) for the DF site to intercept. Under these conditions, accurate bearings were hard to come by, and there was little wisdom in launching a tactical operation against the Viet Cong at an ill-defined location. The WHITEBIRCH net faced other challenges such as the effects of humidity upon the AN/TRD–4A direction finders and the lack of transportation to isolated sites where security was a growing concern. ASA operators at Ha Tien were soon subjected to small-arms fire, leading to the substation's relocation to Bien Hoa.

By the fall of 1961, the 3d RRU's new commander, LTC William J. Cochrane, was turning to Arlington Hall Station for answers to his direction-finding problems. Warrant Officer George Miller served as the point of contact for the 3d RRU and began correspondence with Mr. Herbert S. Hovey, Jr., an electrical engineer in the Office of the Assistant Chief of Staff, Developments at HQ USASA. Eventually, a four-pronged approach to the problem emerged: investigate the possibility of an airborne system, improve the PRD–1, replace the TRD–4As, and develop a small man-pack direction finder for future Special Forces operations. To even consider airborne direction-finding at the time indicated a certain amount of desperation on the part of ASA leaders.

ASA's First Casualty

When the idea of airborne radio direction-finding (ARDF) first surfaced, Mr. Herbert Hovey immediately contacted Mr. Harold H. Jaffe and Mr. John Woodworth from the US Army Electronics Command (ECOM) laboratories located at Fort Monmouth, New Jersey. The three had collaborated in the past on similar projects. The first item on the ASA/ECOM team's agenda was a fact-finding trip to Vietnam. Here, they tried to acquire first-hand knowledge of the direction-finding problem and the local signal environment. Among those they talked with was 25-year old SP4 James T. Davis, who was serving as an advisor to one of the ARVN PRD–1 teams. Davis, a native of Livingston, Tennessee, had come to Vietnam as a member of the original 3d RRU contingent. Reflecting the optimism of the times, Specialist Davis wrote home to his family that, "I feel a little proud about this deal, too. I just hope that our little bit will help to ease things in this part of the world." He also communicated the growing danger of his assignment, "We became a little more involved in this conflict yesterday... It looks like the bad guys have gotten the word to start giving us hell. It breaks the daily routine even though it could become a bit dangerous."

SP4 James T. Davis "... the first American to fall in defense of our freedom in Vietnam."

PRESIDENT LYNDON B. JOHNSON

As tests on the new ARDF system proceeded at Fort Monmouth, the 3d RRU renewed its efforts to make direction-finding successful by utilizing resources on hand. To increase coverage, the 3d RRU began integrating ARVN stations into the WHITEBIRCH net. In addition to the static MRDF net, the 3d RRU also continued to field mobile, short-range direction-finding (SRDF) teams, using PRD–1s. However, establishing an SRDF net meant that ASA personnel were often forced to operate near the enemy. Normally, a network of vehicles consisting of two jeeps and a ¾-ton truck would deploy on a SRDF mission that might last up to a week. Evidence later emerged that the Viet Cong were fully aware of the mission of these DF-teams, and in fact, had taken steps to target them.

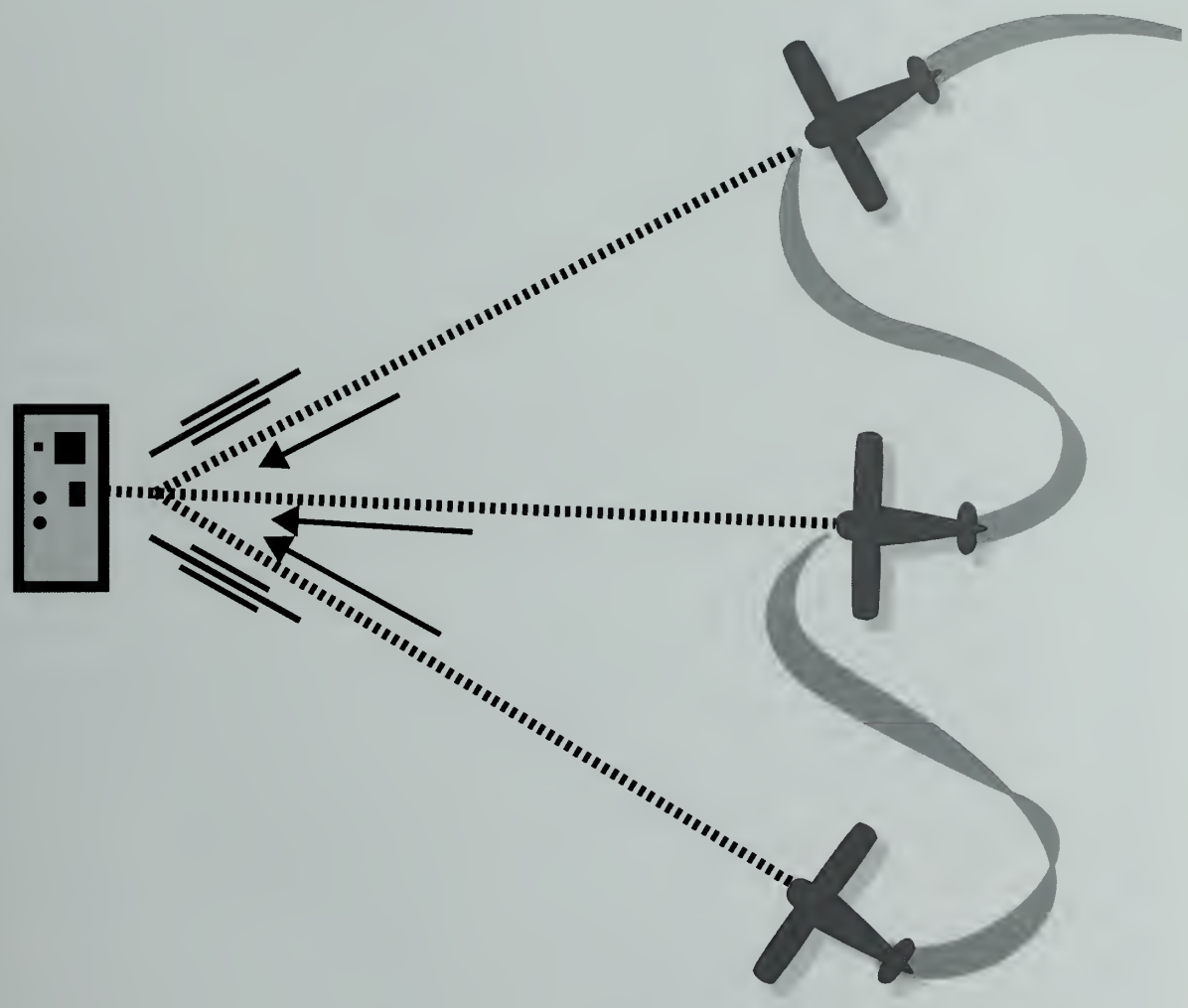
At noon on 22 December 1961, Specialist Davis and his PRD–1 team had just taken a bearing approximately 20 kilometers west of Saigon. The ¾-ton truck carrying Davis and ten ARVN soldiers proceeded northwest on Provincial Highway 10 and was 800 meters west of Cau Xang, not far from the remnants of an old French garrison and a nearby canal, when an electrically controlled land mine suddenly exploded underneath the vehicle's tailgate. The truck then spun out of control, coming to rest in the right ditch. Emerging from their concealed positions, a band of approximately 20 Viet Cong opened fire on the dazed and wounded soldiers. Managing to escape from the truck, Davis returned fire with his M–1 rifle before being fatally struck. Within minutes the ambush was over, and Davis and nine members of his team lay dead. Besides stripping the soldiers of their weapons, the Viet Cong also removed the radio to add to their eclectic collection of US/French/Chinese communications gear.

Because wartime conditions did not exist at the time, Army Regulations prohibited awarding Davis the Purple Heart. But on 10 January 1962, Davis' fellow ASA soldiers dedicated the 3d RRU's facility at Tan Son Nhut Air Base as "Davis Station" to serve as a memorial to their fallen comrade. Of all the tributes given, none, however, were more fitting than the words of Davis' father, "It is a tragedy... to lose a son, but is also an honor to know that a son was a good soldier."

Specialist Four James T. Davis was killed while on an advisory mission with a South Vietnamese PRD–1 team.

The 3d RRU area at Ton Son Nhut AFB in Saigon was named in honor of Specialist Davis.

Inside the U–6, there was barely room for the intercept operator and equipment.



"Because in a way it [airborne radio direction finding] is the radar of Vietnam...."

MR. HERBERT S. HOVEY, JR., ENGINEER, HQ USASA

Airborne Radio Direction-Finding

The challenge for the ASA/ECOM engineers was to create an airborne system that could discriminate between direct and sky waves. Although the answer on how to decouple the antenna from the metal skin of the aircraft was sophisticated, the hardware portion of the problem was easy to solve. The biggest obstacle proved to be selection of the right type of aircraft. When early tests using a UH–19 "Chickasaw"helicopter failed because of vibration problems, the engineers turned to the U–6A, a small, fixed-wing aircraft nicknamed the "Beaver." The U–6s were numerous in Vietnam, which meant that maintenance support was readily available. The aircraft also provided the pilot good ground visibility and could transport a crew of three plus a small load of equipment.

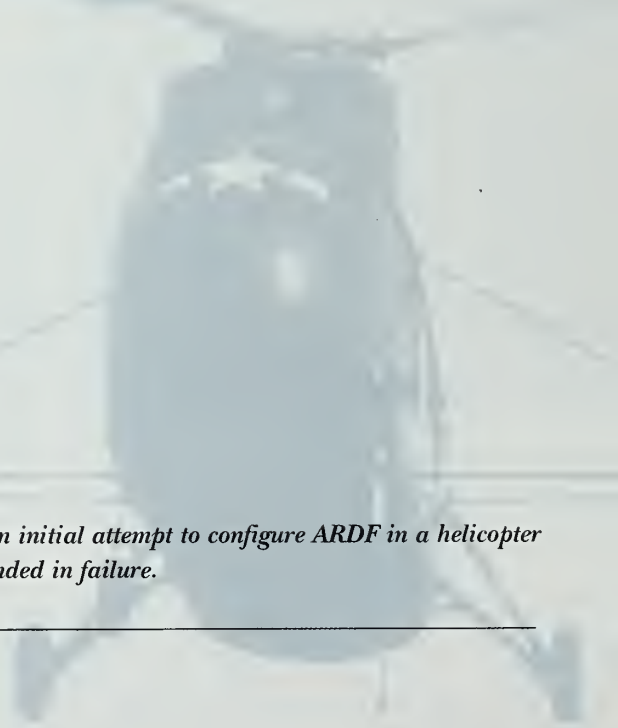
Carrying the airborne radio direction finding (ARDF) equipment in their luggage, the ASA/ECOM team, minus Woodworth, who ironically disliked flying, boarded a commercial flight for Vietnam in early March 1962. Meanwhile, the 3d RRU secured three U–6 aircraft from MAAG–V along with the services of two pilots, CPT William F. Simpson and CPT Donald C. Schessler, neither of whom had prior experience working with communications intelligence. Upon arriving in Saigon, the ASA/ECOM engineers immediately set about installing the DF equipment on the Beavers.

In Saigon, ASA/ECOM engineers stand in front of the U–6 that housed the first operational ARDF platform. (H. Jaffe)

Keeping the antennas from coming loose in flight became the initial challenge. It was even a matter of discussion that the Saigon newspapers should be checked regularly to see if they contained any stories on falling antennas.

The ARDF system consisted of two dipole antennas on the leading edge of each wing connected by cable to a Receiver Radio R–390 housed in the fuselage. Instead of having an antenna within the plane, the aircraft itself acted as the direction finder. By flying with the plane's wings and antennas at right angles towards the transmitter, the pilot allowed the operator to take a series of bearings that resulted in a fix. The operator's success depended upon the pilot's ability to keep the aircraft pointed at the target while reading his gyrocompass. In areas without prominent features, such as over dense vegetation, the pilot had to deploy at a greater than usual distance from the target to obtain a recognizable reference point.

In April 1962, the 3d RRU demonstrated its confidence in ARDF when it submitted a plan to locate, identify, and destroy the Viet Cong communications net. After receiving word of US Ambassador to South Vietnam Frederick E. Nolting's approval, LTG Paul D. Harkins, Commander, US Military Assistance Command, Vietnam (COMUSMACV), passed a sanitized copy to the Chief of the Joint General Staff, Republic of Vietnam Armed Forces whom President Diem had identified as his point of contact for sensitive information. However, based on their own past experience with ground-based direction-finding, the Vietnamese understandably reacted less than enthusiastically. The plan called for the 3d RRU to mount ARDF operations against the Central Office of South Vietnam, which controlled the Communist political and military activity in the South. Staging from Qui Nhon on the central coast and Da Nang to the north, aircrews flew two U–6s during a 4-day operation in mountainous regions under hazardous flying conditions. On 27 May, the Republic of Vietnam Armed Forces responded to the fixes with air strikes, successfully destroying a command post.



An initial attempt to configure ARDF in a helicopter ended in failure.

The 3d RRU had its own communications center in Saigon.

Success At Last

A year after its arrival in Vietnam, the 3d RRU was beginning to make the impact it had originally envisioned. Much of the success could be attributed to ARDF, which eliminated many of the problems previously associated with ground operations. The ARDF operator and equipment could get close enough to the target transmitter with reasonable safety. One aircraft moved fast enough to cover a vast area and did not require a network of direction finders. ARDF also offered quicker response to the tactical commander's requirements in a fluid situation. However, it was ARDF's ability to precisely target the enemy that made the difference in driving other forms of intelligence gathering, such as reconnaissance, and that led to follow-up by artillery, air strike, and ground operations. Finally, ARDF gave the ARVN, and later the US forces, the advantage of surprise, essential during airmobile and rapid entry operations. (It should be noted, however, that in these early years, the ARVN still did not take full advantage of the new source of intelligence.) For its contributions as the ground war escalated, the 3d RRU was presented the Meritorious Unit Commendation in February 1963—the first unit to be so decorated in Vietnam.

The speed with which the first ARDF platforms were deployed to the field could be attributed to their being assembled "in-house" from available resources. Because the original system was relatively simple and the hardware already in existence, ASA required no large outlay of

"One of the biggest historical disadvantages to any counter-insurgency program has been the inability to locate guerrilla concentrations. The direction-finding activities of the 3d Radio Research Unit have provided this headquarters with a vital intelligence advantage previously unavailable to any US or friendly tactical force."

LTG PAUL D. HARKINS, COMUSMACV

The twin-engine U–8 equipped with navigational gear gave the 3d RRU an ARDF platform with greater versatility.

research and development funding from Department of the Army. Consequently, ARDF progressed as rapidly as new platforms were required. During 1963, ASA added two U–8 "Seminoles" to its ARDF fleet. Although the U–8's airframe kept the platform from producing as accurate fixes as the U–6, the Seminole would quickly emerge as the workhorse in the Army's ARDF fleet. The twin-engine aircraft gave the 3d RRU an "all-weather" capability for the first time, and the extra cargo space allowed for installation of navigational gear, eliminating dependence upon visual sightings of landmarks. The aircraft also covered more target areas faster and could be flown at higher altitudes—important in mountainous regions. The bottom line was that the U–8 offered greater versatility and thus greater productivity.

Tan Son Nhut Airfield served as home base for the 3d RRU's aircraft and as headquarters for the 3d RRU's Aviation Branch, which was responsible for managing the growing ARDF mission. On a temporary basis, ASA pilots also flew missions from other airfields. In early 1963, the 3d RRU created a second permanent base for air operations at Phu Bai, 10 miles south of the ancient capital of Hué and approximately 450 miles north of Saigon. ARDF operations at Phu Bai were initially limited to the dry season that lasted from April to October.

At the same time the Army's ARDF program was getting off the ground, the Air Force was laying out long-range plans of its own. However, leadership at the Department of Defense expressed serious reservations regarding the Air Force's proposal until their concerns were alleviated following discussions with ASA engineers. Still, it would take time before the Air Force could deploy a viable system. In the interim, ARDF remained an Army story.

The SABERTOOTH School in Saigon was used for training ARVN signals intelligence personnel.

"These huts probably withstood the weather many years before they were sent in there with the AN/TRD–4, and now they are just rotting. At three of the sites the ARVN and the site advisors erected a bamboo hut right over the other hut."

CWO3 FRED NEWELL, JR., SIT OFFICER, 3d RRU

Training The ARVN

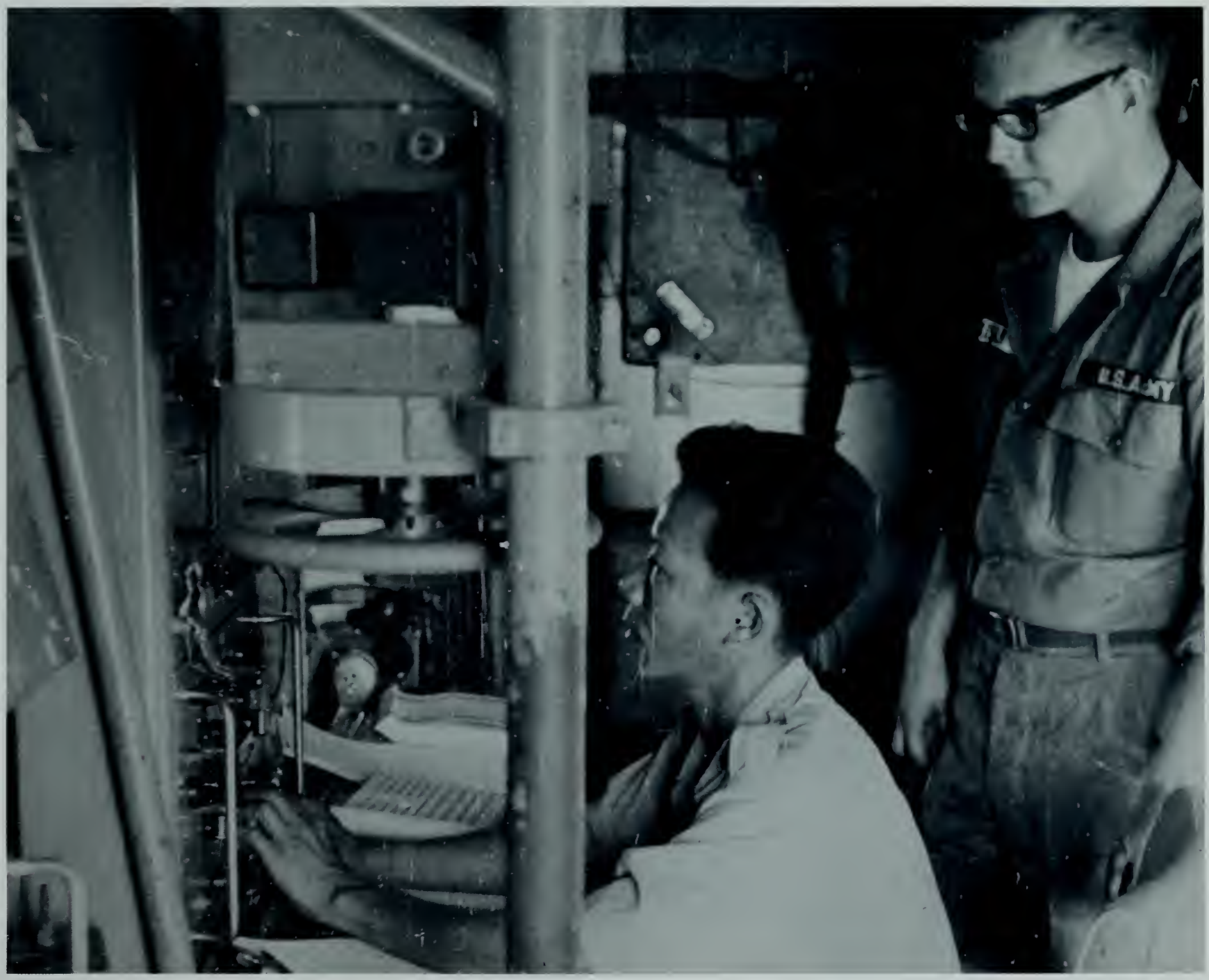
The 3d RRU's mission of running a cryptologic school for their South Vietnamese counterparts was short-lived. After its opening in September 1961, the SABERTOOTH School completed only two cycles of instruction in basic SIGINT skills. Approximately 70 students graduated from the course plus another 75 from instruction in equipment familiarization, before difficulty in identifying personnel for security clearances caused classes to be suspended for 8 months. During the wait, the 3d

RRU proceeded to transfer its training equipment to the ARVN, and by April 1963, the South Vietnamese assumed complete responsibility for the training center. Assisted by a handful of 3d RRU advisors, ARVN instructors conducted classes only whenever sufficient numbers of cleared students were available. In late 1964, an advanced course in intercept and direction-finding was offered for the first time, but the results proved disappointing. Almost half of the operators failed to copy Morse code at the minimal rate of 25 words a minute.

The WHITEBIRCH MRDF net furnished an early opportunity for joint operations. ASA believed that by adding four ARVN outstations, the accuracy of the net could be improved. At each of these new substations, the 3d RRU provided supervision and, for the first time, shared use of its TRD–4A direction finders. By June 1962, 3d RRU personnel were down to manning only two of the WHITEBIRCH outstations. Consequently, ASA could now devote more of its resources to ARDF and the establishment of a second independent MRDF net with a much longer baseline.

In September 1962, Unit 15, the ARVN COMINT element, expressed interest in jointly participating in the 3d RRU's ARDF program. This set off a debate between US officials in Saigon and Washington over how much technical information should be exchanged. In light of recent improvements in Viet Cong communications security procedures, many feared that shared secrets were being leaked to the enemy. Rebuffed, the South Vietnamese simply began a program of its own. This led US officials to reverse their early stance and to agree to fund four platforms. However, over time, the South Vietnamese would fail to emerge as an important player in ARDF.

Although Unit 15 had tripled in size from 1960 to 1962, it continued to suffer from a lack of direction and support from senior ARVN officers. One of the major reasons was that Unit 15 had to compete with the larger ARVN Signal Corps for qualified individuals. Both fell under the control of the Office of the J6, Joint General Staff (JGS), but the J6 regarded Unit 15 as an unwanted step-child and was reluctant to transfer personnel with the necessary technical skills to the COMINT side. When the Office of the J7 was established in March 1963, it assumed total command and control of COMINT, but it failed to bring about an immediate solution to the personnel problem. Still the 3d RRU welcomed this attempt on the part of the South Vietnamese as a step in the right direction and seized upon the opportunity to further encourage Unit 15 by helping to develop a new internal table of organization and equipment. As part of its assistance package, ASA transferred 15 trucks with S–144 shelters, 20 tape recorders, and 21 PRD–1 direction finders. However, what was lacking was any acknowledgement by the South Vietnamese of their need for technical improvement. The culture, the political system, the lack of leadership, and absence of personal skills all worked against success. The fact that there was a steady stream of US advisors rotating in and out also didn't help to bring the message home.



A member of the 3d RRU looks over the shoulder of an ARVN direction-finding specialist, symbolic of ASA's advisory role in the war.

Communications Security

Even before the arrival of the 3d RRU, a handful of Army Security Agency personnel were already in Vietnam engaged in fulfilling the command's other major mission—communications security. In 1959, questions were raised as to the state of security of military communications being used by American advisors. These concerns eventually led MG Charles J. Timmes, Chief, MAAG–V, to request assistance from ASA. In late 1960, a six-man team of the 104th USASA Detachment was sent TDY to Vietnam to monitor military circuits. The team quickly discovered that for all practical purposes the United States/Republic of Vietnam military radio nets were operating without adequate COMSEC. Their report disclosed that some US military advisors had failed to use one-time encryption pads even once during their entire tour. As a result, COL Walker, Chief, USASAPAC, ordered the issuance of crypto equipment to MAAG–V elements, recommended procedural changes in the transmission of messages, and established control over call-sign and frequency assignments.

Specialists of the 7th RRU based out of Saigon monitor MACV communications for security violations.

Nine months after its arrival in country, the 3d RRU received authorization to establish its own COMSEC mission and proceeded to allot five soldiers to the task. The 3d RRU's effort was elevated a month later when a COMSEC team of the 104th Detachment on TDY departed Vietnam leaving behind most of its monitoring equipment. To cover the communications of the widely dispersed US military advisers, the 3d RRU's new COMSEC Section created mobile teams. The first of these two-man teams was tasked with monitoring the MAAG–V Advisory Team 1 at Da Nang. Besides supporting US advisors, COMSEC personnel also trained the ARVN in the use of cryptographic materiel furnished by the United States. Over the next year, the 3d RRU COMSEC element continued to expand, eventually reaching 18 personnel.

On 1 March 1963, the 101st USASA Security Detachment (known initially within country as

the 7th RRU) was organized, ushering in the second phase of ASA COMSEC operations in Southeast Asia. Subordinated to the 3d RRU, the 30-man unit assumed the mission of the former COMSEC Section and subdivided itself into headquarters, security monitoring, and control/analysis elements. The 7th RRU was physically located at the Joint General Staff Compound next to the building housing the 3d RRU's COMINT operations. The creation of the 7th RRU greatly expanded the use of mobile teams to cover MACV elements located throughout South Vietnam. Although there were on-going problems in scheduling either air travel or armed convoys between sites, the 7th RRU was still able to field 10 COMSEC teams by the end of 1963.

By late 1964, it was apparent that the 7th RRU had nearly exceeded its capabilities; the unit's personnel were logging long hours in trying to meet their heavy monitoring schedule. To help alleviate the workload, 16 more soldiers were assigned and another 14 placed on TDY from the nearby 104th USASA Security Detachment. Within months, the ASA COMSEC effort in Vietnam had doubled in size, and the 7th RRU was gradually acquiring the manpower and equipment needed to cope with its ever-expanding mission.

Special Forces

ASA's fielding of special operations units in the early 1960's paralleled the Army's increased reliance on Special Forces to fight counterinsurgency war. By 1962, ASA had organized Special Operations Detachments (SOD) to support each of the Army's four Special Forces Groups. Later that same year, Department of the Army outlined the type of role ASA would play in special warfare operations. The SODs could provide COMINT and COMSEC to US Special Forces and help train indigenous personnel of friendly countries. However, shared COMINT could not normally exceed the classification level of "SECRET" and under no circumstances would training of foreign personnel be conducted at a higher level.

Actual fielding of special operations detachments proved difficult. Details on what specific type of support the SOD should provide and what exact form that support should take still

ASA had its own organic detachments trained to support the Army's Special Forces.

ASA Special Forces experimented with a variety of manpack intercept and direction-finding equipment.

had to be ironed out. While creating the SODs, ASA attempted to integrate a number of missions within a small detachment by cross training personnel, by reducing layers of command, and by attaching the unit to its parent organization for logistical purposes. In several instances, ASA drew upon lessons-learned of the 3d RRU, such as emphasizing the use of manual Morse operators (frequently referred to as "ditty-boppers") who possessed language skills. However, upgrading language proficiency did not prove easy, and interpreting and applying security regulations remained major obstacles. Finally, there was an absence of lightweight equipment for mobile operations. While awaiting development of new systems, ASA turned to purchasing off-the-shelf receivers, but even here the procurement process faced protracted bureaucratic delays.

"Much of our information came from the 400th SOD, a Special Forces unit flown in to run test missions for us to determine how close they could get to the border in order to find better intercept sites."

SFC ROBERT J. SMISEK, OPERATIONS SECTION, 3d RRU

Special Forces were among the first advisors that the US deployed to Vietnam. However, it took some time before ASA could allay the concerns on the part of national authorities regarding possible compromise of secrets while conducting special operations in Vietnam. In the end it was agreed that ASA Special Forces personnel would not carry technical material with them other than what they had developed during the operation itself. Before distributing any intelligence, the SOD would be responsible for sanitizing it for references to any specific COMINT source and would forward copies of all released information to the local Special Security Office (SSO) in Saigon and to the 3d RRU. (The SSO system, which was totally independent of ASA, oversaw the handling and distribution of compartmented information throughout the SIGINT community.)

In February 1964, the 400th USASA SOD deployed a team for a 120-day field test in Vietnam. By the time they were ready to redeploy, the team had confirmed that the Viet Cong were using voice communications and recommended that the ARVN's Unit 15 should follow up. (The exercise also pointed out a paucity of fluent linguists within the SOD.) For the next 2 years, personnel of the 400th shuttled back and forth to Vietnam on one-of-a-kind assignments. These missions provided an opportunity to test direct support to tactical forces and represented an important milestone in shaping ASA's future assistance to Special Forces. Besides operational support, 400th teams also advised ASA planners at the new Phu Bai site on defensive measures and tactics and helped train the station's personnel in the use of weapons.

ASA's Special Forces initially lacked portable equipment and were required to buy systems off-the-shelf.

Detachment J

In January 1962, the 3d RRU received authorization for 21 officers, 4 warrant officers, and 356 enlisted men. A major reason for the increase in manning was the establishment of the Mobile Detachment at Da Nang, near one of the existing South Vietnamese intercept sites. The detachment consisted of an M–292 mobile van that possessed both manual Morse intercept positions and a direction-finding capability—all targeted against selected Viet Cong in the northern provinces and North Vietnamese ground and naval communications. Although collection results at Da Nang represented a real improvement from the past, growing concern over North Vietnam's support of the Viet Cong led to planning for a site even closer to the northern border.

In April 1962 the 3d RRU dispatched a team of three intercept operators to Phu Bai, 10 miles south of Hué, to determine how well targets could be heard. Upon receipt of positive readings, ASA decided to relocate its Mobile Detachment. Although the new site lay 450 miles north of its parent unit, the detachment was near the Phu Bai airstrip and adjacent to Highway 1, allowing the station easy access to logistical, security, communications, and technical support, but more importantly, the area provided excellent reception of the desired signals. However, high winds and sand storms delayed construction, and much of the equipment such as the M–292 vans, which could not readily negotiate the mountainous stretch of road leading from Da Nang, had to be flown

The 3d RRU Mobile Detachment was initially located at Da Nang.

"The channel marker for the Phu Bai direction-finding site was 'Juliet' or 'J.'"

MSG HAROLD E. CASTLE, 3d RRU

Located near Phu Bai, Detachment J was targeted against the Northern provinces and served as a window into North Vietnam.

in. It would take nearly 9 months before the site was ready for occupancy. Upon relocation to Phu Bai in January 1963, the Mobile Detachment became known as Detachment J.

In early 1964, a study of North Vietnamese communications acknowledged a need for expanded coverage. In response, ASA outlined plans for a major field station to be constructed at Phu Bai, designed to accommodate nearly a thousand personnel and a hundred operational positions. However, changes had already begun that would transform the US military presence in Vietnam and reshape ASA's support role. As these historic events began to unfold, Phu Bai found itself at center stage.

Phu Bai also served as home to a detachment of the US Marine's First Composite Radio Company, which was based out of Hawaii. Phu Bai offered the Marines a forward area for COMINT training under the auspices of the 3d RRU. Among the targets of interest to the US Marines were those of the North Vietnamese navy and their reactions to US patrols in the Gulf of Tonkin. (The purpose of these so-called Desoto patrols was to assert freedom of navigation in international waters and to collect photographic and hydrographic information.) On 2 August 1964, Marine operators at Phu Bai accurately foretold of a pending attack by the North Vietnamese on the US destroyer *Maddox*. If such attacks occurred again, the White House warned North Vietnam that there would be consequences. New SIGINT warnings by Phu Bai telling of apparent North Vietnamese plans for more naval attacks and the subsequent response of the destroyers *Maddox* and *Turner Joy* to unknown and unseen enemy vessels on the night of 4 August provided sufficient justification for President Johnson to ask Congress to endorse an expanded role for the American military in South Vietnam by passing the Gulf of Tonkin Resolution.

Enlisted quarters at 39 Hai Ba Trung in Saigon.

Members of the 3d RRU render honors to the flag-draped coffins bearing their fellow soldiers, killed by a Viet Cong detonated bomb in February 1964.

An ASA analyst operating in the field near Pleiku.

Eventually, 3d RRU soldiers found housing in a compound near Tan Son Nhut Air Base. (Note the memorial constructed to honor ASA fallen in foreground.)

"The very best soldiers, or let me say the most highly intelligent, were in ASA. . . . ASA acquired quite a lot of people who weren't particularly interested in avoiding the draft but wanted to do their duty by their country so they volunteered for Agency work. . . . "

COL JOHN J. MCFADDEN, CDR 509th RR GP

The 198th Infantry Brigade arrived in country in December 1966. In time, ASA would have 27 units in direct support of combat forces. (National Archives)

"We were the first detachment of this type to be sent over there and we were the first to be committed. We ran into more bumps and grinds than those that followed."

SSG RICHARD W. HURLBAT, 404th RR DET

The year 1965 opened with the Republic of Vietnam reeling from a series of military setbacks and a deepening political crisis. At Binh Gia, the Viet Cong launched a division-sized attack against the ARVN, and for the first time, the North Vietnamese Army sent its troops into battle near Dak To in the Central Highlands north of Kontum. Terrorist attacks had also stepped up, and among their targets were installations having a strong US presence. It was becoming evident to American policymakers that the existing level of US aid was insufficient to prevent South Vietnam from collapsing. In light of these developments, General William C. Westmoreland, Commander, US Military Assistance Command Vietnam (COMUSMACV) recommended to his superiors that US Army and Marine ground forces, together with supporting air and naval forces, be sent to South Vietnam and adjacent waters.

The Army Security Agency had two battalions available for deployment: the 303d ASA Battalion (Corps) at Fort Wolters, Texas, and the 313th ASA Battalion (Corps) at Fort Bragg, North Carolina. (Their total strength stood at 1,927, an 80 percent fill, due in part to the number of individual soldiers already in Southeast Asia.) The 303d ASA Battalion provided COMINT, COMSEC, and EW support to the III US Army Corps and its major subordinate commands during field exercises and contingencies. The 313th ASA Battalion performed a similar role for the XVIII Airborne Corps. (For example, in April 1965, the battalion deployed its Company A in support of the 82d Abn Division during the US intervention in the Dominican Republic.) The only other tactical asset stationed in CONUS was the 403d ASA Special Operations Detachment, also at Fort Bragg. The 44-man detachment was attached to the 3d Special Forces Group (Airborne) and served as a "training center" for ASA personnel assigned to other SODs overseas.

The present authorized ASA force structure was insufficient to support all divisions and independent brigades. This left ASA planners with the substantial task of standing up additional types of direct support units (DSU) and reorganizing existing ones to function in the Vietnam target environment. On 3 May, ASA activated the 404th ASA Detachment (Airborne Brigade) in support of the 173d Abn Brigade, the first of the ground combat elements selected for deployment. Personnel and equipment used in forming the 48-man detachment came from Company B, 313th ASA Battalion, stationed at Fort Campbell, Kentucky. On 9 June, the 404th ASA Detachment (temporarily designated Det 1, 3d RRU) arrived in Vietnam and was reunited with the 173d Abn Brigade at Bien Hoa. They would prove to be only the tip of the proverbial iceberg.

The 404th Detachment's compound lay near the Bien Hoa Air Base, 3 km southwest of the city and was composed of tents with wooden floors. Utilizing PRD–1s to provide fixes and conducting manual Morse intercept, teams from the detachment accompanied brigade forces on operations in the field. They also passed on targeting information received from ARDF aircraft and performed low-level voice intercept ("low-level" referred to the echelon of communications being targeted). Because only a handful of its members were jump qualified, the 404th was unable to support the 173d Abn Brigade in what would fortunately turn out to be the lone American parachute assault of the war.

In March 1966, members of the 313th ASA Battalion at Fort Bragg, North Carolina, begin loading equipment—destination Vietnam.

Newly arrived ASA units faced more than the enemy. Weather also posed challenges to equipment and operations as shown here at the 407th RR Detachment compound.

Field Force, Vietnam

The deployment of combat divisions signaled the launching of a new strategy by GEN William C. Westmoreland, COMUSMACV, to defeat the enemy in a ground war. On 11 July 1965, the first elements of the 1st Inf Division arrived. The 1st Brigade, 101st Abn Division followed on 29 July, and the 1st Cav Division closed on An Khe in September. Each of the newly arriving divisions was given its own ASA direct support company, and the 1st Brigade, 101st Abn Division was assigned a detachment. The deployment of US combat units led to the creation of a provisional field force headquarters in the II Corps Tactical Zone (CTZ) on 1 August. As a stopgap measure aimed at providing liaison to the new field force, ASA activated a 29-man element, the 407th ASA Detachment at Nha Trang.

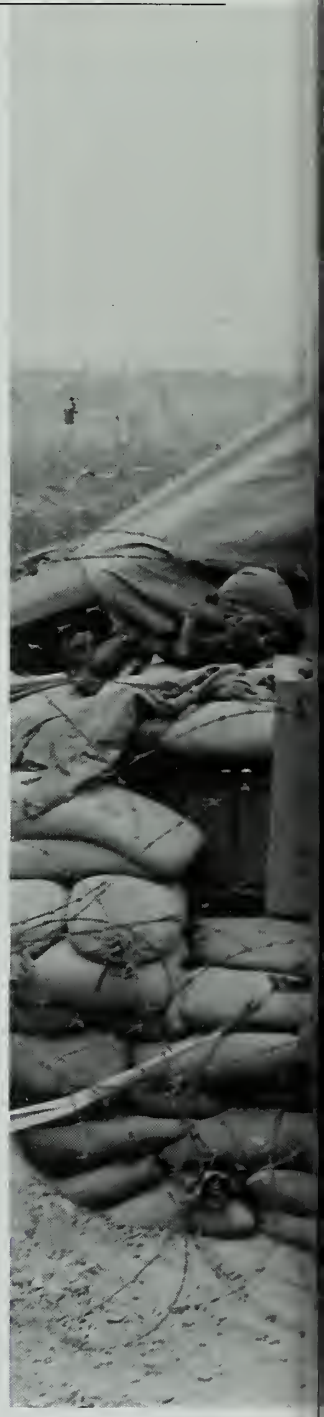
By 1966, the growing numbers of combat units and the launching of major ground operations necessitated greater command and control. In March, I Field Force, Vietnam (FFV) was established at Nha Trang and given operational control over US forces in the II CTZ. At the same time, the II FFV was organized at Bien Hoa in the III CTZ. These field forces were essentially corps-level organizations that also had responsibility for assisting and advising the South Vietnamese. Furthermore, the term "field force" avoided any confusion with the existing South Vietnamese corps tactical zones. Finally, the field force structure offered great flexibility in adding and subtracting combat elements as needed.

"Initially we set up in tents at Camp McDermott in Nha Trang and this was just a wide open area in the middle of a somewhat large open field, called the desert. . . . The Battalion Headquarters Company deployed at full strength of 225 people. The only thing that we were short of was the linguists."

MAJ FRANCIS X. TOOMEY, S3, 313th RR BN

In the March-April time period, the 303d and 313th ASA Battalions arrived in Vietnam to support the newly established field forces. The 313th ASA Battalion was collocated with the I FFV at Nha Trang, and the 303d ASA Battalion with the II FFV at Bien Hoa. While under the operational control of their respective field forces, the battalions were subordinated for administrative purposes to the 3d RRU, which remained the principal ASA headquarters in country. In turn, both battalions commanded direct support units that were allotted on the basis of one ASA company per division and one detachment per independent brigade or armored cavalry regiment. Eventually, each of the battalions also had an operations company assigned to it. These processing companies served as collection managers for the DSUs and played a key role in tasking airborne platforms and in issuing special and summary reports on SIGINT activity within their respective corps tactical zones.

Prior to the buildup of US forces, NSA had resisted any proposal that included deploying ASA tactical support elements to Southeast Asia. Rather, NSA believed fixed intercept sites such as Phu Bai and Saigon to be sufficient. However, the whole debate became moot when ASA direct support units began entering Vietnam as part of the Army's approved force structure. Experience would soon prove a need existed for both the mobile direct support units and fixed stations. The next debate would be over who exactly commanded the COMINT assets. The Army Security Agency's principal unit in country, initially the 3d RRU, maintained administrative control (personnel and logistical support) over all units; and doctrinally, direct support units were under the operational control of their respective tactical command. However, for the first time, fixed sites, such as Phu Bai, were within the war zone, and soon there would be aviation companies. Because these units were in support of theater-wide missions, COMUSMACV eventually took control.



Direct support units, such as Detachment A, 358th RR Company, operated near their parent tactical command.

Direct Support Units

The precedent of having units conducting COMINT/COMSEC in direct support of tactical elements dated back to World War II. During the Korean War, ASA took the practice a step further by adding groups and battalions to the force structure. In both conflicts, there were numerous examples where direct COMINT/COMSEC elements made a significant contribution to success on the battlefield. On the other hand, in World War II, the radio intelligence companies were overshadowed by the code-breaking effort at theater level that was guiding operational planning. During the Korean War, it was a matter of being too little, too late. The first direct support units did not arrive in Korea until late 1950, and another 6 months would pass before the war became stalemated to the point that they could begin making a real contribution.

In Vietnam, ASA's initial challenge would be to tailor each DSU to the tactical element being supported and to the existing signal environment of Southeast Asia. For example, ASA doctrine had not previously allotted DSUs to airborne brigades. This meant that detachments had to be carved out of existing units and given an entirely new organizational structure. ASA planners configured the new detachments at the lowest possible manning level, resulting in a 48-man unit structured to provide maximum mission support, but dependent upon

A soldier of the 265th RR Company copies traffic from inside a bunker. One survey showed that the direct support units were responsible for approximately 90 percent of the COMINT products received by the local commander. Almost all the rest would come from corps-level cryptologic resources.

". . . I cannot overstate our case for the Direct Support Unit. COMINT from the DSUs is by far our most important source of intelligence. If DSU support were not available, the timeliness of this most perishable product would either be lost or degraded to a point where it might be useless."

LTG STANLEY R. LARSEN, CG, I FFV

the host command for logistics. Each of the airborne detachments possessed three positions for manual Morse, one devoted to voice intercept, and one for COMSEC monitoring.

The next challenge was to construct a DSU for an airmobile division. In CONUS, Company C, 313th ASA Battalion (10th RRU) had been in support of an infantry division. However, when selected for assignment to the 1st Cav Division (Airmobile), the company's authorized strength was cut almost in half and its operations subdivided into two parts. First, the company established a centralized manual Morse intercept and analytical effort that utilized R–392 receivers removed from ¼-ton vehicles, modified, and remounted on locally fabricated tables at the An Khe base camp. These operational positions were used to indirectly support the division as part of the larger on-going COMINT effort within the CTZ. The second half of the 10th RRU's operations consisted of three voice-intercept teams ready for immediate deployment with troops in the field. For battalion-size or larger operations, a mobile manual Morse position could be tapped to target enemy communications that couldn't be copied from An Khe. It soon became evident, however, that the 114-man company was simply too light. This eventually led to adding additional resources.

Company B, 313th ASA Battalion (11th RRU) exemplified the most common type of DSU, in support of an infantry division. The company originally consisted of a headquarters element with subordinate platoons designated for COMSEC, communications, and collection/jamming, but prior to deployment the unit was stripped of its EW, ELINT, and VHF intercept capacity, all of which had been designed for a European scenario. The revamped 168-man company supported battalion or larger size operations by receiving, processing, and recording ARDF results; conducting voice intercept; and manning three manual Morse intercept positions. The 11th RRU was also tasked with providing COMSEC assistance to the 1st Inf Division.

With weapons in hand, a 3d RRU crew prepares to board a U–6 "Beaver" aircraft at Tan Son Nhut Air Base on an early ARDF mission. (H. Jaffe)

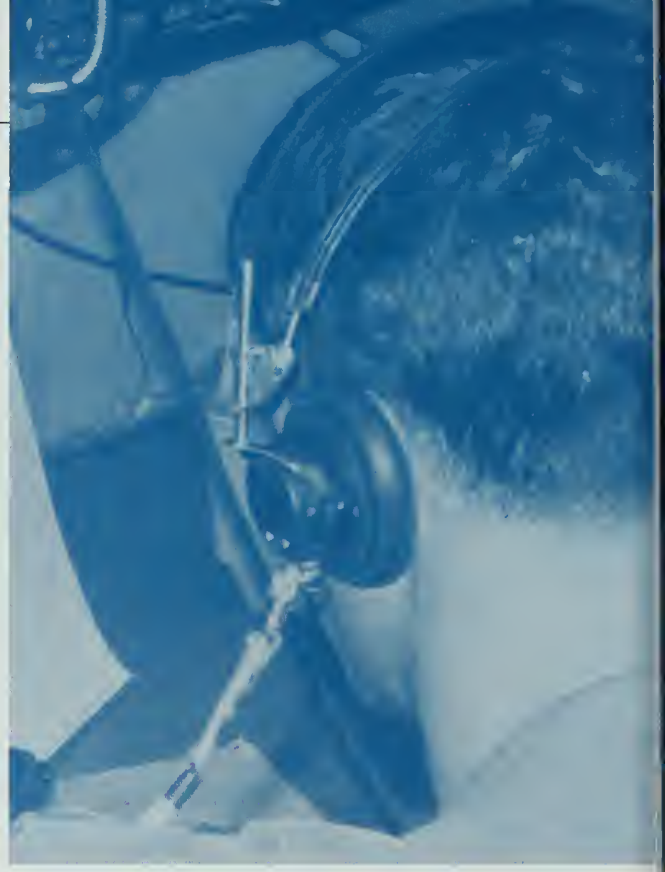
"The intelligence produced by your units was a clinching factor in the decision to launch this operation. Subsequent events confirmed the accuracy and timeliness of the intelligence produced by your units. . . . "

LTG LEWIS WALT, CDR, III MARINE AMPHIBIOUS FORCE

Operation Starlight

The deployment of US combat forces led to new demands for ARDF support. During early 1965, seven additional U–8s were sent to Vietnam under Project SEVEN ROSES. This was followed by CHECK MATE, a procurement package for 17 more aircraft (7 U–6s and 10 U–8s). As US troops entered the ground phase of the war, ASA had a total of 30 aircraft on hand. To manage these new resources, the 3d RRU formed aviation detachments in each of the four corps tactical zones. An ARDF mission began with the J2, MACV sending a tasking message to either the operations officer at the 3d RRU in Saigon or to his counterpart at the 8th RRU (formerly Detachment J) at Phu Bai. They then would assemble the necessary technical background data needed by the operators and deploy the aircraft to satisfy the requirement. Upon completing their missions, the aviation detachments reported the ARDF fixes back to the 3d RRU or 8th RRU, where the information was sanitized and forwarded for tactical exploitation.

On 18 August 1965, US Marines launched the first large-scale American operation of the war on the basis of intelligence provided by the 3d RRU and 8th RRU. The combined air-sea-land attack entrapped a large portion of the 1st VC Regiment on a peninsula near Chu Lai, a hundred kilometers southeast of Da Nang. Although the Marines encountered heavy resistance and suffered losses of their own from an enemy who sought concealment in caves and tunnels and then attacked from behind,



STARLIGHT was considered a major success in the opening round of the expanded ground war. More than 600 of the enemy lay dead, and the American press treated the operation as a major victory. The operation was also notable because of the successful application of close tactical ARDF support. Staging from Phu Bai, 3d RRU platforms provided continuous fixes on the terminals of the 1st VC Regiment and its subordinate battalions. The information was then passed through the 8th RRU to the 3d Marine Division. These fixes reflected enemy locations and movements that permitted the Marines to make adjustments by bringing continued pressure to bear on the Viet Cong forces.

The success of Operation STARLIGHT led the Joint Chiefs of Staff to approve a third procurement package for 41 additional aircraft (Project WINE BOTTLE). The operation also greatly influenced COMUSMACV's decision in January 1966 to give priority to ARDF resources being used in a close tactical support role. ASA support units could in the future directly tip-off ARDF platforms that would then relay back fixes and target information. By using one-time pads to secure their communications, aircrews cut the delivery time from up to 24 hours down to approximately 3 hours. Soon Direct Support Units were receiving 85 percent of their fixes before the aircraft had landed. In October 1966, permission was granted for use of a different type of one-time pads that permitted transmission of information at the SECRET level. Despite these improvements, the one-time pads were still not considered user friendly and failed to allow for sufficient clarification.

As the use of ARDF in a direct support mode continued to evolve, there was still a demand for general search missions. In such instances, ARDF aircraft were used to help develop potential targets within a specific geographical area. Information regarding enemy transmitters was reported back to the direct support unit for follow up by ground collectors.

ARDF Coordination Center

In keeping with his decision to utilize ARDF for close tactical support, General Westmoreland indicated that a requirement existed for "150 U–6/U–8 ARDF aircraft or equivalent systems." The escalating demand for ARDF had a number of far-reaching consequences. For the first time, the US Air Force became a major player in ARDF in Vietnam. The Army and Air Force agreed among themselves that a need existed for both direct and general support types of ARDF platforms and that the Army should contribute 57 U–6/U–8s and the Air Force an equal number of C–47s. However, control of ARDF soon became a major concern. Were ARDF platforms cryptologic assets or were

"Everybody wanted those resources [ARDF aircraft] responsive to them, under their control. However, they were too valuable an asset to diffuse in that manner. I believed that we could get the best effect by concentrating or massing them, with Special Intelligence support in priority operational areas."

MG JOSEPH A. MCCHRISTIAN, J2 MACV

ARDF Coordination Center

Major General Joseph A. McChristian, J2 MACV, established a jointly-manned ARDF Coordination Center to task both Army and Air Force platforms.

they tactical systems? MG Charles J. Denholm, CG, USASA, urged GEN Creighton W. Abrams, Jr., Vice Chief of Staff, US Army, to support the position that ARDF was a "special platform" that could not be divorced from the total SIGINT system. However, the Joint Chiefs of Staff issued guidance that real-time responsiveness was the ultimate goal and that operational control of ARDF resources should be assigned to the overall military commander, in this case, COMUSMACV.

In the past, the scarcity of ARDF resources had been a mitigating factor against committing them to small-scale tactical situations. When MG Joseph A. McChristian became J2, MACV, he further tightened control of ARDF and also acted to end the tug-of-war between the Army and the Air Force as to who should be in the driver's seat when it came to tasking and coordinating ARDF missions. In June 1966, he established a jointly-manned ARDF Coordination Center (ACC) in Saigon. Although the Army (3d RRU) and Air Force (6994th Security Squadron) each retained control of its aircraft, the new center assumed responsibility for translating requirements from combat commanders into taskings once they were approved by the J2, MACV. Furthermore, the ACC monitored, evaluated, and reported the results of all ARDF missions.

At the working level, there was good rapport and cooperation between ASA and the USAF Security Service. Each made a unique contribution to the common goal of supporting the warfighter. Because the PHILLIS ANN platform did not require maneuvering to take a bearing and the size of the C–47 permitted a greater number of collection positions on board, the Air Force systems were much more productive than those of the Army. Initially, however, fixes taken by the Army platforms proved to be more accurate. Thus the ARDF Coordination Center tended to assign direct support missions, particularly those of a high priority, to the Army side of the shop and gave the Air Force responsibility for general search. It was the old question of quality versus quantity. Both were important. While Air Force platforms made rapid progress in the area of accuracy, ASA justified its mission by pointing out that its total cost (aircraft, fuel, maintenance, mission gear, personnel) per fix remained a fraction of that of its sister service.

"I have found the ASA soldier more resilient and...is better equipped to roll with the punches. Age and schooling are certainly factors in this. . . . We don't have major problems. If we do, the man losses his clearance and is transferred out. . . . "

MAJ DAVID J. WOEHR, CHAPLAIN, 509th RR GP

Main gate of the 509th RR Group at Davis Station. The group controlled widely dispersed ASA elements from the Delta to the DMZ. (A bandaged tiger cub served as the symbol of the 509th RR Group.)

The 509th Radio Research Group

In mid-1965, ASA's command and control in Vietnam was relatively simple. A total of 1,487 personnel were distributed among three units: the 3d RRU (606), the 7th RRU (54), and the 8th RRU (827). (The 3d RRU continued to serve as the command element.) But the next 9 months brought the arrival of direct support units and with them new challenges. Given no increase in personnel authorization or realignment of responsibilities, the commander of the 3d RRU had to now divide his attention between fulfilling his own operational mission and making sure that DSUs were meeting the needs of their combat commanders in the field. To resolve the command and control issue, ASA discontinued the 3d RRU on 1 June 1966 and redistributed its mission and resources among four new organizations. Headquarters, 509th Radio Research Group which assumed administrative control of ASA assets in Vietnam; a new Radio Research Communications Unit, Vietnam (RRCUV) that served as ASA's in-country communications center; and the 175th RR Company which took over the 3d RRU's collection and processing missions.

The fourth and final unit created was the 224th Avn Battalion (Radio Research). Activated on 1 June 1966, the battalion and its four subordinate aviation companies replaced the 3d RRU Aviation Branch and its four detachments. The 138th Avn Company (RR) was located at Da Nang; 144th Avn Company (RR) at Nha Trang;

146th Avn Company (RR) at Tan Son Nhut, Saigon; and the 156th Avn Company (RR) at Can Tho. In addition, the 144th Avn Company had platoons at An Khe and the Holloway Army Airfield at Pleiku, and the 138th Aviation Company had an element at Phu Bai.

By September 1966, the 509th RR Group had settled into a command structure that would remain virtually unaltered for the next 5 years. The group had under its direct control three battalions and a field station: the 303d and the 313th RR Battalions, which supported the field forces; the 224th Avn Battalion; and the 8th RRU (soon to be redesignated the 8th RR Field Station). In addition, the 509th commanded three smaller elements that performed countrywide missions. The 101st RR Company (formerly the 7th RRU) directed the 509th RR Group's COMSEC effort, and the RRCUV fulfilled ASA's unique communications requirements. The third and final unit, the 403d RR Special Operations Detachment, would soon arrive in country to provide direct support to the 5th Special Forces Group.

Aside from a small Processing, Analysis, and Reporting Branch, the 509th RR Group acted primarily as an administrative headquarters to provide overall supervision and support to the 20 to 30 ASA units that were further broken down into detachments and teams located at remote sites and fire support bases. At any given time more than a hundred such elements could be scattered throughout South Vietnam. Besides organizational fragmentation, there was the problem of continuous fluctuation as some DSU's moved from one corps tactical zone to another. Compounding all of this was the challenge of distance that separated the various elements from one another and the 509th Group. For instance, teams of the 407th RR Detachment operating along the DMZ were more than 500 miles away from Saigon.

The 403d RR SOD

In June 1966, the fragmented intelligence-gathering activities of the Special Forces in Vietnam took a significant step forward. Up to then, the Special Forces had made do by using internal resources to conduct intelligence-gathering at a basic level. The restructuring of intelligence within the Special Forces began with the arrival of a 110-man contingent equipped to provide counterintelligence, interrogation, and analytical assistance. The other half of the intelligence picture was completed in September when 51 soldiers of the 403d RR SOD deployed from Fort Bragg to conduct signals intelligence.

From the beginning, the 403d RR SOD faced the formidable task of supporting a Special Forces group whose assigned strength would eventually reach 3,500 personnel scattered among 85 different locations. Given its limited resources, the 403d RR SOD attempted to direct COMINT support to the lowest tactical level possible while maintaining maximum mobility and flexibility. By providing support

"Instead of waging guerrilla warfare against conventional forces in enemy territory, the US Special Forces troops were to find themselves attempting to thwart guerrilla insurgency in 'friendly' territory."

COL FRANCIS J. KELLY, AUTHOR *US ARMY SPECIAL FORCES, 1961–71*

ARDF tip-off and manual Morse positions being manned by members of the 403d RR SOD at Ban Me Thuot.

Like other direct support units, the 403d RR SOD was initially committed to establishing short range direction-finding nets.

on a mission-by-mission basis and by emphasizing analytical and reporting assistance, the unit would play a much larger role than indicated by its size. (The 403d RR SOD also gained some added resources by abandoning its COMSEC mission.)

Throughout its stay in Vietnam, the 403d RR SOD's Headquarters/Control Team was collocated with the 5th Special Forces headquarters at Nha Trang. Here, the special operations detachment performed limited analysis and integrated COMINT into the Special Forces' operational planning. The 403d RR SOD also exercised administrative control over its subordinate teams, but depended totally on the 5th Special Forces for all non-ASA logistics and transportation—an arrangement that proved highly satisfactory. Troop billeting conditions ranged from simple wooden structures to immense underground concrete bunkers, leaving most ASA teams situated only a short distance from their operational positions. Despite the remoteness of many of these locations, ASA believed that adequate security measures were in place to safeguard its sensitive mission from enemy attacks.

During its first year in Vietnam, the 403d RR SOD focused upon targets in the northern II CTZ area. From Kontum, which served as a major Special Forces base, the 403d RR SOD manned manual Morse intercept and ARDF tip-off positions, deployed direction-finding/voice intercept teams, ran the local DF net, and performed second and third echelon maintenance. When tasked, the Kontum element could also deploy a small intercept team in support of mobile operations. Normally, low-level voice intercept teams consisted of two or three linguists, but the 403d arrived with only one soldier proficient in Vietnamese. To help new linguists recognize commonly used words and phrases, the detachment obtained voice tapes from the 330th RR Company. The benefit was immediate. On a number of occasions when high-priority support for strike forces was required, the 403d obtained linguists on loan from nearby ASA units. For some time, the Special Forces had hired local villagers since their proven loyalty was often greater to their US employers than to the Saigon government. Following suit, the 403d began utilizing indigenous personnel who proved particularly adept at understanding local Viet Cong transmissions and regularly predicted impending enemy attacks, locations of their units, and on occasion, operational plans.

The intercept vans parked in a row represented the consolidation of resources at the 175th RR Company, CMA for the III CTZ.

"The CMA is the focal point of COMINT operations in the battalion. Allocation of all cases was controlled by the CMA, who had complete authority on allocation of cases to all intercept units throughout the battalion."

LTC NORMAN J. CAMPBELL, CDR, 303d RR BN

Collection Management Authorities

When the 3d RRU was discontinued in June 1966, its operational mission was transferred to the newly organized 175th RR Company. With only 275 authorized spaces, the company was a third the size of the 8th RRU. National authorities proposed that the resources of the 175th RR Company be expanded, but in a counter proposal, ASA successfully argued for the deployment of the 330th RR Company, a processing support unit with a manning level of 350 spaces. This would save having to build up the existing facilities in Saigon and Phu Bai, and by basing the 330th RR Company at Pleiku, it would fill a gap in coverage of targets. Strategically locating each of the three processing elements in a different tactical zone also solved the problem of how to effectively manage the growing number of cryptologic resources in Vietnam. Initially, the 330th RR Company was named Collection Management Authority (CMA) for the II Corps Tactical Zone, and the 175th RR Company as CMA for the III Corps Tactical Zone. The 8th RRU would eventually serve as CMA for the northern tier of provinces, and a fourth and final CMA (335th RR Company) was created in the Delta region (IV CTZ).

On paper, the processing companies were to have been used solely in support of the direct support units. However, from the beginning, they shed all pretense of being mobile and assumed the role of fixed sites. Acting as mini field stations in a war zone, the CMA's were responsive to the theater commander General William C. Westmoreland. In contrast to the direct support units, the CMAs performed in-depth processing. They also directed intercept coverage and responded to special consumer

needs, such as performing area analysis. The CMAs issued a series of intelligence and after-action reports and provided technical "feedback" to the DSUs located within their corps tactical zone. In addition, analytical personnel from the CMAs often conducted on-site visits to the DSUs to provide technical assistance. With their own designated communications, the CMAs also served as a switchboard for information being exchanged up and down the SIGINT chain of command.

The CMAs were the glue that allowed ASA to successfully fulfill its mission in Vietnam. By effectively managing the SIGINT resources, the CMAs ensured that the larger interests of the field forces, MACV, and the cryptologic community were satisfied. By exercising targeting authority and providing technical support, they also enhanced the value of the DSUs' support to the tactical commander. Divisions and brigades quickly came to the realization that they could not effectively task their DSUs. A 1967 survey found that only two DSUs were actually utilizing more than 30 percent of their intercept positions in a direct support mode. The remaining units were being tasked by the CMAs. This intercept was fed into the larger SIGINT system that could then indirectly benefit the commander in the field. The Collection Management Authorities also played a critical role in deploying ARDF platforms. In coordination with the ARDF Coordination Center, they helped validate targets, select the type of aircraft needed for a mission, and determine time-over-target.

"COMSEC in Vietnam, among US forces, is terrible, absolutely deplorable—horrible—it practically doesn't exist. . . . Pilots gave coordinates, flight times, targets under attack, mentioned locations of supported Allied units in the clear. . . . Most of the Army divisions were little better."

MAJ EDWIN M. MORRISON, SECURITY OFFICER, G2, I FFV

The Transmission Security Problem

Transmission security had been a problem within US forces since the advent of the telephone and radio. Vietnam was no exception. The biggest obstacle that communications security had to overcome was human nature. Too few communicators actually believed that "Charlie" was listening—although it was common knowledge that the enemy possessed captured US radios. Captured enemy documents indicated that South Vietnamese communications were an important source of information, and prisoners of war revealed that the Viet Cong and NVA forces were regularly eavesdropping. In one instance, an interrogated prisoner reported seeing a group of 8 Chinese on several different occasions carrying radios. When he queried his platoon leader as to their purpose, he was told that they were "Chinese comrades who have come to help us, they speak Vietnamese, English, and Cambodian, and they listen to the radios they carry to let us know what the Americans and Vietnamese troops plan to do."

The advent of rapid moving airmobile warfare only compounded the problem of transmission security. Many commanders in the field reasoned that even if the enemy were listening, they simply could not react quickly enough to take advantage of the situation. One of the division commanders put it this way: "With regard to COMSEC, I had to choose between communicating freely in voice to enable rapid deployment and reaction or losing timeliness of tactical communications and movement through applying full COMSEC measures. I took the risk of COMSEC weaknesses in voice communications to develop the most rapid possible reactions…with our mobility, the enemy could not keep up with the speed of our tactical action and reaction…." This tension between the need for security and the need for timely communications would remain as long as US combat forces were engaged in Vietnam.

Many communicators falsely reasoned that the mobile nature of the war negated the need for COMSEC. (National Archives)

Captured documents and interrogation of prisoners revealed that the enemy was listening.

Transmission security also faced the challenge of convincing communicators that their "homemade" codes lacked security. (The origin of some of these codes could be traced back to the American Expeditionary Forces in World War I.) On one occasion, COMSEC personnel from the 303d RR Battalion demonstrated the inherent weakness of an unauthorized point-of-origin code being used by the long-range reconnaissance patrols of the 9th Inf Division. (Point-of-origin codes were used to relay locations by referencing a position from points left or right and up or down, usually in increments of 1,000 meters.) In a briefing to the division commander, a COMSEC specialist from the 303d illustrated that the improvised code being used by one of his patrols could be broken in less than 4 minutes.

During Operation SILVER BAYONET, the 1st Cav Division and ARVN forces launched a pursuit operation against two regiments of the North Vietnamese 325th Division. While the operation was in process, the 101st RR Company monitored the 1st Cav Division's communications. The study revealed a high rate of disclosures of communications frequencies, operational plans, and intelligence information. The end result was a decision by the Joint Chiefs of Staff to ship all available voice encryption devices to Vietnam to help stem the tide of COMSEC violations.

"We were monitoring . . . a transportation battalion. . . . The conversation included the time they would leave, how many people they needed, where they were going, and the fact that the troops would conduct a sweep of the area on the way back to Camp Enari. Any analyst could figure what time the B–52 raid would take place."

CPT CONRAD P. SKANTZ, LEADER, 2d PLT, 101st RR CO

A COMSEC specialist from the 303d RR Battalion monitors US communications for security violations. The direct support units brought their own COMSEC assets.

A Failed Solution

The arrival of ASA's direct support units greatly expanded the number of available COMSEC resources. Each of the two battalions was authorized 2 officers and 26 enlisted personnel and up to four positions for COMSEC monitoring purposes. In addition to supporting the field force headquarters, the battalions also oversaw the COMSEC activities of their subordinate companies and detachments. Each company was allotted 19 personnel and from two to five COMSEC positions. However, detachments could contribute only four soldiers and one position to security. All DSU's were responsible for preparing a COMSEC plan for their commander's approval, and most often, it was the emphasis of the commander that spelled the difference between a successful COMSEC program and failure.

Throughout the war, the 101st RR Company (formerly the 7th RRU) remained the principal proponent of Army COMSEC within Vietnam. The company interfaced with J2, MACV, on security policy matters and exercised technical control over ASA's COMSEC mission. From Saigon, the 101st RR Company directed cells based at Da Nang, Pleiku, Long Binh, and Can Tho. These teams were responsible for

monitoring and analyzing MACV communications as well as conducting training in security procedures. They also briefed South Vietnamese forces in the use of cryptosystems on loan to them by the United States.

ASA elements were capable of monitoring only 6 percent of the Army's communications in Vietnam. Furthermore, approximately two-thirds of the effort was targeted against one source—the radiotelephone. This meant that only a relatively small percentage of actual communications violations could be identified. By focusing on procedures, monitors often failed to address the larger issue of exactly how much intelligence could be gained by enemy analysts from all communications sources, both classified and unclassified. Although COMSEC monitoring did not solve the security problem, it did lead to rethinking the issue. In 1966, evidence arose that the enemy was receiving warnings of pending B–52 strikes and that friendly communications might be the weak link. To confirm these suspicions, the 509th RR Group committed a large portion of its COMSEC resources to studying the problem. The findings concluded that it was possible for the enemy to obtain advance notice, determine the general location of a raid, and once the operation was underway, identify a specific target. During one of the monitored calls, the parties even acknowledged that the information being discussed was classified, but continued to converse anyway.

COMSEC personnel also played a limited role in electronic warfare that included deception operations. Imitative communication deception (actual intrusion into an enemy's communications network) was never attempted in Vietnam, but from time-to-time, manipulative communication deception was employed with mixed results. Manipulative deception was the use of one's own communications to deceive the enemy. Already involved in monitoring and performing analysis of friendly communications, COMSEC specialists were tasked with providing technical assistance to deception operations. However, actual cases of electronic deception were few in number and restricted to small-scale operations.

"The fact that the RFP positions continued to operate at all was simply due to good coordination between personnel at the various stations. If somebody had something the other guy didn't have, he'd loan it to him or give it to him. This, of course, didn't always work because everybody ran out from time to time."

CWO–3 RICHARD W. FOOTE, SIT SECTION, 509th RR GP

A member of the 175th RR Company mans a radio fingerprinting position on the right.

Fingerprints and Landlines

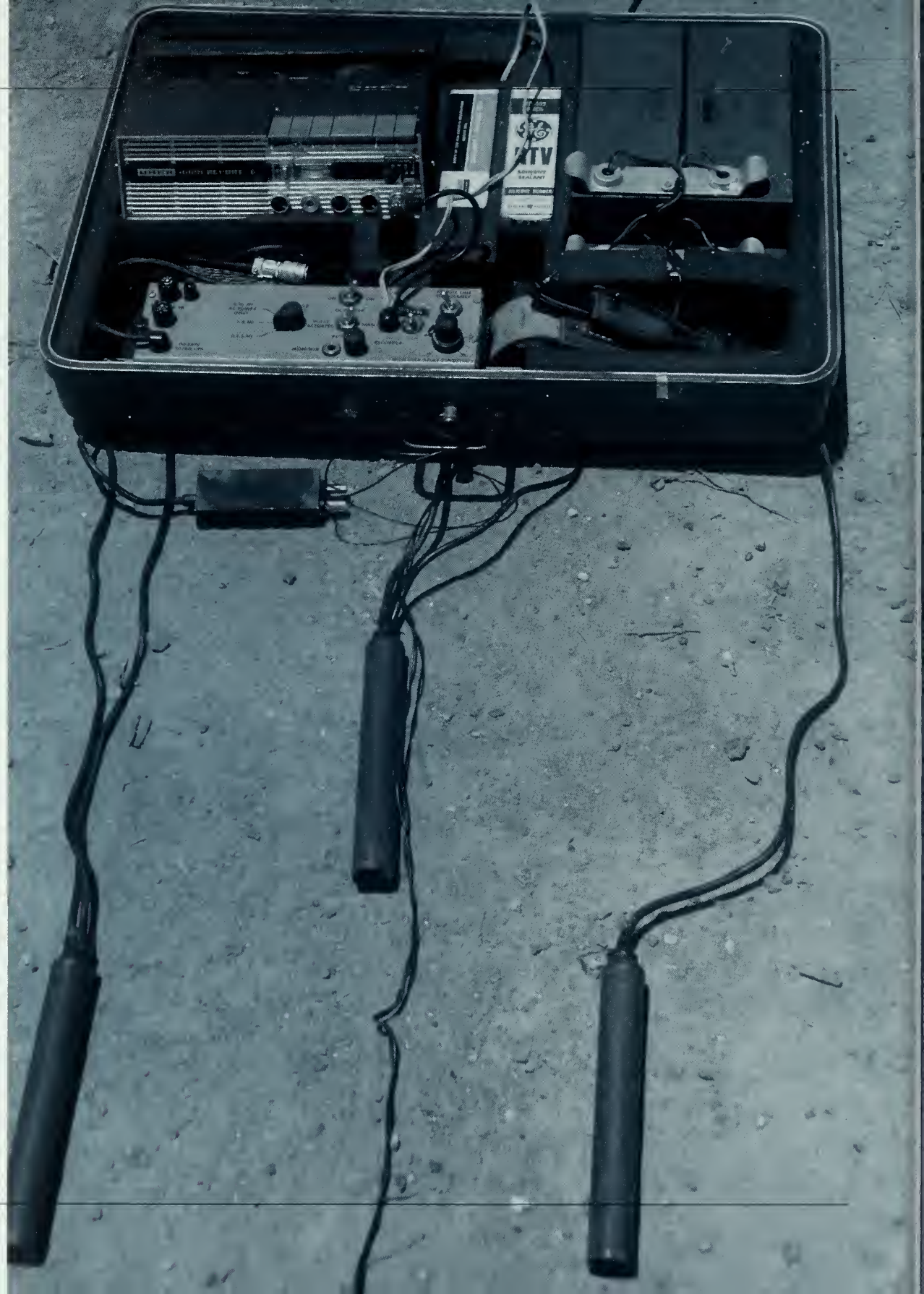
While in Vietnam, ASA found itself engaged in a number of minor projects that consumed a disproportionate amount of its energies. One of the diversions was radio fingerprinting (RFP). First used in World War II, radio fingerprinting involved recording of characteristics (such as power and frequency variations) of an intercepted signal in order to identify a specific radio transmitter. An oscilloscope converted a signal into a visual format that could then be captured on film. To make this happen, the intercepted signals had to be of sufficient strength. Furthermore, an experienced operator was needed to interpret the results. What many did not fully grasp was that radio fingerprinting was never meant to stand alone, but rather to be used in conjunction with other identification tools. RFP was far from an exacting methodology, and in Vietnam, it would face added challenges.

In 1962, less than a year after arriving in Vietnam, ASA decided to deploy an AFSAV–37 radio fingerprinter to its Saigon intercept site. Twelve months later, a second piece of equipment arrived at Phu Bai. Together, these systems covered targets in the Delta and the northern provinces, but had significant problems identifying low-powered transmitters being used by the enemy in central Vietnam. More than 10 years old, the AFSAV–37 began to quickly show its age. A hostile environment of

dust, humidity, and heat was taking its toll on the sensitive equipment, and atmospheric interference and the presence of weak signals further reduced RFP's effectiveness. Mounting repair problems soon convinced ASA that a new generation of equipment was a necessity.

Landline intercept was another mission that demanded an expenditure of a disproportionate amount of energies and resources on the part of ASA. The targeting of landlines dated to the Civil War, when both the North and South frequently tapped telegraph lines for the purpose of intelligence gathering. During World War I, opponents monitored radiotelephone lines that ran among the intricate trench systems that bordered "no-man's-land." However, the lack of a stable front in World War II furnished the US Army with few opportunities. In the summer of 1951, the Korean War, like World War I, had become stalemated along the 38th Parallel, leading ASA to revive the technology. For example, a landline-monitoring site was established on "Heartbreak Ridge."

Given this historical background, ASA naturally began searching for possible targets in Vietnam. In March 1966, a small team made up of personnel from the 3d RRU and the 400th ASA SOD explored the feasibility of ground return intercept at several widely dispersed locations. The equipment consisted of two UHER–4000 battery powered tape recorders,



One of a number of landline kits sent to Vietnam in an attempt to provide smaller, more user-friendly equipment.

battery powered special-purpose amplifiers, and 3-foot brass ground stakes. Although no Viet Cong telephone conversations were recorded, the team did bring back a number of important lessons learned. It was impossible to deploy such a system under the cover of darkness, and any future operations would have to be conducted in remote areas. At the same time, ASA operations personnel expressed serious reservations as to whether or not information gained from such intercept would ever outweigh the risks of exposing installation teams to enemy attack.

Mobile DF

In 1965, short-range direction-finding (SRDF) received renewed emphasis with the arrival of ASA's direct support units, all of which possessed PRD–1s. At the height of the war, the DSUs had some 36 PRD–1 teams organized into local direction-finding nets. Each substation searched for a signal or was tipped off by the control station. After locating a signal, the PRD–1 operator took a bearing, recorded it on the azimuth scale disk, and then passed the information to net control by using radio and one-time pads for security. Control then plotted all the bearings and retransmitted the "cuts" (two intersecting bearings) or fixes to its immediate headquarters where an "SRDF Spot Report' was released electronically to all DSUs within the respective corps tactical zone.

Many of the same problems that had handicapped SRDF in the early days in Vietnam continued to plague the effort. Weighing over 50 pounds, the PRD–1 was far from portable. This led to attempts to make the system more mobile. Under Operation MASHER/WHITEWING in early 1966, PRD–1 teams were airlifted from place to place in a "leap-frog" fashion, hoping to pinpoint the target. Later, there was even an attempt to operate SRDF teams from inside helicopters. In the end, however, these efforts demonstrated more ingenuity than they did long-term solutions. Tactical commanders could not expend the personnel needed to protect SRDF teams so they were often relegated to firebases. This often led to the base line (distance between the extreme outstations) being longer than the desired 6 to 10 km. Keeping the SRDF teams in the rear also altered their mission. Instead of serving as a target acquisition tool, they supplemented other systems, such as PPS–4 personnel detectors, in providing force protection. Furthermore, the signal environment that existed around firebases often proved a hindrance to the SRDF mission. These outposts

Given adequate protection, PRD–1 operators, such as this one from the 303d RR Battalion, could target enemy transmitters.

"To begin with I had to instruct them on how to operate this DF. We used 05H's as the operators on DF and they would look at the equipment and say 'what's this.' We would have to tell them that is a DF set."

SP5 DUANE M. GAGNON, DET 1, 16th RRU

had more than their share of radiating and reflecting materiel such as antennas, concertina wire, vehicles, and shell casings.

The constant movement of the PRD–1s between sites was a leading cause of equipment outage, and the lack of air transportation only exacerbated the problem. In one instance, members of the 403d RR SOD were forced to rely upon elephants for transport. The age of the equipment placed added strain on a logistical system that could not maintain an adequate supply of parts, such as vacuum tubes. This led to cannibalization of existing PRD–1s, further reducing the number on hand. However, the lack of qualified operators was the final nail in the coffin. On the basis of its early experience with SRDF in Vietnam, ASA eventually relegated most of their PRD–1s to supporting intercept operations. In the process, school-trained, direction-finding specialists (05D) were replaced by manual Morse operators (05H) who possessed only on-the-job training and lacked the essential skills.

DANCERS and Small Steps

The only joint training conducted at the SABERTOOTH facility between 1965 and 1967 was a class on conversational English, taught in hope of promoting increased communications and leading to better understanding between the ARVN and US SIGINT personnel. By 1966, the 509th RR Group had given up on jointly manning the WHITEBIRCH DF net with the South Vietnamese, having failed to convince Unit 15 (COMINT) personnel of the necessity to perform such elementary tasks as preventative maintenance, continuously manning their positions, and responding to all DF flashes. The situation deteriorated to the point that if a US advisor was not present, ARVN operators would literally walk away from their DF positions, consequently no credence could be placed in line bearings being received from an ARVN outstation. However, ASA leadership would be unsuccessful in its efforts to extricate the command from having any future involvement with the WHITEBIRCH net.

Although the Vietnamese failed to achieve the necessary proficiency in direction-finding, they did contribute in other ways. The lack of qualified linguists led US cryptologists to turn to the use of native Vietnamese—Project DANCER. In 1964, the 3d RRU received permission for the first time to use locals, but it was not until June 1965 that equipment was actually in place for the program to be implemented. ARVN

"There is a definite need for more DANCER personnel. Because they are native they do a better and more rapid job than our people. Their transcriptions of...low-level voice were consistently superior."

CWO–4 WILLIAM R. MACDONALD, 175th RR CO

South Vietnamese linguists or DANCERS would become invaluable assets for ASA's voice intercept mission.

DANCERS were to be assigned to ASA elements, and civilian DANCERS employed at the South Vietnamese SIGINT center in Saigon. ASA would provide the ARVN linguists with tapes of plain text Vietnamese voice intercept for transcription along with the necessary technical data such as call signs, with which to accomplish their tasks. However, the project proceeded at a much slower pace than originally envisioned. During the first 3 months of 1966, DANCERS processed some 923 tapes of voice intercept, but only 11 were identified as being enemy communications. By 1967, DANCERS numbered 22, of which 12 were at the 8th RR Field Station. Many of the early DANCERS lacked basic grammar skills and suffered from low morale because they experienced feelings of isolation and discrimination at the hands of their US hosts.

Since its inception in 1961, the South Vietnamese COMSEC organization, the 1st Radio Control Company (known as Unit 16), lagged behind its sister communications intelligence organization (Unit 15). In October 1965, Unit 16 restructured itself into a headquarters element and four mobile platoons; one for each of the corps tactical zones, thus mirroring the 101st RR Company. Although for the first time the unit possessed all the equipment necessary to monitor the Republic of Vietnam Armed Forces communications, serious shortcomings persisted. Many of the South Vietnamese COMSEC personnel still did not know what actually even constituted a transmission violation. Few had adequate typing skills, and if they did, they didn't have access to typewriters, leaving copying to be done by hand. And even if a security violation was identified, the finding lost all relevance after making its way through a cumbersome reporting system. To make matters worse, ARVN units viewed Unit 16 as a sort of a "communications police" because officers committing violations received fines, while enlisted personnel could be reduced in rank, all of which did not encourage cooperation.

A soldier from Unit 16 monitors ARVN communications fo security violations.

"As a division commander, SI was the one kind of intelligence that would actually and always cause me to move elements or maneuver units based on it. Anytime a significant movement of an enemy regiment in the operational area was reported, I made corresponding immediate movements, based on such intelligence."

MG WILLIAM E. DEPUY, CG, 1st INF DIV

ASA personnel entered and exited Vietnam through either the 509th in Saigon or the 8th Field Station at Phu Bai. (Pictured is the processing center at the Saint-George Hotel in Saigon.)

Manual Morse intercept positions dominated ASA's effort in Vietnam. (The manual Morse bay of the 328th RR Company.)

A low-level voice intercept team in the field.

The Headquarters Building of the 224th Avn Battalion is shown in the left foreground; the 509th RR Group's headquarters is across the street with overhang.

In the aftermath of the enemy's Tet 68 offensive, support for US involvement in Vietnam waned, eventually leading to the exit of US forces from Vietnam. (National Archives)

"I recall COL Faulk, my G2, in talking to me about it afterwards said that this group asked him, 'What were major intelligence failures?' He told them that he didn't really know what the intelligence failures were, but he simply hoped that next time he would have as much intelligence. . . ."

LTG FREDERICK C. WEYLAND, CG, II FFV

Beginning the night of 30 January 1968 and into the next morning, a combined force of approximately 84,000 Viet Cong and North Vietnamese troops launched a coordinated attack country-wide during the traditional holiday period surrounding the lunar new year—Tet. Besides the capital of Saigon, the enemy mounted over 100 assaults against provincial capitals, autonomous cities, and district capitals. Although the Allies defeated the enemy in the field, Tet 68 proved to be the watershed event of the war. It led to the disenchantment of the Nation's decision-makers, US news media, and eventually the American people themselves. Support for the war would soon begin to wane, ultimately leading to the withdrawal of US forces.

The intelligence failure of Tet 68 resulted from J2, MACV's underestimating the enemy's strength in South Vietnam and miscalculating how the war was progressing. The rate of infiltration down the Ho Chi Minh Trail was a key factor in determining the order of battle. MACV had come to rely on SIGINT as the basis for its analysis of the flow of men and materiel, but only after the information was confirmed by interrogations of prisoners, debriefings of defectors, and exploitation of captured documents. This took time, creating an information gap. Still COMINT was able to provide ample warning of the Tet buildup. On 30 December 1967, pattern analysis found enemy forces to be generally well away from populated centers with some along South Vietnam's border. (In pattern analysis, dots on a chart were used to represent fixed enemy radio terminals or other information indicators of unit locations. Over time, these began to suggest possible courses of action.) By 15 January, a movement to the more populated areas was underway, "like iron filings being attracted to a magnet," and on the eve of the attack, analysis showed the enemy encircling the major population centers. Based on this information, Allied forces were placed on full alert for the night of 30 January. What COMINT did not show was the scope, fury, and nature of the attack. Two prime targets, Saigon and the city of Hué, were heretofore untouched by the war. The possibility of a rocket attack was not unthinkable, but the prospects of a ground assault were believed slim. When the enemy employed messengers and maneuvered on prearranged plans, COMINT was blind. It could not reveal what the enemy did not choose to transmit.

ASA units were not immune from the fighting. On 31 January, several companies of VC, backed by mortars, launched an all-out assault on the Vietnamese Joint General Staff Compound housing the 509th RR Group's operations. Enemy soldiers penetrated the compound's defensive perimeters and came within 100 meters of the WHITEBIRCH Building before being killed or turned back. Landline cables belonging to the RR Communications Unit at Tan Son Nhut were severed, delaying the dissemination of SIGINT products. On 18 February, rocket fire hit Tan Son Nhut Air Base, wounding some 25 ASA soldiers. At Phu Bai, a rocket attack destroyed a portion of the trailer complex and damaged several buildings and antennas belonging to the field station.

One of the great stories that emerged from Tet was the awarding of the Legion of Merit to Edward W. Minnock, Jr., a 19-year-old private whose intercept team was isolated near Tuy Hoa City. After analyzing the in-coming intercept, Minnock formulated a plan to thwart an enemy attack against the city and sold the local combat commander on a successful counter-offensive maneuver.

The Army outfitted a Navy P2–V "Neptune" aircraft as an electronic warfare platform (CRAZY CAT/CEFLIEN LION).

"Then he [General Westmoreland] asked a question. 'Well, what do you think about jamming the enemy up in Khe Sanh, if we have to?' I told him from the way I looked at the enemy's communications. . . that when they were on the offense, they had very little need for communications, per se."

COL WILLIAM T. RILEY, JR. CDR, 509th RR GROUP

A ¾-ton mounted MLQ–24 jammer. Like the rest of ASA's electronic warfare resources in Vietnam, it remained silent.

Electronic Warfare

ASA was responsible for the Army's EW mission. However, a judgement call was made early in the war that intelligence derived from COMINT far outweighed any possible short-term benefits of denying the enemy his ability to communicate. Apart from a handful of isolated exceptions, this policy was never altered. One such exception occurred in late 1965 when the 5th Special Forces Group reported that the enemy planned to broadcast a message in the area of Pleiku with the intent of inciting local Montegnard tribesmen serving with the Civilian Irregular Defense Group. After obtaining clearance from the US Embassy, GEN Westmoreland, COMUSMACV, directed the 3d RRU to jam the broadcast. By simultaneously using transmitters located at Nha Trang and Pleiku, ASA jammers successfully overrode the foreign voice signal.

That same year, the US Pacific Command sponsored an electronic warfare conference to outline a strategy to disrupt the communications of low-level Viet Cong targets. One of the recommendations was for the Army to deploy an EW platform. The Joint Chiefs of Staff approved, assigning ASA the responsibility for fielding Project CRAZY CAT (later renamed CEFLIEN LION). However, no existing Army aircraft could sustain the weight and size of the AN/MLQ–29 countermeasure systems being proposed, causing ASA to turn to the Navy's RP–2E "Neptune." In continuous operation

since 1945, the Neptune was used for maritime patrol missions and had even set a non-refueling long distance record of 11,000 miles. Its ability to stay aloft for 14 hours at a time made it particularly attractive for use as an EW platform. Because the aircraft was the only one of its kind within the Army's inventory, the five CEFLIEN LION platforms required specially trained pilots and a unique logistical support system.

The 1st RR Company (Avn) was activated for the sole purpose of performing the CEFLIEN LION mission, but when the company arrived in Vietnam in June 1967, it immediately ran into strong opposition. The most vociferous objection to jamming came from the J6, MACV, who feared the enemy would retaliate by launching attacks against US communications sites or that jamming would "slop-over" and disrupt friendly comms. Members of the cryptologic community also expressed concerns that jamming would jeopardize the exploitation of enemy targets. Only the strong interest shown by GEN Westmoreland, COMUSMACV, kept the project alive.

The closest the CEFLIEN LION platforms ever came to deploying in an electronic warfare mode was during the Battle of Khe Sanh. In early 1968, NVA/VC forces attempted to wrestle the northern province of Quang Tri from the control of the Allies. As the intensity of the battle increased, GEN Westmoreland called together several advisors to discuss the possibility of jamming the communications of enemy forward observers. However, those who had argued against such a course of action in the past prevailed once again. In 1968, the 509th RR Group needlessly updated its inventory of ground based jammers by adding four AN/MLQ–29 sets. Like the systems they replaced, the MLQ–29s sat in storage where they continued to gather dust along with their operational plans.

Airborne Collection

The Army's first attempt at airborne intercept in Vietnam was short-lived. In January 1966 ASA deployed an SSQV–6 system housed within a "Caribou" CV–2B: a twin-engine, medium tactical transport aircraft capable of carrying as many as 32 passengers. Besides its lift capacity, ASA engineers were attracted to the aircraft's ability to cruise for over 5 hours at a speed of 135 knots. Nicknamed PATHFINDER, the platform had space for 4 HF/VHF intercept and search positions plus a HF direction-finding capability. The project was terminated early when an agreement was reached between the Army and the Air Force that all medium-size transport aircraft, including the CV–2B, be transferred to the latter. Although PATHFINDER failed to demonstrate that it was the final answer, airborne collection did show enough promise to merit further exploration.

The next attempt involved a U–1A "Otter," a single-engine, light tactical-transport aircraft that could carry up to two crew members and 2,000 pounds of cargo. The first of the platforms, nicknamed CAFÉ GIRL, arrived in Vietnam in March 1967. CAFÉ GIRL utilized the standard dipole-antenna configuration and the AN/ARD–15 direction finder, but also came equipped with manual Morse search. The next two U–1As, nicknamed LAFFING OTTER, represented an upgraded CAFÉ GIRL and were primarily employed in a collection mode with an auxiliary ARDF capacity. On 12 February 1969, hostile fire downed a LAFFING OTTER approximately 1.5 miles inside Cambodia. US rescue attempts were aborted when a firefight broke out between the crew of the Otter and nearby enemy forces. Following their capture, the crew.was fortunately turned over to Cambodian authorities. When US officials finally had the opportunity to debrief the released ASA soldiers, they were relieved to learn that all documents and equipment had been destroyed and that security had not been compromised.

The U–1As provided ASA with its first successful airborne collection platform in Vietnam.

Aboard a LAFFING OTTER, an ASA operator turns the dials to begin copying.

"During my recent visit to South Vietnam I observed and was told by our senior commanders that COMINT, primarily airborne direction finding and airborne intercept, is providing 80 to 85 percent of the intelligence used in planning and operations against the Communist Forces in South Vietnam . . . "

FINN J. LARSEN, DEPUTY DIRECTOR, DOD (DDRE)

In April 1968, MACV directed ASA to deploy its five CEFLIEN LION platforms in a collection mode. Designed for communications jamming, the CEFLIEN LION system also had the capability to gather COMINT in both the VHF and HF range. (One had to collect signals before one could target them for jamming.) Operational plans were drafted to use the platforms against the ongoing infiltration of enemy personnel, supplies, and equipment into South Vietnam. In its new role, CEFLIEN LION would emerge as the Army's most prolific airborne collector. For all intents and purposes, CEFLIEN LION was an extension of the 8th RR Field Station at Phu Bai. After receiving daily briefs on pending B–52 strikes in the area of operations, the crew of the P–2E aircraft would take off at 0400 hours from Cam Ranh Bay and head north along the coast before turning west in the vicinity of Phu Bai/Hué. Following the DMZ, the plane completed a long arching orbit. Whatever information operators could transcribe was immediately passed to the 8th RR Field Station for processing and distribution to consumers. Five to eight hours later, the aircraft landed at Da Nang for refueling. Here, soldiers from the 8th waited to courier the day's intercept back to Phu Bai. The crew then departed for home by retracing their earlier flight pattern south along the coastline to Cam Ranh Bay.

Housed in a UH–1D helicopter, the LEFT BANK system operated in direct support of the local commander.

LEFT BANK/ LAFFING EAGLE

LEFT BANK was unique among ASA's airborne systems. First of all, it was housed in a UH–1D helicopter, not a fixed-wing aircraft. More importantly, LEFT BANK represented a joint effort between ASA units that packaged the systems and the supported divisions that furnished the choppers. In the summer of 1967, the 1st Cav Division provided three "Hueys" along with pilots, while its direct support unit, the 371st RR Company, contributed operators and systems. (The 4th Inf Division and the 374th RR Company worked out a similar arrangement.) LEFT BANK was also one of a kind in that it came under the direct operational control and tasking of the division commander. Initially designed as a complete direct support package in the HF spectrum, LEFT BANK contained an AN/ARQ–27 direction-finding system, an RO–278 radio fingerprinting position (RFP), and a voice recorder. One operator reported losing the RFP film out the chopper's open door and having to hang upside down on the helicopter's skids to retrieve the classified material resting on the top of the jungle canopy. Within 2 years of becoming operational, the finger printer was eliminated altogether because of erroneous readings caused by excessive vibrations. Its removal actually enhanced the platform's overall effectiveness by simplifying operations and allowing the intercept position to be used solely in support of direction-finding.

"... the LEFT BANK went out, obtained a target, and then became a small command center in the sky directing the attack. In fact, the Cav became so reliant on this technique that when the LEFT BANK was no longer available their effectiveness was severely hampered."

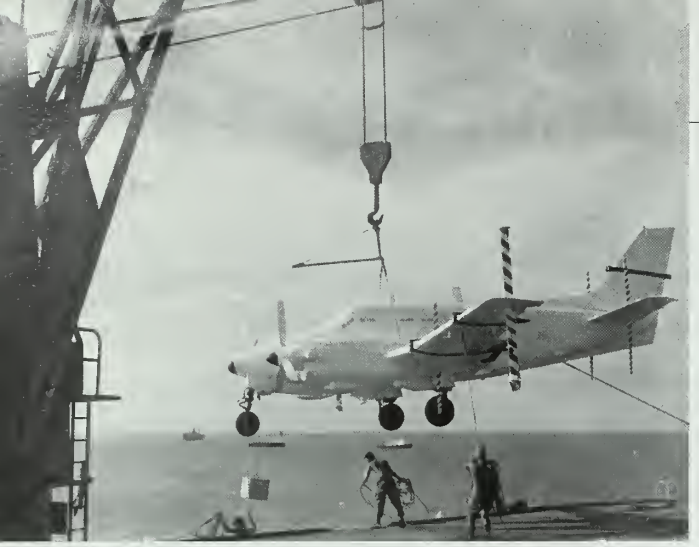
LTC DONALD E. GRANT, CDR 303d RR BN

What allowed LEFT BANK to achieve its full potential was the development of a concept of operations that integrated the platform with the firepower and mobility of airborne warfare. After a LEFT BANK pilot called in a fix, an observation chopper worked the area at tree level for evidence of movement, trail use, or bunkers. If personnel were spotted, a gunship rolled in, and troops possibly inserted. In 1969, two platforms of the 4th Inf Division flew some 315 missions (1,215 hours); the average radius of the 438 fixes was even smaller than that of fixed wing platforms. In the month of January alone, LEFTBANK was responsible for six B–52 strikes, firing of 1,200 rounds of artillery, and insertion of troops that accounted for 300 of the enemy being killed. However, LEFT BANK missions experienced their share of risks. ASA suffered the loss of two crews when enemy fire downed their helicopters.

In December 1968, ASA deployed the first of its 16 U–21D "Ute" aircraft. The LAFFING EAGLE platforms were designed to perform both direction-finding and airborne collection, but delays in the development of the AN/ARD–23 (V–Scan) DF system forced the platform to be employed initially for VHF voice and HF manual Morse intercept. The LAFFING EAGLE possessed the capability to record low-level voice intercept on tape which could then be passed rapidly by courier to the local collection management authority or by secure voice to a direct support unit. The aircraft could also pass on targeting data to nearby ARDF platforms.

LAFFING EAGLE gave ASA its most efficient collection platform. The U–21D was a smaller, newer, less complex, and mechanically superior aircraft to the CEFLIEN LION P–2E. (The U–21 also demonstrated greater flexibility because CEFLIEN LION had to deploy close to its logistical base.) LAFFING EAGLE was credited with intercepting elements of the NVA 1st Division and their plans for an attack on 22 February—the launch date of the 69 Tet Offensive. LAFFING EAGLE was also the first airborne system to successfully target the low-powered voice transmitters employed by the Viet Cong in the southern delta and hill country.

The radio fingerprinting and voice positions were eventually eliminated from the LEFTBANK platform in favor of improved ARDF.



The arrival of the U–21D LAFFING EAGLE platforms in late 1968 represented an important milestone for ASA in its development of airborne collection and direction-finding.

"Previously we had to land after flying all the way back to Saigon and then send the data over the wire. It was passed through channels to Bien Hoa Base and they had to get it out to the tactical commander. In the new system, using COMUS pads, we could pass the information directly to the ASA direct support unit with the 173d."

SFC MICHAEL R. CUMM, NCOIC PROCESSING SECTION, 3d RRU

Manpower/Navigation/ Communications

Pilots played an important role in intelligence collection. The quality of an ARDF fix depended upon accurately determining the position of the aircraft. Before each mission, pilots received a pre-brief in which they were given the location where the target was last fixed along with other operational details. It was important that they overfly the proper area at the correct time. ARDF training for pilots was originally conducted at the USASA Training Center and School, Fort Devens, Massachusetts, until eventually being transferred to Fort Huachuca, Arizona, to take advantage of better weather conditions and improved on-site maintenance. During the war's peak years, ASA graduated approximately 170 pilots annually from the course.

Initially, visual contact with ground features proved adequate, but cloud cover, darkness, and the lack of distinguishable landmarks precluded total dependence on this method. In 1964, U–8 platforms began to arrive equipped with Doppler navigational radar. Eventually, the Canadian Marconi Doppler (AS/ASN–64) became standard equipment on U–8s, the P–2Es (CEFLIEN LION), and the U–1As (LAFFING OTTER). The Doppler not only turned the aircraft into an all-weather system, but made it possible for the platform to be flown at a higher altitude, thus extending its intercept range. The Doppler also reduced the time a pilot spent continuously following the aircraft's position on a map. But adoption of the Doppler had its drawbacks: the copilot was required to systematically update the system; Doppler errors voided as many as a third of the intercepts; and breakdown of the radar proved to be the number one cause of aborted missions.

Besides navigation, ARDF became increasingly dependent upon the need for secure communications. When an enemy transmitter was on the air for only a few minutes, rapid communications was more than a luxury; it was essential. The ultimate solution lay in the introduction of voice encryption equipment—the TSEC/KY–28 in late 1966. With encrypted voice, delivery time to a supported commander dropped from hours down to as little as 6 minutes. At the same time, overall mission productivity rose because secured voice allowed for clarification of the downloaded information.

Despite these improvements, communication problems remained. Mountainous regions could prohibit tip-off procedures altogether, and the airwaves also became increasingly congested. Ground-to-ground communications, ground-to-air tip-offs, and air-to-ground reporting often occurred on the same frequency, making it difficult to sort out the tip-offs. Within the III CTZ alone, ARDF platforms could simultaneously receive tip-offs from as many as 16 different intercept sites because ground flash stations often could not hear each other's transmissions. Pilots frequently reacted to the incessant verbiage by turning their sets off until they could again stand to put up with the chatter. To help alleviate the problem, the ARDF Coordination Center eventually assigned priorities to different types of traffic and in 1969 resorted to allotting separate flash and reporting frequencies.

Using captured radios, the VC/NVA regularly tried to jam Allies' communications and to enter their nets.

An Unofficial War

From time to time ASA operators engaged in unofficial electronic warfare. To keep a target communicating, individual operators would sometimes temporarily jam an enemy's signal. This caused the targeted transmitter to try and communicate again. In one instance an ASA team working off the USS Benewah, on the Mekong River, obtained permission to undertake sustained jamming. By keeping the enemy broadcasting, the intelligence specialists successfully followed the movements of the headquarters communications element back and forth across the Mekong River until all of its members were either captured or killed by waiting Navy river patrol boats.

If the US Army was reluctant to use EW as a weapon, the enemy was not. To conduct jamming, the only thing the enemy needed to possess was compatible equipment such as

"The only time we let him communicate was when one of our ARDF birds was in the air. . . . We would get an ARDF fix and thirty seconds later here comes gunships. . . . So when he tried to get across [the Mekong], all the patrol boats up river and all the patrol boats down river converged. We got . . . all their radio operators except for one which was killed. . . . "

SFC JAMES W. WOOD, JR. LIAISON TO IV CORPS

Aboard the USS Benewah, an ASA team practiced limited electronic warfare against enemy units operating along the Mekong River.

captured radios and to be in close proximity to the intended target. Enemy operators employed whistling, keying, scratching the mike, or playing Armed Forces Vietnam Network radio programs. One captured document listed the following simple guidelines for VC operators: "When jamming, play with dials, whistle, make noise or simulate sounds if possible, but do not talk."

The enemy also engaged in communications deception by entering Allied communications nets and broadcasting messages in hope that the subterfuge would not be detected. The NVA/VC was known to have successfully used American, Australian, and Spanish accents for the purposes of deception. One US unit reported six such intrusions within a week's time. Typically, the enemy intruders tried to redirect artillery fire and medical evacuations or to order Allied forces to withdraw or to cease fire.

On 6 January 1968, ABC News cameras captured for its nightly broadcast a case of enemy intrusion. Elements of the 9th Inf Division and the 2d Brigade, 25th Inf Division, were engaged in a firefight with VC/NVA forces within 10 miles of the Cambodian border when an intruder, identifying himself as Australian, entered one of the command nets. He urgently requested artillery fire to be shifted as rounds were impacting in his area. In a display of poor COMSEC, US personnel made no attempt to authenticate and continued to converse with the unidentified station. Eventually, the would-be deceiver withdrew from the net once he sensed that the other side had grown suspicious.

The best protection against the enemy's electronic warfare and signals intelligence was simply good COMSEC—the use of proper radio procedures and exercise of discipline within the communications net. Against jamming, a radio operator could employ such countermeasures as relocating his reception site so as to lessen the effect of the incoming jamming signal, ceasing broadcasting altogether, or changing frequencies. Attempting to broadcast on a different frequency was to be used only as a last resort since a jammer could easily find the new signal.

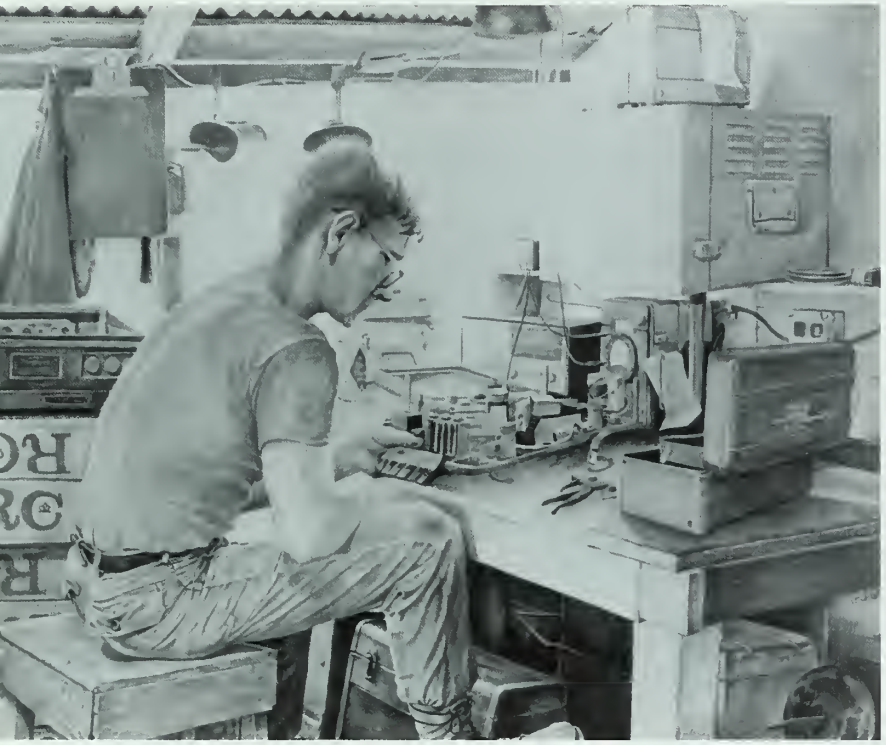
SHORT SKIRT/CAFÉ BLEW

In 1966, a new radio-fingerprinting (RFP) system, Project SHORT SKIRT (later renamed LAFAIRE KNEE), was deployed as replacement equipment at each of the CMAs: the 8th RR Field Station, the 175th RR Company, and the 330th RR Company. The RO–278 worked on the principal of recording an analog picture of the targeted signal on light-sensitive paper. Operators could then develop the image by simply exposing the paper to low intensity ultraviolet light, such as a florescent lamp. The use of paper eliminated the need for chemicals in film processing and permitted multiple copies to be forwarded to different RFP libraries. Despite the advantages of convenience and ease of operation, the RO–278 presented its share of challenges. Unwanted characteristics showed up in the recordings that were eventually traced to improper grounding of

"The value in the radio-fingerprinting system is that it is self-contained within one station. . . . without taking the time that is required for MRDF shots throughout the country to locate entities that have disappeared for a time."

CPT JAY M. WALDMAN, OP OFF, 335th RR COMPANY

the equipment. The quality of the light-sensitive paper was poor and reached the 50-percent degradation point within an hour of having been developed. But the greatest challenge to RFP remained one of management. How to utilize a handful of RFP positions against an unlimited number of targets? Sometimes the collection management authorities placed emphasis on quality of shots; other times the emphasis was on quantity. Maintenance of RFP libraries was also a major concern. One library might contain as many as 10,000 individual shots that required constant screening.



When it came to PRD–1s, good maintenance was critical as shown in this piece of combat art.
(Charcoal by SP4 Wayne A. Salge, member of the 509th RR Group)

Short-range direction-finding remained in Vietnam much longer than the ASA leadership had anticipated. Commanders in the field were reluctant to turn loose assets that they owned and believed were helping to pinpoint enemy troops in their local area of operation. However, cuts and fixes on targets that could not be verified through analysis were of questionable value and could even lead to serious consequences. For example, one commander used SRDF teams as flank protection during combat operations. Another deployed the PRD–1s in defense of his base camp, thereby committing more troops to combat actions. Some of the blame could be attributed to the direct support units themselves who too often lacked a clear understanding as to how to correctly utilize the equipment.

One of the earliest attempts at improving SRDF was an effort to field a manpack, hand-held system to be used by the 403d RR SOD. However, field tests by the detachment revealed major shortcomings in each of the systems, such as the lack of a built-in compass in the RTCV–7A radio receiver that possessed an AT–249 homing antenna. The next piece of equipment to be tested was the PE–484 system, which demonstrated sufficient accuracy, but proved inadequate for the task at hand. It lacked the necessary ruggedness, possessed only limited range, and proved difficult to repair.

In 1968, ASA made a last-ditch attempt to field a system that would solve the SRDF problem once and for all. CAFÉ BLEW was a new mobile direction-finding system designed to provide line bearings on HF and VHF signals, to differentiate between sky and ground waves, and to allow for antennas to be remoted up to 700 feet away. However, test results in Vietnam quickly revealed that CAFÉ BLEW fell far short of expectations. Consequently, in March 1969, MG Denholm, CG USASA, directed the removal of CAFÉ BLEW equipment and ordered, that in the future, PRD–1s no longer be used in a direct support mode. SRDF's legacy in Vietnam would be that its failure had led to the development of ARDF.

Engaged in long-range reconnaissance patrol, MAC–SOG soldiers and their South Vietnamese counterparts were regular practitioners of landline intercept. (A. Berg)

Circus Act

The 509th RR Group served as a coordination center for landline intercept activities in Vietnam. Under Project CIRCUS ACT, the group assumed responsibility for processing and reporting information gained from intercept, conducting training, and whenever security was not a consideration, engaging in the actual setup. Priority was given to training reconnaissance elements such as Special Forces, long-range patrols, Navy SEALS, and

Marine amphibious assault groups, but any tactical unit could request assistance. Compromise of COMINT was not believed to be a problem as long as non-indoctrinated personnel were the only ones performing the line tap.

The Military Assistance Command-Studies and Observation Group (MAC–SOG) was a joint service, unconventional warfare task force engaged in long-range reconnaissance patrols throughout the region. Because MAC–SOG personnel operated in remote areas, it was believed they would be ideal candidates to intercept landline circuits. In October 1966, a MAC–SOG team successfully spliced an enemy landline and attached a monitor, but the operation failed to yield any meaningful intelligence. However, the never-ending demand to expand the intelligence base in Vietnam would continue to drive future experimentation with landline intercept.

Specifically designed for use in Vietnam, the VITACK XR4–100 kit system could be deployed in different modes, including parallel induction and wire splicing. Furthermore, the equipment could be left buried for 7 to 10 days for landlines located in remote areas. The drawback was it resembled a two-piece luggage set and weighed 54 pounds. The 403d RR SOD first tested the VITACK XR4–100 in 1968. During the initial phase of the operation, the US/ARVN team was discovered, and a firefight ensued. Several of the team members were wounded and an enemy soldier killed. It was obvious that what was needed was lighter, less cumbersome equipment and a method for conducting a pre-test to determine if a line was actually active. The 403d RR SODs next tested the XR4–100A, a replacement system, half the size of the original equipment. On the first three attempts, the team had to withdraw under fire even before reaching its target.

"The majority of all wire sightings reported has been in Northern I Corps Tactical Zone which is the area under XXIV Corps control. . . ."

MAJ DAVID B. MULLAN, USAF, NSA PROJECT OFFICER

During its fourth deployment, while in the process of locating the wire, the team was observed and engaged by an enemy platoon. Two members of the team were killed, a 403d RR SOD soldier wounded, and the equipment wound up being destroyed in place to keep it from falling into enemy hands.

For a number of years, Special Forces had attempted to sample landlines with home-made inductive monitoring devices, no larger than a package of cigarettes. Although no documented evidence existed to prove any of these efforts actually bore fruit, the idea of an effective, hand-held device remained popular. In December 1968, NSA engineers finally gave the Special Forces what they had been asking for—the XR–114A, a system weighing 5 pounds that was voice activated and capable of recording up to 2 hours. A year later ASA deployed the XR4–100D surveillance system, which offered even broader applications. This newest piece of equipment came with radio relay and remote command activation capabilities. But despite these technical advances, the J2 MACV's command emphasis, and the 509th Group's attempts to reenergize CIRCUS ACT, success continued to elude the landline program.

Advice and Assistance

Each of the direct support units possessed internal resources to perform COMSEC monitoring, but it was becoming increasingly evident that monitoring by itself was an ineffective means of preventing transmission security violations. During Project COVERALL, the 101st RR Company tried to revitalize the program by monitoring only similar units at the same time so as to present a more accurate transmission security picture, but the time lapse before a follow-up session could be accomplished negated any benefit. (The 101st RR Company alone had responsibility for 142 units.)

By the mid-Sixties, a change in the direction of COMSEC was emanating from the National Security Agency and was slowly working its way throughout the rest of the cryptologic community. The new approach emphasized advice and assistance. The assumption was that if people knew what to do, they would do it. Communicators already recognized the need for safe-guarding information; they just had to be informed of the nature of the threat, given reasonable means to effect security, and shown how. More importantly, the fear associated with the policeman role of COMSEC monitoring did not prevent violations; it actually hindered good security practices.

The security poster at the 328th RR Company was a reminder that ASA could and did monitor all types of communications.

"The efforts of the COMSEC Advice and Assistance Team caused more improvement within these two divisions in a few weeks than the many previous months of communications monitoring. . . . "

US ARMY, VIETNAM MESSAGE, DATED AUGUST 1968

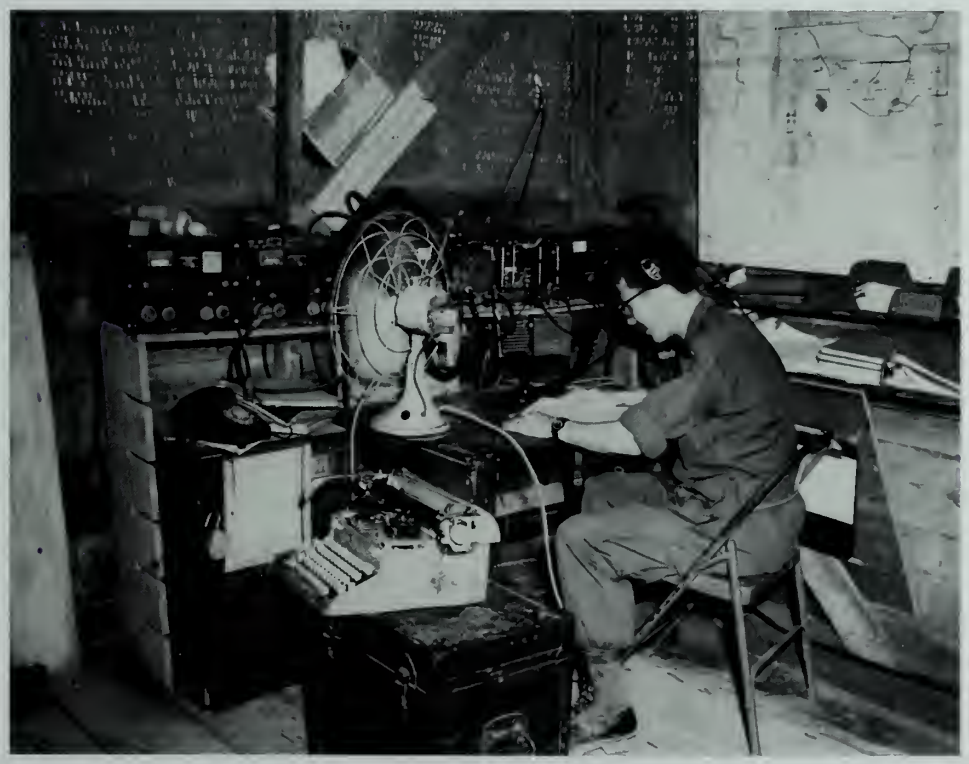
The National Security Agency at Fort George G. Meade, Maryland, was the primary proponent of the new emphasis on advice and assistance. (National Security Agency)

However, advice and assistance was not just a top-down drill. Initiatives also came from below. In February 1968, a team of COMSEC officers from the 303d RR Battalion traveled around the III CTZ to determine the security awareness among US units in the aftermath of the 68 Tet Offensive. They concluded a need existed for a COMSEC Advice and Assistance Team (CAAT) to present classes, to implement security measures, and to work with local COMSEC specialists to improve their skills. Elsewhere, the 313th RR Battalion kicked off Project CORRECT (COMSEC Role Recast) throughout the II CTZ. A letter of introduction from the Chief of Staff, I FFV, preceded an assistance visit by CORRECT team members. Once on the ground, they conducted COMSEC awareness classes, followed 3-4 weeks later by a monitoring team that evaluated a unit's progress.

The road leading from an emphasis on monitoring to focusing on education was not always a smooth one. COMSEC personnel often shifted back to monitoring and analysis because that was what a local commander desired most. Other commanders wanted COMSEC resources assigned on a permanent basis, not just showing up periodically. Some in the COMSEC business believed that even advice and assistance did not go far enough. Operations security, where all types of threats were evaluated, was what was really called for. But perhaps the greatest hindrance to change was the shortage of COMSEC specialists skilled as educators. COMSEC personnel had to know the tactical environment, local communications networks, and the organization of the supported command. By the time a COMSEC specialist acquired the know-how, his tour of duty was up. It would take longer than the US Army's stay in Vietnam for the COMSEC advice and assistance program to become a reality.

"In general, I've seen no great development in COMSEC status since World War II. Although there have been improvements in COMSEC equipment, there is a practical limit to the amount of COMSEC equipment that we need or which can be carried by the combat soldier. In Vietnam, the use of even the KY–38 was not practicable for manpack on the soldier in active combat."

MG JOHN R. DEANE, JR., CG, 173d ABN BDE



A member of the 371st RR Company utilizes a bank of secure voice equipment to tip off a LEFT BANK platform.

Secure Voice

Captured documents revealed that enemy COMINT personnel concentrated on exploiting unauthorized codes and plain text. There was no evidence the enemy ever successfully attacked approved enciphered systems and methods. That is not to say the enemy might not have had success when communicators employed improper procedures, such as when plain text was mixed within an encoded message. In 1968, the 101st RR Company conducted a survey that revealed tactical battalions were employing unauthorized codes 90 percent of the time when passing locations of friendly units over radiotelephone nets. COMSEC specialists even speculated that transmissions in the clear were preferable over "homemade" codes. At least the sender would not be lulled into a false sense of security.

Early in the war, one-time crypto pads where each page was destroyed as it was used were in wide use, but the sheer numbers required proved a significant burden. In 1967, the KAC codes were widely distributed for use at the lower echelons. However, the vocabulary of the General Purpose Codes (KAC–P and KAC–Q) was not always adequate for all types of units. To correct this deficiency, codes were designed upon request for units with special vocabulary. (For instance, artillery units used the KAC–184.) The reception of these speciality codes was generally favorable. In the words of one artillery officer, "It is the first decent code I have seen produced for artillery. Most of the time we get a modified infantry code that doesn't fit our needs."

However, talk persisted among Army communicators that the KAC codes were not convenient. For instance, having to use pencil and paper at night, in the rain, or under actual combat conditions was considered prohibitive, but upon investigation these criticisms proved largely without merit or highly exaggerated. Pilots complained that the vibration of their helicopters made the KAC hard to read. Because this had never been an issue elsewhere, one COMSEC officer commented tongue-in-cheek that "the air currents found in Vietnam must be significantly different." COMSEC personnel were also quick to point out that the often chosen alternatives to the KAC—unauthorized, home-made codes used to encrypt and decrypt coordinates—did not actually save any time. To address the perceived shortcomings of the KAC, COMSEC authorities next issued a wheel code, the CIRCE, which was considered more user-friendly.

Since the Army had become dependent upon voice communications, secure voice equipment was seen as the ultimate answer to transmission security. In 1964, production of the Nestor series of enciphered voice communications (KY–8 vehicular mounted, KY–28 aircraft, and KY–38 manpack) was begun, but over a year passed before the KY–8/38 reached Vietnam in sufficient numbers, and even then few existed below battalion level. The Nestor equipment was sensitive to humidity and heat, and aircraft carrying KY–28s required frequent refitting. However, most of the problems involved the KY–38 because of its weight and bulkiness. The initial solution was to divide the communications gear, connected by a cable between two soldiers. During combat, the weakness of such an arrangement was obvious.

Touchdown

Prior to the deployment of US Forces to South Vietnam, the enemy had concentrated his intercept activities on Vietnamese Air Force and Government communications. However, in 1965 there was a decided shift in priorities. The VC/NVA communications intelligence effort began an intensive training program to produce the requisite number of English linguists to exploit US communications. Through interrogation reports and captured enemy documents, it was known that the VC/NVA was primarily targeting plain language and brevity coded voice communications. It was also commonly known that the enemy was exploiting low-level codes, both authorized and unauthorized. What was not known was exactly how successful they had been. This would change with the capture of an enemy COMINT unit.

On 20 December 1969, in response to a fix provided by a US Air Force ARDF platform, elements of the 1st Inf Division captured a VC/NVA radio intercept unit 3 km north of Ben Luc, in the III CTZ, near the division's base camp at Lai Khe. A South Vietnamese scout noticed a whip radio antenna affixed to a tree limb with a wire leading down into a "spider hole." Having been discovered, an enemy soldier threw out a hand grenade and was quickly killed. However, his comrades were talked into surrendering. Follow-up interrogations revealed the element to be the Technical Reconnaissance Unit A–3, a radio intercept cell of the Military Intelligence Section, Military Affairs Branch, Sub-Region 1. Individual members included the unit commander, one voice (Vietnamese) intercept operator, two voice (English) intercept operators, five manual Morse intercept operators, two manual Morse analysts, and one female nurse. Their dead companion had served as the team's senior analyst.

TAREX (target exploitation) personnel from the 509th RR Group were assigned the task of processing the captured documents and equipment. The TAREX effort was a small one. It consisted of a group of highly skilled human intelligence specialists who had already served a tour with ASA in Vietnam and who were proficient in the Vietnamese language and familiar with the target environment. Based out of Saigon, TAREX teams regularly performed liaison with Allied tactical units and the joint intelligence exploitation centers in search of information or captured materiel that might assist ASA in its mission.

The two captured AN/PRC–25 receivers were evidence that the enemy intercept cell possessed the capability of intercepting US tactical units. The R–139 Chinese manufactured receiver could also target radios in the AN/GRC series, and even the homemade

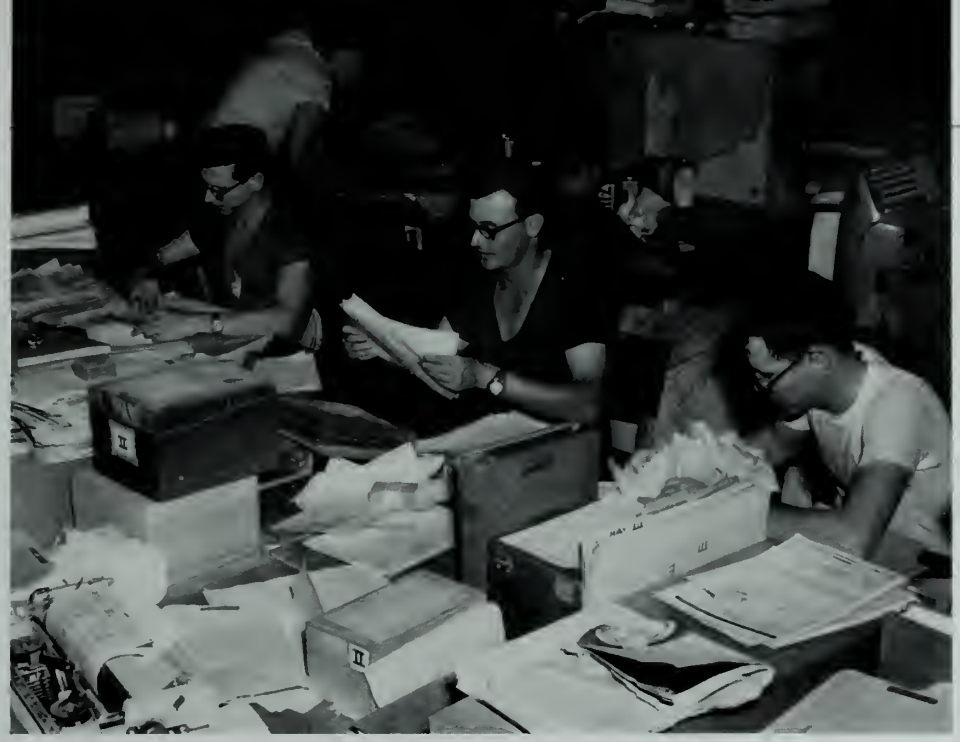
"This work is really rather startling; the attention to detail, complete accuracy, and thorough professionalism is amazing. These guys are reading our mail and everyone will be informed that they are."

GEN CREIGHTON W. ABRAMS, COMUSMACV

Wires leading out of a spider hole led to the capture of an NVA communications intelligence team.

receivers were compatible with some US communications gear. The enemy unit also possessed seven Sony radios and one Panasonic receiver with which it could exploit virtually all nonsecure communications emanating from US/ARVN tactical units. Captured documents revealed listings of frequency and call-sign allocations by unit, still others gave extensive instructions on proper intercept techniques, and one even told how to break point-of-origin codes. In the 4–5 weeks prior to its capture, the team had intercepted over 2,000 US unencrypted transmissions and had screened them for possible indicators. Couriers then carried the material to a division-level headquarters located approximately a mile away. Here, further evaluation was made of the traffic, and the results sent by radio or courier to nearby tactical elements.

The capture of an enemy SIGINT unit verified what COMSEC specialists already knew—the enemy was listening.



The 175th RR Company's processing and reporting section concentrated on getting out intelligence products.

"Compartmentalization detracted most from maximum USASA mission accomplishment. . . special clearances which, in turn, contributed to the problem of getting the intelligence to the user—the tactical commander at the lower echelons—was a definite disadvantage toward maximum mission accomplishment."

COL WILLIAM E. BURR, II, G2, XXIV CORPS

Processing Information

ASA believed that if there was a deficiency in its support to the tactical commander, it lay in the area of analysis. The overall value of the product provided the commander was believed to be good, but could use improvement. In 1967, the 509th RR Group leadership proposed that a 265-man processing company be created. Its purpose would be to coordinate, manage, and analyze results countrywide and not be restricted to a specific corps tactical zone. In-depth, interpretive analysis and reporting could be performed without jeopardizing the near-real-time mission of the direct support units. Owing to its close proximity to MACV, the processing company could also help fuse collateral and SIGINT information, something that was not being done by the collection management authorities.

Believing the existing system to be more than adequate, NSA initially resisted the proposal. However, in the aftermath of the 68 Tet Offensive, the J2, MACV, directed that the 509th RR Group organize a 30-man Processing, Analysis, and Reporting (PAR) Branch. One of its first assignments was to study unidentified radio terminals appearing on established networks. In the coming months, personnel TDY from units in theater further augmented the branch, but the branch never realized the vision that ASA had originally planned.

For SIGINT information to be useful to combat commanders, it had to be timely, but "timely" meant different things to different people. Some commanders accepted a reasonable delay between the time information was intercepted and when it was in their hands. Others felt that any delay was unacceptable. In response, ASA

introduced the Tactical Report (TACREP). The TACREP was in addition to Spot Reports, Electrograms, and Summary Reports and was designed to pass sensitive information directly to military commanders on a real-time basis. One survey in 1967 revealed that 81 percent of TACREPs was reaching the supported commanders via its direct support unit within 30 minutes of intercept.

Although established guidelines existed for the dissemination of SIGINT, the implementation of those procedures varied widely from unit to unit. In most instances, the process depended upon the relationship between the DSU commander and the G2, the working style of the Special Security Officer (SSO), and the past exposure of the combat commander to SIGINT. (Established in World War II, the Special Security system was responsible for handling special intelligence and came under the control of the theater commander, in this case COMUSMACV.) For example, one DSU commander reported an excellent relationship between himself, the local SSO, and the G2. Priority information was delivered directly to the G2 or his staff. In contrast, an SSO at another headquarters insisted on reviewing all information, thereby creating a delay in the reporting process. Dissemination was also hindered by the lack of personnel cleared for special intelligence (SI). Over time, combat divisions requested and received approval for indoctrination of three-times the original allotment, but the number of personnel seldom exceeded 25. Even then, commanders at battalion level were never cleared, requiring information to be sanitized, a process that again cost valuable time. The substitution of the term "usually reliable source" for SIGINT was normally a sufficient indicator for a commander to take action, but if he had not experienced past successes, there might be some hesitation. Battalion commanders also sometimes did not respond simply because of human nature. Sanitized SIGINT was simply not as "exciting" as the real thing.

A forward deployed SSO shelter containing crypto equipment and classified documents being relocated from LZ Two Bits in support of the 1st Cav.

SSG Hall of the 403d RR SOD receives the Bronze Star with Valor. He along with SSG James M. Alward and SP5 Donald C. Childs, II were decorated for their part in the defense of Duc Lap in August 1968.

Expanding Support

Lacking many of the capabilities of a company-size direct support unit, the 403d RR SOD required close coordination with a major processing element. The 330th RR Company at Pleiku served as the collection management authority for the II CTZ, the 403d's primary area of operations. Consequently the detachment found it invaluable to place a small team of analysts with the 330th to assist in transcribing and processing intercepted traffic. By this means, the 403d also received much needed technical aids (such as frequencies, call signs, and last known location of enemy units) along with guidance in assigning target priorities. To provide similar support to its ARDF tip off and low-level voice intercept teams being deployed outside of the II CTZ, the 403d RR SOD ended up installing analysts at the other three collection management authorities. (However, the bulk of the 403d RR SOD analysts remained collocated with the 330th RR Company.) In 1969, the 403d RR SOD upgraded its analytical efforts by establishing briefing and correlation teams with the Special Forces command and control elements within each of the CTZs. Their purpose was to meld COMINT into the overall intelligence picture for the Special Forces.

Analysts from the 403d RR SOD continuously monitored all ARDF fixes received by the CMAs for indications of enemy buildup or movement that could possibly endanger Special Forces camps or operations. The results were sanitized and issued in the form of Special Agent Reports (SPAR) as part of general intelligence reporting, but if a specific detachment faced an immediate threat, analysts would pass the information directly to the unit involved. Prior to deployment of Special Forces elements, the 403d briefing teams prepared current intelligence studies and an order of battle on NVA/VC units active in the area of operations. These studies included ARDF locations of all identified and unidentified terminals over the previous 60–90 day period.

Communications were particularly important to the 403d RR SOD. The lack of secure comms impacted the timeliness in which information was inputted, analysis made, and intelligence distributed. The 403d took advantage of circuits belonging to the various CMAs to communicate between the detachment's headquarters and its analytical elements. In the field, elements located at Special Forces bases used one-time pads until 1967 when they received KY–8 crypto systems. Low-level voice intercept and ARDF tip-off teams deployed with Strike Forces were also

Operations hut occupied by a forward deployed team from the 403d RR SOD.

"... ASA personnel of the 403d SOD remained at the base camp and made direct contact with the aircraft [LAFFING EAGLES] and passed fixes immediately to the camp commander. As a result, we absolutely flattened the enemy, drove his forces out of the area, and declared the battle of Bu Prang an ARVN victory. . . . "

1LT JARVIS E. WILLIAMS, LIAISON OFFICER, G2 SECTION, HQ, I FFV

outfitted with the bulky KY–38 man-pack version. Altogether, these improvements in secure communications greatly aided passing of information to airborne platforms and providing fixes to the local commanders.

While the 403d RR SOD's soldiers were trained intelligence specialists, they also served as members of the Special Forces and, as such, were often subjected to many of the same dangers. Over a 2-year period, the 403d RR SOD suffered some 22 wounded and 1 killed as a result of providing close support. For instance, 403d RR SOD soldiers were part of a 12-man Special Forces team located at Duc Lap, a remote camp situated 3 miles from the Cambodian border near an infiltration route. In August 1968, the enemy launched 3 days and 2 nights of unrelenting mortar and rocket fire coupled with human-wave attacks against the outpost. ASA soldiers fought alongside other members of the team as they defended the base and helped lead local Montagnards in counterattacks.

The Cambodian Incursion

Perhaps no single operation better illustrated the full extent of ASA's support during the Vietnam War than the incursion of Allied troops into Cambodia in the spring of 1970. Prior to the conception of the campaign, ASA units had assembled a wealth of technical data on VC/NVA entities in the border area. This proved essential to the campaign's success. On 28 April, officers from the 371st RR Company accompanied MG Elvy B. Roberts, Commander, 1st Cav Division, his G2, and the SSO to brief LTG Michael S. Davison and staff at HQ, II FFV. A density plot of ARDF fixes accumulated by ASA elements over the previous 6-month period served to orient the axis of the Allied advance into the "Fish Hook" area and helped to identify sites for possible fire support bases and landing zones.

The 175th RR Company, CMA for the III CTZ, supplied translations, tasked ARDF/collection efforts, identified fixes, monitored the DSUs, and issued reports to higher headquarters. The processing company also deployed three RATRACE teams to assist DSUs in analysis of their intercept, and a TAREX team traveling with combat elements was able to exploit captured documents. Using both U–8 and U–21 aircraft, the 146th Avn Company alone flew 222 direction-finding sorties and 156 collection missions in support of the campaign.

Despite lack of advance notification, LTC James Freeze, Commander, 303d RR Battalion was able to quickly formulate an effective plan to shape ASA's support on the ground.

"As COSVN retreated we could watch . . . the transmitters moved along with the DF fixes. On a daily basis we could tell people that COSVN had moved so many miles up Highway 7. Unfortunately, they managed to stay just outside of US penetration into Cambodia."

CW3 CHARLES R. BYARS, SIT OFFICER, 509th RR GP

Because the enemy possessed low-powered transmitters, a decision was made to emphasize voice intercept. On 4 May 1970, personnel of the 409th RR Detachment became the first DSU to enter Cambodia. Attached to the 11th Armd Cav Regiment, the detachment logged 158 km over a 54-day period. Its low-level voice intercept (LLVI) effort contributed 2,133 minutes of enemy traffic and exploited 108 messages. The 371st RR Company also engaged in LLVI, and its LEFT BANK platform was credited with locating the enemy's logistics center popularly known as "The City." When ARVN soldiers secured the area, they discovered 182 storage bunkers containing supplies and weapons. The 372d RR Company supplied targeting data to the 25th ARVN Division crossing into the "Parrot's Beak" area in search of other enemy logistical bases. Under Operation SKYSPOT, the company also used air-to-ground communications to receive fixes and then quickly passed them on to tactical aircraft.

In the II CTZ, the 374th and 330th RR Companies supported the 4th Inf Division engaged in joint operations against NVA tactical and rear service elements. To the south, the Delta Military Assistance Command launched a combined land and naval operation to secure the Mekong River from the Vietnam border and to evacuate Vietnamese nationals from Cambodia. Besides passing information on the changing enemy situation, the 335th RR Company also briefly ran an LLVI/ARDF tip-off operation off the USS Benewah, command ship for naval operations.

A LEFT BANK platform located "The City," a large cache of enemy supplies and weapons.

Members of the 409th RR Detachment pause aboard an M–113 armored personnel carrier during the 1970 Cambodian Incursion.

TRAI BAC

The 8th RR Field Station, nicknamed "Trai Bac Station" or "Station of the North," possessed some of the finest facilities in Vietnam, consisting largely of permanent structures, a prefabricated operations building, and air conditioned trailers for troop billets and mess. The field station's security posture was equally impressive. An intensive defense perimeter, including 2600 meters of personnel and communication trenches, 30-foot-high steel watch towers, 12-inch cement reinforced star bunkers, concertina and barbed wire fences, and 54,000 M–14 antipersonnel mines all surrounding the compound. Although there was no fear of direct attack, the facility did receive occasional rocket fire. Of greater concern was enemy activity interrupting truck convoys bringing supplies.

Beginning in 1967, the 8th RR Field Station began focusing on the network that carried personnel and cargo on a 1,000–mile journey down the "Ho Chi Minh Trail" to the battlefields of South Vietnam. The North Vietnamese travelled in battalion size groups, as organic table of organization units, or in smaller-sized elements of specialized personnel and were conveyed by train, truck, and barge as well as on foot to their destinations. Cargo, which was stockpiled at various sites, entered the system and was transported via similar means. Observers believed that the system was capable of handling a minimum of 200,000 personnel annually and 2,200 tons of supplies each month.

The arrival of ASA direct support units during the spring of 1968 significantly expanded the field station's mission. The recent Tet Offensive and the deteriorating tactical situation in the Northern provinces led to the shifting of the 1st Cav Division; the 1st and 2d Brigades, 101st Abn Division; and the 3d Brigade, 82d Abn Division into the I CTZ. The 371st RR Company, the 265th RR Company, and the 405th RR Detachment accompanied the divisions. By fall, the 371st RR Company, 405th RR Detachment, and their parent organizations had redeployed to the III CTZ and were replaced by the 407th RR Detachment in support of the 1st Brigade, 5th Inf Division.

The 8th RR Field Station maintained an operational site on Hill 180.

". . . I would say at least three times a week, General Abrams would come over to the field station at Phu Bai. . . . He and a field station Chief Warrant Officer by the name of Holder would literally talk the entire situation through. General Abrams would at times turn around to the J3 and say, 'Let's lift a force over in such and such an area, and have the 1st Air Cav throw a blocking action. . . . ' "

COL WILLIAM T. RILEY, JR., CDR, 509th RR GP

South Vietnamese civilians assisted in bolstering the defenses of Phu Bai which was a well guarded installation but suffered rocket attacks from time to time.

In its new tactical support role, the 8th RR Field Station found itself having to provide technical and analytical assistance to the assigned direct support units. However, the field station lacked the staff necessary to serve as a "provisional battalion" and was without the type of logistical system needed to support the needs of the DSUs. One of the early problems was the discovery that some DSU personnel could not function in their new area of operations because of the different target environment. As they received on-the-job training at the field station, the 8th was forced to substitute its own personnel in the field.

Throughout its history, the 8th RR Field Station made a significant contribution at theater level. For example, its intercept of enemy weather reports supported the Seventh Fleet's strike and reconnaissance missions. The field station's around-the-clock reporting provided the carrier task group commanders with timely information on which to base their aircraft go/no-go launch decisions. To keep pace with its ever-expanding missions, Phu Bai undertook a series of major construction projects. In the end, the 8th RR Field Station would not only become ASA's largest unit in Vietnam, but its largest operational element worldwide.

Sharing the Mission

In 1968, a significant amount of VC/NVA voice intercept was being collected. To meet the increased workload, ASA made greater use of South Vietnamese transcribers, DANCERS, who were almost 3 times more efficient than US linguists. By 1970, 76 DANCERS were scattered among US cryptologic units, almost half of them assigned to the 8th RR Field Station. In August, DANCERS even began to fly collection missions with the 138th Avn Company. DANCERS-in-the-sky (DITS), as they were called, could copy live 90 percent of all voice traffic intercepted, thus eliminating the need for transcription and allowing for timelier reporting. DANCERS were also used at remote collection sites and as members of the RATRACE teams deployed by the various CMAs to provide direct support units with analytical and transcription assistance.

In 1970, the 509th RR Group undertook a study of the South Vietnamese SIGINT effort (Unit 15) to determine what further assistance could be provided. High on the agenda was evaluating the ARVN's medium range direction-finding net. The study disclosed serious deficiencies, including the fact that some Unit 15 operators were readjusting bearings to fit preconceptions. This further confirmed ASA's long held belief that the South Vietnamese should get out of the MRDF business altogether and focus mainly on voice intercept. But in the end, the 509th RR Group was forced to continue to assist the South Vietnamese's direction-finding program, eventually turning over state-of-the-art AN/TRD–23 direction finders.

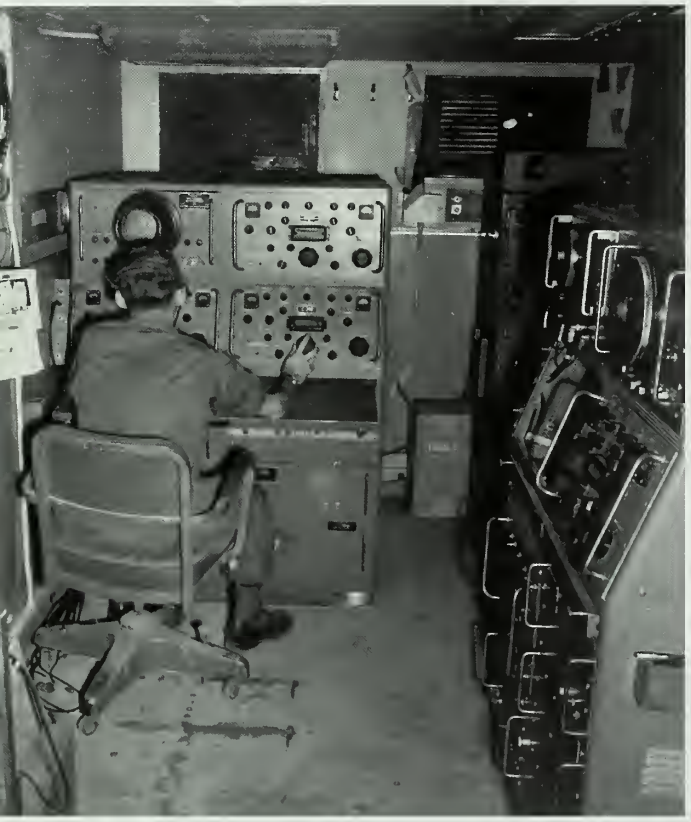
Unit 15 had repeatedly tried to get its ARDF effort off the ground. Utilizing U–6 aircraft, the South Vietnamese began flying missions in the III and IV Corps areas. Although given only targets that they demonstrated the ability to copy,

> **"I hope people understand, it is going to take time to establish an ARVN SIGINT Data Base. It takes months, even years, to build an intelligence base. Just because someone puts up an antenna doesn't mean he's going to start producing intelligence."**
>
> MAJ DAVID A. BELL, ADVISOR, 21st DIVISION

A South Vietnamese linguist stands atop a remote intercept site at An Duong Wong. From here, the 265th RR Company conducted voice and manual Morse intercept.

the South Vietnamese ARDF program still continued to founder. A 1970 study by the 509th RR Group placed much of the blame for poor results on ineffective equipment. ARVN pilots and operators were judged to be competent and highly motivated, but the R–390 receivers, magnetic compasses, and direction gyros were showing signs of age. Even the maps were too small and outdated. Subsequently, 509th RR Group furnished the South Vietnamese with additional training in ARDF procedures and put into place a new reporting system. Six months later, the US Air Force began transferring aircraft to the South Vietnamese who, in the meantime, had created a separate organization, Unit 17, for the specific purpose of carrying out its revitalized ARDF mission.

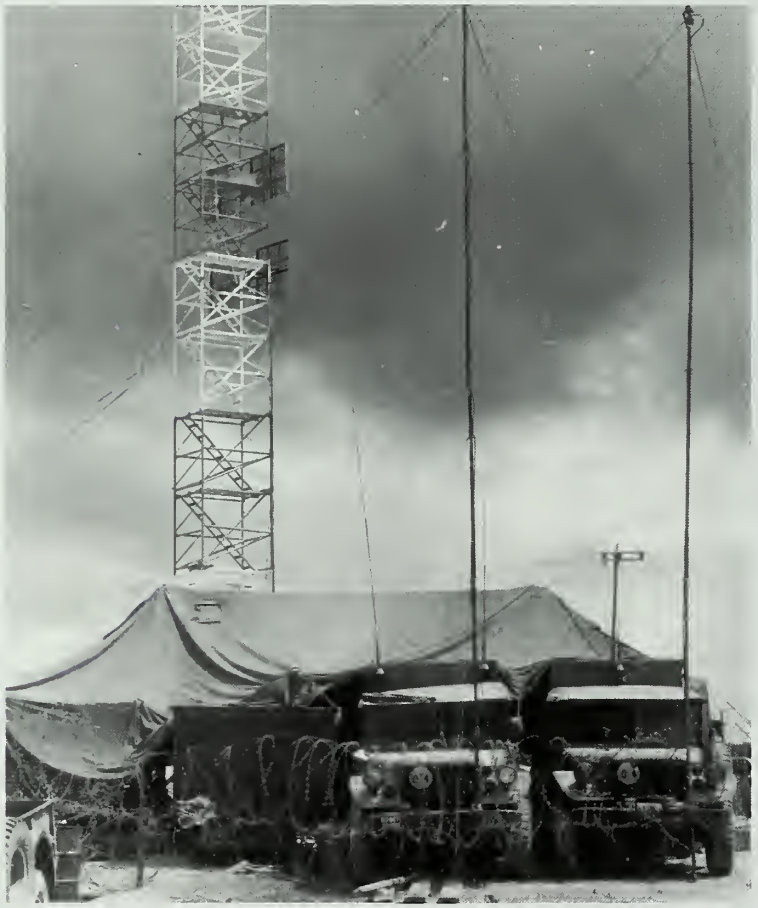
The South Vietnamese COMSEC effort (Unit 16) was characterized by its lack of trained personnel, inability to perform telephone monitoring because of political considerations, tardiness in receiving authorized equipment, and absence of qualified US advisors, but over time, Unit 16 began to demonstrate signs of progress. By 1971, it possessed for the first time the COMSEC resources needed to monitor, on a sampling basis, all networks within the Vietnamese Armed Forces and to conduct semi-annual crypto inspections of all military and non-military agencies. But in the end, it was a simple matter of being too little and too late.



An operator mans the AN/TRD–23 Direction-finder inside a shelter.

"... General McCown when we got onto the ship (USS Benewah) took me down into the operations center and introduced me to all the colonels, couple of generals and the remaining staff. . . . He said, 'Gentlemen I want your attention, this is Sergeant Wood and he will be coming down every once in a while with some information for you and whatever he tells you is fact.' "

SFC JAMES W. WOOD, JR., LIAISON TO IV CORPS



Operational area of the 1st Platoon, 335th RR Company at FSB Moore.

Traffic Analysis Section at the 175th RR Company.

BG George Godding, CG USASAPAC, and COL William Riley, CDR 509th RR Group, leave the WHITEBIRCH Compound in Saigon, scene of fighting during TET 68.

On 15 December 1970, members of the 403d RR Special Operations Detachment cased their colors at Headquarters of the 5th Special Forces Group in Nha Trang.

VIETNAMIZATION 1971 1973

"In theory, the centralized field station concept would allow mission accomplishment with reduced resources. In our case, however, the benefits of the concept were not realized because our assets were spread over 53 percent of the land mass of Vietnam."

LTC DAVID A. WISYANSKI, CDR, 330th RR FS

Following a meeting with South Vietnamese President Thieu on 8 June 1969, President Richard M. Nixon announced the initial withdrawal of 24,000 American troops from South Vietnam. The redeployment signaled the beginning of a process to extract the United States from the war and to turn the fighting back to the South Vietnamese. The reduction in US tactical operations and the withdrawal of combat elements would lead to corresponding changes in the size and scope of the SIGINT mission in Vietnam. Representatives from the cryptologic community met in Saigon in early December 1970 to map out exactly how and where the cuts would be made. A plan emerged to consolidate at a handful of locations, thus allowing the 509th RR Group to take its manpower reductions among support rather than operational personnel. This could be accomplished by replacing the direct support battalions with field stations, inactivating the 144th Avn Company, and reorganizing the 101st RR Company. Plans called for selected manual Morse positions to be remoted, and systems whose value was deemed marginal eliminated altogether.

Over the next 9 months, ten DSUs were either redeployed or inactivated, among them the Headquarters and Headquarters Companies of the 303d and 313th RR Battalions and the 403d RR SOD. In September 1971, two new field stations were organized from the existing Collection Management Authorities. The 175th RR Company was redesignated the 175th RR Field Station at Bien Hoa. The 330th RR Company was inactivated and the 330th RR Field Station organized in its place at Nha Trang. Like the 8th at Phu Bai, the two new field stations would exercise control of targeting and the residual direct support units in their area of operations. At the same time, ASA inactivated the 335th RR Company as the local collection management authority for the IV CTZ. In its place, a new smaller-sized company was organized and given an advisory mission in support of the local South Vietnamese COMINT Center. Other changes involved the drawdown of the 144th Avn Company and redistribution of its aircraft and mission to the 3d Platoon, 146th Avn Company. The 101st RR Company's strength was reduced by 50 percent to 113 spaces, its supervisory role transferred to the 509th RR Group, and its COMSEC specialists were formed into support platoons that were assigned to the various field stations.

During the initial reduction phase, marginal systems were first on the cutting block. Radio fingerprinting had fallen into disuse, making it an easy candidate for removal. The WHITEBIRCH direction-finding net was also discontinued, and its targets assumed by other nets and ARDF. At best, WHITEBIRCH had served to maintain continuity on targets of a relatively low priority. However, other missions were not as easily eliminated; chief among them was manual Morse, the backbone of ASA's intercept effort in Vietnam. June 1970 found the 509th RR Group devoting 199 of its 271 positions to manual Morse. A year later, the number of manual Morse positions was cut almost in half, and the impact was immediately felt by consumers at all echelons.

Members of the 1st ASTD, the ARVN equivalent of an ASA direct support unit.

Vietnamese students learning to transcribe manual Morse code using both pencil and typewriter.

DARRS and CARRS

As they assumed more responsibility for conducting the war, the South Vietnamese began to reorganize their COMINT effort to more closely mirror the US system, but on a much smaller scale. For example, the South Vietnamese created ARVN Special Technical Detachments (ASTDs), each consisting of 4 officers and 56 enlisted personnel. They provided direct support to combat divisions and passed information up the South Vietnamese cryptologic chain of command. On 1 July 1969, the first two of the ASTDs became a reality: one in support of the 1st ARVN Division at Hué, and the other assigned to the 2d ARVN Division at Quang Ngai. Under the terms of the Vietnamese Improvement and Modernization (VIM) program, the 509th RR Group assisted all 10 of the ASTDs by providing mission equipment and logistical support and by instructing the South Vietnamese on how to perform their own maintenance. ASA also made an NCO available to each of the ASTDs for advice and assistance. All the while, ASA representatives continued to take every opportunity to press the ASTDs to focus upon voice intercept and even offered on-the-job training by temporarily assigning Vietnamese to the 509th RR Group's own low-level voice intercept teams.

> "For a long time we had a shortage of hard intelligence such as *Chieu Hois* and POWs. This was back in July through October of last year before the 9th DARRS existed. . . . The 9th DARRS has given us the ability to make estimates and allow the commander to make decisions."
>
> MAJ NOEL J. DOYLE, JR., G2 ADVISOR, TEAM 60

Under Project SCREWDRIVER, ASA soldiers regularly visited South Vietnamese elements to pass on maintenance tips and to ensure that they were receiving a reliable source of expendable supplies, especially for their ARDF program. These types of advice and assistance visits proved an excellent means to monitor overall operational progress. ASA collection management authorities also created a sponsorship effort at each of the ARVN fixed stations. Nicknamed Project LEVER, the program revolved around periodic visits and recommendations concerning procedures and techniques.

Although responsibility for the fighting shifted to the South Vietnamese, requirements by US authorities for COMINT support remained as critical as ever. Under Project AXE, the concept of Division Advisors Radio Research Support (DARRS) Detachments was first tested in the field in January 1970 when a DARRS team successfully deployed in support of the Senior Advisor, 1st ARVN Division and the 1st ASTD. This led MACV to approve DARRS detachments for all the ASTDs. The primary function of the DARRS was to pass COMINT to senior US personnel advising the ARVN divisions and to provide a sanitized version for the ARVN commanders. In addition, DARRS personnel served as advisors to the ARVN Special Technical Detachments. The impact of the DARRS was immediately evident and was given credit for making the ASTDs operationally functional.

In July 1971, the 509th RR Group assisted in establishing the Center Advisory Radio Research Support (CARRS) detachments at each of the four South Vietnamese field stations/centers: Can Tho, Pleiku, Saigon, and Da Nang. The CARRS's primary mission was to improve the SIGINT centers' management of operations, communications, and maintenance support.

Housed in a U–21, the LEFT JAB platform was targeted against transmitters near the DMZ. An antenna was contained in the radome mounted under the plane's belly and extended upon takeoff.

"Special intelligence has been a key factor in tactical success—we'd be quite blind without it. Although one cannot rely on special intelligence alone, it provides the essential skeleton against which other source material can be associated to form a quite accurate framework of enemy disposition and in some cases, enemy intentions...."

MG GEORGE I. FORSYTHE, CG, 1st CAV DIV

New Platforms

Throughout the war, COMINT/ARDF was the most important source of timely, accurate intelligence and served as the commanders' principal eye in finding an elusive enemy. By May 1968, the 224th Avn Battalion was contributing nearly 4,000 fixes a month to the ground war. Consumers often utilized ARDF as a warning mechanism of pending enemy activity. This was particularly important in protecting fire support bases and isolated outposts. Normal countermeasures included air strikes, artillery fire, and even the launching of offensive operations. On one occasion, ARDF fixed an enemy terminal several kilometers in front of an advancing

convoy. The rapid relay of the warning allowed the commander to halt the convoy in time and insert armored personnel carriers and tanks. The ambush was thwarted and heavy casualties were inflicted on the enemy.

ARDF often influenced the intelligence-gathering process. A member of the G2 staff, Delta Regional Assistance Command, made the following observation: "Often an ARDF fix will cause us to look for the collateral; a ground sweep will be made and a prisoner captured and interrogated...." On the flip side, ARDF proved most effective when merged with other forms of information such as airborne personnel detectors, infrared, side-looking airborne radar, long-range reconnaissance patrols, aerial photography, enemy documents, prisoner-of-war interrogation, and area studies.

In February 1968, MACV established a requirement for an airborne VHF intercept and direction-finding platform to cover the DMZ area. The initial attempt to field a system in a U–1A (SORE THUMB) was a failure, and a second try in an OV–1C (HOMING PIGEON) ended with mixed results. But after a lengthy delay, three LEFT JAB platforms were finally fielded in December 1970 and assigned to the 138th Avn Company at Phu Bai. At the heart of the system was a spinning spaced loop antenna mounted in a radome under the belly of a U–21 aircraft. Originally designed for ground-based systems, the antenna could be extended after takeoff.

The installation of the AN/ARD–23 V-Scan on the LAFFING EAGLE platforms in October 1970 represented a major milestone in Army ARDF. The V-Scan system was the most advanced HF ARDF platform in the ASA's inventory and placed the Army technologically on more equal footing with the Air Force. Advantages over previous systems included increased speed in recording fixes, ability to cover larger areas, and a more accurate navigational system. It was not long before the LAFFING EAGLE was being used exclusively in its ARDF role as other platforms began to stand down.

On 4 March 1971, the 224th Avn Battalion received word that a LEFT JAB aircraft was missing in action. The fate of the craft and its 5-member crew was later confirmed by a report of the North Vietnamese News Agency, which claimed that a surface-to-air missile had downed a US plane just inside North Vietnam. But the shoot-down did not deter future flights near the DMZ. In fact, during the enemy's 1972 Spring Offensive, airborne COMINT collection efforts in the area took on even greater significance. Although credited with only a small portion of the total manual Morse intercepts, LEFT JAB still made a significant contribution during the campaign's critical phase.

Wideband operators at the 175th RR Field Station helped to make up for the loss of manual Morse resources.

"On Hill 950 with Project EXPLORER the Chief of the Studies and Observations Group . . . was adamant about putting anything up there that would draw attention to the hill. He remarked that the 5 Americans and 38 . . . mercenaries on the hill were there at the grace of the VC. . . . He did not object to a new antenna, but a shelter would have drawn too much attention."

CWO-4 WILLIAM R. MACDONALD, 175th RR CO

Computer systems, such as this at the 8th RR Field Station, were increasingly in use during Vietnam.

New Technologies

Over 50 percent of ARDF fixes remained unidentified. In response to this problem, the USASA Materiel Support Command at Vint Hill Farms Station, Virginia, fabricated the first Wideband position, known as MUSTARD, and shipped it to the 330th RR Company, where it became operational in April 1967. Wideband collection recorded segments of the radio frequency spectrum for selective playback. Although the system demonstrated promise, tapes of the recovered intercept had to be sent back to Vint Hill Farms Station, Virginia, for processing. The 2-week turn around time kept Wideband from having any real impact upon the immediate tactical situation. However, by September 1968, the two Wideband positions were beginning to make some headway, accounting for between 10–20 percent of the fixes being identified each month. This led to the introduction of additional systems with increased collection capability at each of the Collection Management Authorities. When the 509th RR Group finally departed Vietnam, Wideband positions would be among the last positions manned.

During Vietnam, computers began to make their debut on the battlefield. One of the earliest systems was designed to improve target acquisition. Field tested at the 8th RR Field Station in May 1969, the new system did not replace the manual Morse operator, but it did provide him with a new tool to automate

certain functions that had previously been done by hand, such as, tuning to selected frequencies.

Until 1970, airborne platforms provided the only significant intercept of enemy VHF communications along the Laotian border. To augment airborne collection, a hearability test was conducted on Hill 950 located in western Quan Tri Province, 110 km northwest of the 8th RR Field Station. Manned by a contingent of Special Forces and Montagnard Tribesmen, the mountain overlooked the rugged wilderness that served as a haven for elements of the North Vietnamese Army. The quality of intercept obtained by these tests proved at least equal if not superior to any being copied from airborne platforms.

In June 1970, the first remote system (EXPLORER), controlled by operators at the 8th RR Field Station, was put into operation. Despite its successful beginnings at producing real-time intelligence, EXPLORER faced a number of logistical problems. The most significant was providing adequate supplies of gasoline to power the system. To draw as little attention as possible, ASA soldiers buried all of the equipment minus the antennas, and to cut down on noise, used generators specifically designed for "whisper" quietness. Then there were the normal environmental factors of heat, dust, humidity and their affect upon the equipment. To top it off, the rainy season frequently interrupted refueling and maintenance runs.

By March 1971, four more remote positions had been added on Hill 950. (A month later, EXPLORER II was established at Golf 5 (Hill 1005) and the intercept relayed to the 330th RR Company at Pleiku for processing and reporting.) Unfortunately, EXPLORER operations at Hill 950 ended abruptly on 4 June 1971 when the outpost came under intense enemy mortar and rocket fire, lasting most of the day. At 2100 hours orders were given to destroy the equipment with thermite grenades and to evacuate the site.

Success at a High Price

It wasn't until the latter stages of the war that the landline effort could point to an example of real success. In February 1970, a Ranger team from the 1st Brigade, 5th Inf Division, was inserted by chopper to exploit an enemy landline located in the vicinity of the DMZ. Making the remainder of the way on foot, they found a lead-in wire running parallel to a small, well-used trail that ran through dense undergrowth. Here, they buried the kit's lead wires along with the control box and batteries and then fastened a whip antenna on the backside of a tree away from the path. Total time to install the XR4–100D was 38 minutes. A second trip was made to replace the antenna because of an interference problem. During the 2 weeks the Con Thien operation was active, 15 translations were made and nine tactical reports forwarded, successfully alerting friendly forces against pending attacks. The intercept also revealed the enemy's reaction to Allied artillery fire. In total, almost 255 hours of North Vietnamese plain text voice were intercepted until the output ended abruptly. A third Ranger team was sent to investigate, but came under small arms fire. This led to the decision to destroy the intercept equipment by targeting the site with rounds of artillery and by dropping some twenty-four bombs as the final *coup de grace.*

The success at Con Thien served as a catalyst for further attempts. During the Cambodian Incursion in 1970, one landline intercept successfully warned US forces of a pending attack by a battalion-size force and a 75mm recoilless rifle company. In another instance, the 138th Avn Company (RR) participated in an airborne test for intercepting relayed signals. However, for the most part, landline operations continued to court disaster. On 23 April 1971, Company L, 75th Infantry (Ranger) attempted to tap into communications lines believed to be serving the Ho Chi Minh Trail, but were met with stiff resistance by the enemy. Two choppers were shot down, killing 11 soldiers and wounding 22 others. Later it was discovered that the operation had been doomed from the start because the recording unit's batteries had been accidentally reversed.

"Analysis of the tape indicated that the intercept was . . . entirely concerned with roads and routes which are probably part of the Ho Chi Minh trail. . . . This cut was too brief to be of significant intelligence value."

MAJ ALBERT B. YOUNG, COLLECTION OIC, 509th RR GP

One of the major problems faced by wiretap teams was that the VC/NVA units would daily send runners along the lines to check them. Two ASA engineers working at Vint Hill Farms Station came up with the LEFT TWIST system where a transmitter in the form of a pole was dropped from a helicopter. Actual results in the field in 1971 proved mixed, and future trials were cut short when the course of the war began to change. The drawdown of US combat forces led to fewer deployment opportunities for landline intercept and eventually brought an end to the mission altogether. Time had finally run out on ASA's landline mission. However, lingering questions remained as to why lessons learned as far back as 1966 were continually ignored. The technological advances in the CIRCUS ACT program were achieved at a high cost given the numbers of casualties suffered by the installation teams and the limited amount of usable intelligence extracted.

The departure of US troops ended all opportunities to exploit enemy landlines. (National Archives)

Free Fall

What began as a steep glide in the level of ASA's commitment to Southeast Asia had turned into a virtual free fall by late 1971. The 509th RR Group was ordered to cut its remaining 4,000 spaces in half. Missions were eliminated, the last of the DSUs was inactivated, two of the field stations were discontinued, and the 224th Avn Battalion was in the process of being reduced to a company. Plans called for only the 509th RR Group headquarters, the 8th RR Field Station, the 175th RR Field Station, and the 146th Avn Company to remain.

In November, the 335th RR Company began to systematically shift its manual Morse effort to the South Vietnamese collection site at Can Tho. The company would be the first among ASA's units to undergo such a transfer. The 335th RR Company personnel were responsible for training the ARVN specialists in analysis, reporting, and maintenance procedures. Eventually, the 175th RR Field Station took over as the CMA for the Delta Region when the 335th finally ceased operations in 1972.

The departure of US forces also changed the manner in which ASA did business. The need for COMSEC support was greatly reduced, leading to the phase out of the 101st RR Company and its discontinuance altogether on 1 April 1972. The drawdown also meant TAREX personnel could no longer depend upon US combat units for captured equipment and documents. In the future, all TAREX collection teams would be based out of Saigon, and liaison with the South Vietnamese stepped up. As US

Manual Morse positions, such as these at the 175th RR Field Station, were the heart and soul of ASA's effort in Vietnam. Their decline signaled that ASA's role in the war was coming to an end.

"Plans for our evacuation were jovially passed around, trying to convince each other that it would never actually come to that. Then, at the stroke of 5:00 p.m., the sky caved in, and within the next 30 minutes more than 500 shells of assorted sizes impacted and detonated. . . . At 5:30 p.m., when the heavy barrage was lifted, we resumed destroying all that was not an absolute necessity."

MSG G. DUANE WHITMAN, 407th RR DET

The loss of direct support units such as elements of the 407th RR Detachment at Con Thien near the DMZ significantly impacted ASA's ability to satisfy all of its consumers.

units departed, the Army's logistical system also began to shut down, creating a shortage of signal parts in the supply pipeline and significantly impacting upon ASA's operations.

During January 1972, the 1st RR Company flew two of its five Neptune aircraft to Japan for turn-in. Despite having only half of its aircraft available, the company maintained production at 90 percent of previous levels until the company was inactivated on 30 April. (The 1st RR Company also sent one of its remaining aircraft to Fort Rucker, Alabama, for permanent display at the Army Aviation Museum.) Meanwhile, flight crews of the 156th Avn Company were also touching down for the last time in preparation for turn-in of the U–6's and transferring the unit's colors to Fort Bliss, Texas. During the 156th Company's 6 years of existence, its aviators flew over 16,000 support missions and logged some 7 million miles.

Nowhere did the drawdown have a greater impact than in the area of manual Morse collection. By 30 June 1972, ASA had 60 intercept positions remaining, compared with 199 two years earlier. On top of this, the 509th RR Group was facing a critical shortage in intercept operators. Realigning working schedules and shifting mission taskings offered some temporary relief; the lack of personnel also justified the retention of the five remaining Wideband collection systems.

Changing Course

Conventional intelligence sources, along with COMINT support from ASA direct support elements, had slowly dried up with the departure of US combat divisions. In January 1972, SIGINT began to reflect large-scale movement of equipment and supplies southward into the DMZ, Tri-border, and Panhandle areas, indicating preparations for a major offensive that threatened the phased withdrawal of US forces. Twelve North Vietnamese combat divisions representing approximately 100,000 personnel were located within or adjacent to South Vietnam. In the light of these developments, MACV indicated that it could not tolerate further loss of SIGINT coverage in Military Region (MR) II and the southern portion of MR I. To compensate for the pending closure of the 330th RR Field Station, a last-minute replacement detachment was stood up at Da Nang and placed under the control of the 8th RR Field Station. Meanwhile, responsibility for targets in the southern MR II was transferred to the 175th RR Field Station. Once these improvised arrangements were in place, the 330th RR Field Station proceeded to stand down on 1 September 1972.

Planning called for paring the 224th Avn Battalion's organization down to one company, the 146th Avn Company, and reducing the number of aircraft from 36 to 10 U–21s. On 10 June, COMUSMACV intervened and reversed the order, citing the following rationale: "MACV ARDF resources…represent our most effective means of finding and fixing the enemy…." The drawdown was not only put on hold, but the allotment of manpower spaces was actually doubled to 540. To complicate matters, when the 224th Avn Battalion received notification that the current level of ARDF support must be maintained, it was entering the final phase of inactivation. Only 5 percent of the Headquarters and Headquarters Company's personnel remained. The 138th Avn Company had flown 11 of its U–8s to Vung Tau for shipment back to the States, and the remaining aircraft were at Long Thanh North Army Airfield to wait processing.

"We're in a dynamic situation. Decisions on units being drawn down, forces being economized, and selection of the key installations to stay open are being made. To do this safely you must have knowledge of the enemy, his plans and intentions. Special intelligence provides this. It's invaluable."

MG CHARLES M. GETTYS, CHIEF OF STAFF, USARV

The ASA leadership: (left) BG Herbert E. Wolff, CG USASAPAC, and (center) MG Charles Denholm, CG USASA, arrive at Phu Bai International Airport to discuss drawdown plans with ASA commanders in country.

For the next 3 to 4 weeks, the 224th Avn Battalion scrambled to retrieve planes and equipment. The stock of replacement parts had dropped so low that the battalion was forced to cannibalize nine of the returned aircraft. For the sake of efficiency, a decision was made to place all 27 U–8s with the 146th Avn Company at Long Thanh North and to assign all U–21s to the 138th Avn Company at Phu Bai. This would allow each type of aircraft to be in close proximity to support facilities handling its particular type of navigational equipment. Despite having released a third of its aviators, the 224th Avn Battalion was able to draw upon TDY crews to take up the slack. Within 10 days, the 224th Avn Battalion had the first U–8 back in the air, and by another week and a half, the number of missions had risen to 133 a week.

A member of the 8th RR Field Station's security force surveys the horizon.

Shifting Sites

Throughout the spring and summer of 1972, ASA units in Vietnam faced a growing security problem. Increased enemy activity coupled with the departure of nearby US combat elements left ASA sites vulnerable to attack. During the last 9 months in country, each one of the 509th RR Group's remaining units would be forced to relocate at least once. On 13 August, the COMUSMACV ordered the removal of US forces at Long Thanh North. Thanks to outstanding lift support from the US Air Force, the 224th Avn Battalion completed its transition to Saigon in less than 6 days. Simultaneously, the 146th Avn Company was moved from Long Thanh North to Can Tho while still completing 50 percent of its missions.

The 175th RR Field Station and the 8th RR Field Station remained as collection management authorities, and each were subdivided into collection management and reporting sections. Targeting continued to be responsive to field commanders' Essential Elements of Information and Special Intelligence Collection Requirements. On 30 September, the 175th RR Field Station relocated from Bien Hoa to Davis Station in Saigon and began conducting operations out of the former WHITEBIRCH facility within the Joint General Staff Compound. The building had become available when the 509th RR Group, no longer requiring the large work area, moved to the communications center adjacent to Davis Station.

> "During the current NVA offensive, ARDF has been the single most important intelligence collection program providing early warning of impending enemy action. . . . I consider ARDF coverage especially of the northern Military Regions to be critical as long as US interests are involved in the Republic of Vietnam."
>
> GEN FREDERICK C. WEYAND, COMUSMACV

The 8th RR Field Station and the 138th Avn Company were the last of the ASA units to change locations. Beginning in March, the physical security posture at Phu Bai became a subject of growing concern, leading to manning the perimeter and placing reaction teams on 24-hour alert. All personnel were assigned defense responsibilities that required a vast amount of time, equipment, and funds devoted solely to defense. Faced with an increased number of rocket attacks that left several dead and others wounded, the field station moved quickly to divest itself of its remaining missions. The end came in November when the residual elements of the field station and the 138th Avn Company were evacuated to Da Nang.

By the close of 1972, ASA personnel in Vietnam were manning only a handful of positions. The shifting of ground-intercept responsibilities to the South Vietnamese had progressed slowly but steadily. All the while concerns continued to be voiced as to whether or not the South Vietnamese had either the manpower or skills required to do the job. As a final stop-gap measure, ASA personnel worked alongside South Vietnamese SIGINT specialists in Saigon and Da Nang. By so doing, they helped to ensure that a steady supply of intelligence reached US authorities.

Cease Fire

In October 1972, USARV issued an operations plan that directed all remaining US forces to depart Vietnam within 60 days of a cease-fire. By early January, ASA had turned over all ground-based intercept to the ARVN with the exception of its Wideband positions located at the South Vietnamese COMINT site in Saigon. The departure of the 7th Air Force from Tan Son Nhut forced the 509th RR Group to move its personnel to the annex adjacent to MACV Headquarters for billeting and messing purposes.

Between 0620 and 0800 hours on 28 January 1973, the 509th RR Group's staff assembled atop the Newport Hotel to welcome in the cease fire by watching the enemy's rocket attack on Tan Son Nhut Air Base. The next day a contingent of VC/NVA soldiers arrived to occupy the former Davis Station compound as members of the four-power joint military commission. No sooner had the delegation settled in and guards been posted at the installation's gates than antennas began to appear. To the ASA personnel observing the proceedings, the prospects of the new occupants conducting communications intelligence at 509th RR Group's former headquarters seemed an ironic but fitting conclusion to the war in the ether.

During the cease-fire, the 509th RR Group analysts continued to serve as advisors at the South Vietnamese SIGINT centers, but VC/NVA units tended to remain in place and began to make greater use of landlines. All the while, ASA crews flew collection missions that, despite the truce, continued to be subjected to antiaircraft fire. On 16 February 1973, a crew of the 138th Avn Company completed the Army's final ARDF mission in the vicinity of Pleiku. The end came less than a month later on 7 March 1973, when the 509th RR Group was discontinued and the handful of its remaining soldiers boarded the last plane for home, bringing ASA's 12-year tour of service to a close.

When ASA left Vietnam, it took with it a number of lessons learned. (Although in reality, many of these issues were for higher echelons to solve.) The need for greater fusion of communications and collateral intelligence was recognized as well as better coordination of the entire US intelligence effort. ASA had felt frustrated by the limited numbers of consumers cleared for SIGINT and of the restraints imposed by the SSO system, a system it did not control. There was also acknowledgement that in mobile warfare, intelligence could never be too timely. Some within the ASA leadership believed that the agency had not taken personnel assignments seriously enough and had often placed junior or inexperience officers in key operational or leadership positions, particularly at the DSU level. On the other hand, despite the hostile intelligence environment, ASA had succeeded in providing the commander on the ground with a level of support previously unknown in the annals of Army cryptology. (Vietnam was the reverse of World War II where SIGINT had achieved great success at theater level but proved to be of only marginal value in the direct support mode.) ASA had been first into Vietnam and among the last to leave. Its systems had operated in the air and in close support of ground forces from the Delta to the DMZ and all points in between. ASA left Vietnam with the satisfaction of having been the primary source of timely, usable intelligence during the course of the war. A staff officer assigned to J2, MACV, perhaps summed it up best, "The COMINT effort gained great 'kudos' from tactical commanders and G2s. . . . There was never anything like it before and possibly there may never be again!"

The 509th RR Group receives the Republic of Vietnam's Cross of Gallantry with Palm. While in Vietnam, ASA units were awarded more than 120 US decorations and 60 foreign citations.


505
VIETNAM 1965 1970

Appendix A

Order of Battle 1961–73

Status of ASA Units in Vietnam

(as of December 1964)

Administrative Designator	Cover Designator	Base Camp Location	Supported Unit	Assigned Strength Off	WO	EM	Total
53d SOC	3d RRU	Saigon	MACV	20	15	371	406
101st Scty Det	7th RRU	Saigon	MACV	2	0	43	45
8th FS	8th RRU	Phu Bai	MACV	9	4	336	349
			Totals	**31**	**19**	**750**	**800**

Status of ASA Units in Vietnam
(as of February 1966)

Administrative Designator	Cover Designator	Base Camp Location	Supported Unit	Authorized Strength Off	WO	EM	Total
53d SOC	3d RRU	Saigon	MACV	36	12	565	613
101st Scty Det	7th RRU	Saigon	USARV	2	0	52	54
8th Fld Sta	8th RRU	Phu Bai	MACV	24	6	812	842
Co C, 313th Bn	10th RRU	An Khe	1st Cav Div	8	2	104	114
Co B, 313th Bn	11th RRU	Di An	1st Inf Div	9	3	156	168
Co A, 303d Bn	16th RRU	Chu Chi	25th Inf Div	9	3	156	168
404th Det	Det 1 3d RRU	Bien Hoa	173d Abn Bde	2	0	46	48
406th Det	Det 3 3d RRU	Phan Rang	1/101st Abn Div	2	0	46	48
407th Det	Det 4 3d RRU	Nha Trang	FFV	3	0	26	29
			Totals	**95**	**26**	**1963**	**2084**

Status of ASA Units in Vietnam
(as of October 1968)

Administrative Designator	Cover Designator	Base Camp Location	Supported Unit	Authorized Strength Off	WO	EM	Total
Gp VN	509th RR Gp	Saigon	MACV	41	10	299	350
Scty Co Saigon	101st RR Co	Saigon	USARV	9	2	181	192
Comm Unit Vn	RRCUV	Saigon	509th RR Gp	3	6	195	204
403d SOD	403d RR SOD	Nha Trang	5th SF Gp	3	0	41	44
Fld Sta Phu Bai	8th RR Fld Sta	Phu Bai	MACV/MAF	16	11	1039	1066
265th Co	265th RR Co	Camp Eagle	101st Abn Div	9	3	156	168
406th Det	406th RR Det	Camp Eagle	1/101st Abn Div	2	0	46	48
407th Det	407th RR Det	Quang Tri	1/5th Inf Div	3	0	80	83
303d Bn	303d RR Bn	Long Binh	FFV–II	18	5	251	274
Op Co Bien Hoa	175th RR Co	Bien Hoa	FFV–II	3	9	350	362
335th Co	335th RR Co	Dong Tam	9th Inf Div	9	3	156	168
337th Co	337th RR Co	Di An	1st Inf Div	9	3	156	168
371st Co	371st RR Co	Phuoc Vinh	1st Cav Div	9	2	146	157
372d Co	372d RR Co	Cu Chi	25th Inf Div	9	3	156	168
405th Det	405th RR Det	Phu Loi	3/82d Abn Div	3	0	74	77
409th Det	409th RR Det	Xuan Loc	11th Armd Cav	3	0	80	83
856th Det	856th RR Det	Long Binh	199th Inf Bde	2	0	60	62
313th Bn	313th RR Bn	Nha Trang	FFV–I	18	5	251	274
330th Co	330th RR Co	Pleiku	FFV–I	7	6	390	403
374th Co	374th RR Co	Pleiku	4th Inf Div	9	3	156	168
404th Det	404th RR Co	Phu Hiep	173d Abn Bde	2	0	60	62
Am RR Co (Prov)		Chu Lai	23d Inf Div	—	—	—	—
408th Det	408th RR Det	Chu Lai	196th Inf Bde	2	0	46	48
415th Det	415th RR Det	Chu Lai	11th Inf Bde	3	0	74	77
601st Det	601st RR Det	Chu Lai	198th Inf Bde	3	0	74	77
224th Avn Bn		Saigon	MACV	14	3	84	101
1st Co	1st RR Co	Cam Ranh	MACV	9	18	188	215
138th Avn Co		Da Nang	I CTZ	16	34	187	237
144th Avn Co		Nha Trang	II CTZ	16	34	187	237
146th Avn Co		Saigon	III CTZ	16	36	201	253
156th Avn Co		Can Tho	IV CTZ	11	21	138	170
			Totals	277	217	5502	5996

Status of ASA Units in Vietnam
(as of October 1971)

Administrative Designator	Cover Designator	Base Camp Location	Supported Unit	Authorized Strength Off	WO	EM	Total
Gp VN	509th RR Gp	Saigon	MACV	57	23	386	466
Scty Co Saigon	101st RR Co	Long Binh	USARV	13	0	98	111
Comm Unit VN	RRCUV	Saigon	509th RR Gp	2	6	180	188
FS Phu Bai	8th RR FS	Phu Bai	MACV/XXIV Corps	18	12	1011	1041
265th Co	265th RR Co	Camp Eagle	101st Abn Div	8	2	155	165
328th Co	328th RR Co	Chu Lai	23d Inf Div	8	2	151	161
FS Bien Hoa	175th RR FS	Bien Hoa	TRAC	12	9	504	525
405th Det	405th RR Det	Phuoc Vinh	3/1st Cav Div	3	0	72	75
FS Pleiku	330th RR FS	Nha Trang	SRAC	10	4	289	303
224th Bn	224th RR Bn	Long Thanh	MACV	13	4	78	95
1st Co	1st RR Co	Cam Ranh	MACV	9	17	175	201
138th Avn Co		Phu Bai	MR–1	18	42	212	272
146th Avn Co		Long Thanh	MR–2/3	22	60	266	348
156th Avn Co		Can Tho	MR–4	11	21	131	163
Co Can Tho	335th RR Co	Can Tho	DRAC	5	4	176	185
			Totals	**209**	**206**	**3884**	**4299**

Appendix B

Unit Summaries

Campaigns

1	Advisory	15 Mar 62–7 Mar 65
2	Defense	8 Mar 65–24 Dec 65
3	Counteroffensive	25 Dec 65–30 Jun 66
4	Counteroffensive, Phase II	1 Jul 66–31 May 67
5	Counteroffensive, Phase III	1 Jun 67–29 Jan 68
6	Tet Counteroffensive	30 Jan 68–1 Apr 68
7	Counteroffensive, Phase IV	2 Apr 68–30 Jun 68
8	Counteroffensive, Phase V	1 Jul 68–1 Nov 68
9	Counteroffensive, Phase VI	2 Nov 68–22 Feb 69
10	Tet 69/Counteroffensive	23 Feb 69–8 Jun 69
11	Summer-Fall 69	9 Jun 69–31 Oct 69
12	Winter-Spring 70	1 Nov 69–30 Apr 70
13	Sanctuary Counteroffensive	1 May 70–30 Jun 70
14	Counteroffensive, Phase VII	1 Jul 70–30 Jun 71
15	Consolidation I	1 Jul 71–30 Nov 71
16	Consolidation II	1 Dec 71–29 Mar 72
17	Cease-Fire	30 Mar 72–28 Jan 73

Note: What follows is based solely on ASA records. Only the USA Center of Military History can grant campaign credits and confirm unit awards. The following abbreviations were used: Presidential Unit Citation (PUC); Valorous Unit Award (VUA); Meritorious Unit Commendation (MUC); Republic of Vietnam Cross of Gallantry with Palm (RVN CGP); and Republic of Vietnam Civil Action Honor Medal (RVN CA)

1st ASA COMPANY

Deployed: 21 June 1967
Cover Designation: 1st Radio Research Company
Assigned Command: 224th Aviation Battalion
Supported Command: MACV*
Location: Cam Ranh Bay
Inactivated: 30 April 1972
Vietnam Campaign Participation Credit: 1**, 5–17
Vietnam Honors: 2 MUCs and 1 RVN CGP

* From Mar 1971 to Apr 1972, a detachment from the 146th Avn Co was attached to the 1st Avn Co to perform ARDF missions in the MR 2 upon the inactivation of the 144th Avn Co.
** Prior to assignment to ASA, the then 1st Army Avn Co had deployed briefly to Vietnam.

138th AVIATION COMPANY

Activated: 1 June 1966
Cover Designation: 138th Aviation Company (Radio Research)
Assigned Command: 224th Aviation Battalion
Supported Area: I CTZ*
Location: Da Nang on 1 June 1966
Relocated: Phu Bai on 3 June 1970
Relocated: Da Nang on 21 October 1972
Inactivated: 1 March 1973
Vietnam Campaign Participation Credit: 3–17
Vietnam Honors: 2 MUCs, 1 MUC (Navy), and 1 RVN CGP

* Redesignated MR 1 on 4 Oct 1970.

144th AVIATION COMPANY

Activated: 1 June 1966
Cover Designation: 144th Aviation Company (Radio Research)
Assigned Command: 224th Aviation Battalion
Supported Area: II CTZ*
Location: Nha Trang (Camp John F. McDermott)
Inactivated: 30 September 1971 (stood down April 1971)**
Vietnam Campaign Participation Credit: 3–15
Vietnam Honors: 3 MUCs and 1 RVN CGP
* Redesignated MR 2 on 4 Oct 1970.
** Mission transferred to 146th Avn Co.

146th AVIATION COMPANY

Activated: 1 June 1966
Cover Designation: 146th Aviation Company (Radio Research)
Assigned Command: 224th Aviation Battalion
Supported Area: III CTZ*
Location: Saigon
Relocated: Long Thanh North on 5 January 1970
Supported Area: MR 3 and MR 2 in April 1970**
Relocated: Can Tho on 16 August 1972
Supported Area: MR 3 and MR 4 in August 1972***
Inactivated: 17 February 1973
Vietnam Campaign Participation Credit: 3–17
Vietnam Honors: 3 MUCs and 1 RVN CGP
* Redesignated MR 3 on 4 Oct 1970.
** Assumed mission of the inactivated 144th Avn Co.
*** Assumed mission of the redeployed 156th Avn Co.

156th AVIATION COMPANY

Activated: 1 June 1966
Cover Designation: 156th Aviation Company (Radio Research)
Assigned Command: 224th Aviation Battalion
Supported Command: IV CTZ*
Location: Can Tho
Redeployed: 27 April 1972**
Vietnam Campaign Participation Credit: 3–17
Vietnam Honors: 3 MUCs and 1 RVN CGP
* Redesignated MR 4 on 4 Oct 1970.
** Transferred mission to 146th Avn Co.

HQ & HQ DETACHMENT, 224th AVIATION BATTALION

Activated: 1 June 1966
Cover Designation: Hq & Hq Company, 224th Aviation Battalion (Radio Research)
Assigned Command: 509th US Army Security Agency Group
Supported Command: MACV
Location: Saigon
Relocated: Long Thanh North on 5 January 1970
Redesignated: Hq & Hq Company, 224th Army Security Agency Battalion on 19 May 1971
Cover Redesignation: 224th Radio Research Battalion
Relocated: Saigon on 19 August 1972
Redeployed: 3 March 1973
Vietnam Campaign Participation Credit: 3–17
Vietnam Honors: 3 MUCs and 1 RVN CGP

265th ARMY SECURITY AGENCY COMPANY

Deployed: 3 December 1967
Cover Designation: 265th Radio Research Company
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 101st Airborne Division
Location: Bien Hoa
Reassigned Command: US Army Security Agency Field Station, Phu Bai on 23 February 1968
Relocated: Camp Eagle on 15 March 1968
Relocation: Phu Bai on 13 January 1972
Inactivated: 1 April 1972 (zero strength by 18 January 1972)
Vietnam Campaign Participation Credit: 5–17
Vietnam Honors: 3 MUCs, 4 RVN CGP, and 1 RVN CA*
* The 3d Platoon, 265th Army Security Agency Company was awarded the MUC.

HQ & HQ COMPANY, 303d ARMY SECURITY AGENCY BATTALION

Deployed: 12 April 1966
Cover Designation: 17th Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: FFV–II
Location: Long Binh
Reassigned Command: 509th US Army Security Agency Group on 1 June 1966
Cover Redesignation: 303d Radio Research Battalion on 29 July 1966
Redeployed: 15 June 1971*
Vietnam Campaign Participation Credit: 3–14
Vietnam Honors: 5 MUCs, 1 RVN CGP, and 1 RVN CA
* Command mission transferred to USASA Field Station, Bien Hoa.

COMPANY A, 303d ARMY SECURITY AGENCY BATTALION

Deployed: 13 February 1966
Cover Designation: 16th Radio Research Unit
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 25th Infantry Division
Location: Cu Chi
Redesignation: 372d Army Security Agency Company on 15 October 1966
Cover Redesignation: 372d Radio Research Company
Inactivated: 6 March 1971 (zero strength by November 1970)
Vietnam Campaign Participation Credit: 3–14
Vietnam Honors: 5 MUCs, 3 RVN CGP, and 1 RVN CA

COMPANY C, 303d ARMY SECURITY AGENCY BATTALION

Deployed: 7 September 1966
Cover Designation: 14th Radio Research Unit
Assigned Command: 313th Army Security Agency Battalion
Supported Command: 4th Infantry Division
Location: Pleiku (Camp Enari)
Redesignation: 374th Army Security Agency Company on 15 October 1966
Cover Redesignation: 374th Radio Research Company
Relocated: An Khe (Camp Radcliff) on 1 March 1970
Redeployed: 15 December 1970
Vietnam Campaign Credit: 4–14
Vietnam Honors: 3 MUCs, 3 RVN CGPs, and 1 RVN CA*

*Detachment 1, 374th ASA Company was awarded 1 PUC.

HQ & HQ COMPANY, 313th ARMY SECURITY AGENCY BATTALION

Deployed: 15 March 1966
Cover Designation: 13th Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: FFV–I
Location: Nha Trang
Cover Redesignation: 313th Radio Research Battalion on 3 May 1966
Reassigned Command: 509th US Army Security Agency Group on 1 June 1966
Redeployed: 18 June 1971*
Vietnam Campaign Participation Credit: 3–14
Vietnam Honors: 5 MUCs and 1 RVN CGP
* Command mission transferred to USASA Field Station, Pleiku.

COMPANY B, 313th ARMY SECURITY AGENCY BATTALION

Deployed: 3 August 1965
Cover Designation: 11th Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: 1st Infantry Division
Location: Bien Hoa
Relocated: Di An on 10 November 1965
Reassigned Command: 303d Army Security Agency Battalion on 10 May 1966
Redesignation: 337th Army Security Agency Company on 30 September 1966
Cover Redesignation: 337th Radio Research Company
Relocated: Lai Khe on November 1968
Relocated: Di An on 17 February 1970
Redeployed: 7 April 1970
Vietnam Campaign Participation Credit: 2–12
Vietnam Honors: 5 MUCs, 1 RVN CGP, and 1 RVN CA

COMPANY C, 313th ARMY SECURITY AGENCY BATTALION

Deployed: 16 September 1965
Cover Designation: 10th Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: 1st Cavalry Division
Location: An Khe (Camp Radcliff)
Reassigned Command: 313th Army Security Agency Battalion on 10 April 1966
Redesignation: 371st Army Security Agency Company on 15 October 1966
Cover Redesignation: 371st Radio Research Company
Reassigned Command: US Army Security Agency Field Station, Phu Bai on 23 February 1968
Relocated: Camp Evans (near Phu Bai) on 17 March 1968
Reassigned Command: 303d Army Security Agency Battalion on 16 October 1968
Relocated: Camp Gorvad (Phuoc Vinh) on 11 November 1968
Redeployed: 29 April 1971*
Vietnam Campaign Participation Credit: 2–14
Vietnam Honors: 2 PUCs, 1 VUA, 4 MUCs, 3 RVN CGPs and 1 RVN CAs**

* Residual mission transferred to the organized Brigade Radio Research Detachment (Provisional).
**Detachment 2, 371st Army Security Agency Company received the VUA.

328th ARMY SECURITY AGENCY COMPANY

Activated: 20 November 1968*
Cover Designation: 328th Radio Research Company
Assigned Command: 313th Army Security Agency Battalion
Supported Command: 23d Infantry Division
Location: Chu Lai
Reassigned Command: US Army Security Agency Field Station, Pleiku on 30 June 1971
Reassigned Command: US Army Security Agency Field Station, Phu Bai on 24 October 1971
Relocated: Da Nang on 24 October 1971
Reassigned Supported Command: 196th Infantry Brigade on 24 October 1971
Inactivated: 30 June 1972 (zero strength by 12 March 1972)
Vietnam Campaign Participation Credit: 9–17
Vietnam Honors: 3 MUCs and 3 RVN CGP**
*Assumed mission of the Americal Radio Research Company (Provisional)
** Detachment 2, 328th Army Security Agency Company received the VUA.

330th ARMY SECURITY AGENCY COMPANY

Deployed: 11 August 1966
Cover Designation: 12th Radio Research Unit
Assigned Command: 313th Army Security Agency Battalion
Supported Command: FFV–I
Location: Pleiku (Engineer Hill)
Cover Redesignation: 330th Radio Research Company on 18 July 1966
Relocated: Nha Trang on 20 May 1970
Reassigned Command: US Army Security Agency Group, Vietnam (509th RR Group) on 15 June 1971
Inactivated: 30 September 1971*
Vietnam Campaign Participation Credit: 4–15
Vietnam Honors: 4 MUCs and 1 RVN CGP
*Mission transferred to USASA Field Station, Pleiku

335th ARMY SECURITY AGENCY COMPANY

Deployed: 10 January 1967
Cover Designation: 335th Radio Research Company
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 9th Infantry Division
Location: Camp Martin Cox (Bear Cat) near Long Thanh
Relocated: Dong Tam on 16 July 1968
Relocated: Di An on 28 August 1969
Reassigned Command: US Army Security Agency Group, Vietnam (509th RR Group) on 24 December 1969
Relocated: Can Tho on 24 December 1969
Inactivated: 5 April 1971*
Vietnam Campaign Participation Credit: 4–15
Vietnam Honors: 5 MUCs, 3 RVN CGP, and 1 RVN CA

* Mission and personnel transferred on 5 April 1971 to the USASA Operations Company, Can Tho.

DETACHMENT A, 358th ARMY SECURITY AGENCY COMPANY

Deployed: 19 February 1968
Cover Designation: Detachment A, 358th Radio Research Company
Assigned Command: US Army Security Agency Field Station, Phu Bai
Supported Command: 3d Brigade, 82d Airborne Division
Location: Hue-Phu Bai
Redeployed: 15 July 1968*
Vietnam Campaign Participation Credit: None**
Vietnam Honors: None

* Mission transferred to the 405th Radio Research Detachment

** Elements deployed without their headquarters elements receive no campaign credits.

403d ARMY SECURITY AGENCY SPECIAL OPERATIONS DETACHMENT

Deployed: 27 September 1966
Cover Designation: 403d Radio Research Special Operations Detachment
Assigned Command: 509th US Army Security Agency Group
Supported Command: 5th Special Forces Group
Location: Nha Trang
Inactivated: 15 December 1970
Vietnam Campaign Participation Credit: 4–14
Vietnam Honors: 1 PUC, 1 MUC, 3 RVN CGP, and 1 RVN CA

404th ARMY SECURITY AGENCY DETACHMENT

Deployed: 4 June 1965
Cover Designation: Detachment 1, 3d Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: 173d Airborne Brigade
Location: Bien Hoa
Reassigned Command: 303d Army Security Agency Battalion in May 1966
Cover Redesignation: Detachment 1, 17th Radio Research Unit in May 1966
Cover Redesignation: 404th Radio Research Detachment on 29 July 1966
Reassigned Command: 313th Army Security Agency Battalion on 1 December 1967
Relocated: Phu Hiep in February 1968
Relocated: LZ English (Bong Son) on January 69
Reassigned Command: US Army Security Agency Field Station, Pleiku on 30 September 1971
Inactivated: 1 April 1972 (zero strength 28 August 1971)*
Vietnam Campaign Participation Credit: 2–17
Vietnam Honors: 1 PUC, 6 MUCs, and 1 RVN CGP

*Residual mission transferred to 330th Radio Research Field Station on 23 July 1971

405th ARMY SECURITY AGENCY DETACHMENT

Deployed: 25 June 1965
Cover Designation: Detachment 2, 3d Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: 1st Brigade, 101st Airborne Division
Location: Bien Hoa
Inactivated: 5 November 1965
Reactivated: 15 July 1968
Cover Designation: 405th Radio Research Detachment
Assigned Command: 8th US Army Security Agency Field Station
Supported Command: 3d Brigade, 82d Airborne Division
Location: Gia Le
Reassigned Command: 303d Army Security Agency Battalion on 28 September 1968
Relocated: Phu Loi on 28 September 1968
Inactivated: 5 December 1969
Reactivated: 30 September 1971**
Cover Designation: 405th Radio Research Detachment
Assigned Command: US Army Security Agency Field Station, Bien Hoa
Supported Command: 3d Brigade, 1st Cavalry Division
Location: Phuoc Vinh–Bien Hoa
Inactivated: 30 June 1972
Vietnam Campaign Participation Credit: 2, 8–12, 15–17
Vietnam Honors: 3 MUCs and 1 RVN CA

* Assumed mission of the redeployed Detachment A, 358th ASA Company

** Assumed residual mission of the discontinued Brigade Support Detachment (Provisional).

406th ARMY SECURITY AGENCY DETACHMENT

Deployed: 27 July 1965
Cover Designation: Detachment 3, 3d Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: 1st Brigade, 101st Airborne Division
Location: Phan Rang (arrived 5 November 1965)
Reassigned Command: 313th Army Security Agency Battalion on 2 May 1966*
Cover Redesignation: Detachment 3, 13th Radio Research Unit in May 1966
Cover Redesignation: 406th Radio Research Detachment on 29 July 1966
Reassigned Command: 8th US Army Security Agency Field Station on 16 July 1968
Relocated: Camp Eagle on 16 July 1968
Inactivated: 20 November 1968**
Vietnam Campaign Participation Credit: 2–9
Vietnam Honors: 1 PUC, 1 VUA, 2 MUCs and 1 RVN CGP

* See Provisional Radio Research Company
** Residual mission transferred to 265th ASA Company.

407th ARMY SECURITY AGENCY DETACHMENT

Deployed: 10 August 1965
Cover Designation: Detachment 4, 3d Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: Field Force, Vietnam
Location: Nha Trang
Inactivated: 3 May 1966*
Deployed: 28 July 1968
Cover Designation: 407th Radio Research Detachment
Assigned Command: US Army Security Agency Field Station, Phu Bai
Supported Command: 1st Brigade, 5th Infantry Division
Location: Quang Tri Combat Base
Relocated: Dong Ha Combat Base on 31 Aug 68
Relocated: Quang Tri Combat Base (Camp Red Devil) on 12 Nov 68
Inactivated: 1 April 1972 (zero strength on 28 August 1971)**
Vietnam Campaign Participation Credit: 2–3, 8–17
Vietnam Honors: 3 MUCs and 3 RVN CGP

* Liaison mission assigned to the deployed 313th RR Bn.
** Portion of mission transferred to Detachment A, USASA Field Station, Phu Bai.

408th ARMY SECURITY AGENCY DETACHMENT

Deployed: 19 October 1966
Cover Designator: 408th Radio Research Detachment
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 196th Infantry Brigade
Location: Tay Ninh
Relocated: Chu Lai as of 11 April 1967*
Reassigned Command: 313th Army Security Agency Battalion on 12 April 1967
Inactivated: 20 November 1968
Vietnam Campaign Participation Credit: 4–9
Vietnam Honors: 2 MUCs

* See Provisional Radio Research Company

409th ARMY SECURITY AGENCY DETACHMENT

Deployed: 18 August 1966
Cover Designation: 409th Radio Research Detachment
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 11th Armored Cavalry Regiment
Location: Xuan Loc (Blackhorse Base Camp)
Relocated: Di An on 5 October 1969
Inactivated: 6 March 1971
Vietnam Campaign Participation Credit: 4–14
Vietnam Honors: 1 VUA, 4 MUCs, 4 RVN CGPs, and 1 RVN CA

415th ARMY SECURITY AGENCY DETACHMENT

Deployed: 22 December 1967*
Cover Designation: 415th Radio Research Detachment
Assigned Command: 313th Army Security Agency Battalion
Supported Command: 11th Infantry Brigade
Location: Chu Lai
Inactivated: 20 November 1968
Vietnam Campaign Participation Credit: 5–9
Vietnam Honors: 1 MUC

* See Provisional Radio Research Company

601st ARMY SECURITY AGENCY DETACHMENT

Deployed: 26 October 1967*
Cover Designation: 601st Radio Research Detachment
Assigned Command: 313th Army Security Agency Battalion
Supported Command: 198th Infantry Brigade
Location: Chu Lai
Inactivated: 20 November 1968
Vietnam Campaign Participation Credit: 5–9
Vietnam Honors: 1 MUC

* See Provisional Radio Research Company

856th ARMY SECURITY AGENCY DETACHMENT

Deployed: 21 November 1966
Cover Designation: 856th Radio Research Detachment
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 199th Infantry Brigade
Location: Long Binh (Camp Frenzell–Jones)
Inactivated: 6 March 1971 (stood down on 24 December 1970)
Vietnam Campaign Participation Credit: 4–14
Vietnam Honors: 1 VUA, 4 MUCs, 3 RVN CGPs, and 2 RVN CAs

PROVISIONAL RADIO RESEARCH COMPANY

Organized: 10 April 1967*
Assigned Command: 313th Army Security Agency Battalion
Supported Command: Task Force OREGON
Location: Chu Lai
Supported Command: 23d Infantry Division (Americal) on 25 September 1967
Redesignated: Americal Radio Research Company (Provisional) on 7 October 1967**
Discontinued: 20 November 1968***

*Formed from the 406th and 408th ASA Detachments and Detachment 2, 374th ASA Company.
**Formed from the 408th, 415th, and 601st ASA Detachments.
***Mission transferred to the 328th ASA Company on 20 November 1968.

BRIGADE RADIO RESEARCH DETACHMENT (PROVISIONAL)

Organized: 3 April 1971*
Assigned Command: 303d Army Security Agency Battalion
Supported Command: 3d Brigade, 1st Cavalry Division
Location: Bien Hoa
Reassigned Command: US Army Security Agency Operations Company, Bien Hoa on 15 June 1971
Discontinued: 30 September 1971**

* Mission received from inactivated 371st ASA Company.
** Mission transferred to the newly activated 405th ASA Det.

8th US ARMY SECURITY AGENCY FIELD STATION

Organized: 1 November 1964*
Cover Designation: 8th Radio Research Unit
Assigned Command: 53d US Army Security Agency Special Operations Command (3d RRU)
Supported Command: MACV and MAF
Location: Phu Bai
Reassigned Command: 509th US Army Security Agency Group on 1 June 1966
Redesignation: US Army Security Agency Field Station, Phu Bai on 15 December 1967
Cover Redesignation: 8th Radio Research Field Station
Supported Command: MACV and XXIV Corps on 14 April 1971**
Supported Command: MACV and FRAC on 19 March 1972***
Relocated: Da Nang on 1 November 1972
Discontinued: 26 February 1973
Vietnam Campaigns: 1–17
Vietnam Decorations: 3 MUCs, 1 RVN CGP, and 1 RVN CA

* Replaced Det J, 3d RRU.
**Upon Departure of the MAF.
***Upon Departure of the XXIV Corps.

82d US ARMY SECURITY AGENCY SPECIAL OPERATIONS UNIT

Organized: 20 September 1961*
Cover Designation: 3d Radio Research Unit
Assigned Command: US Army Security Agency Pacific
Supported Command: MAAG–V and MACV
Location: Saigon
Redesignation: 53d US Army Security Agency Special Operations Command on 1 November 1964
Discontinued: 1 June 1966**
Vietnam Campaigns: 1–3
Vietnam Decorations: 2 MUCs***

*Replaced the 400th USASA Unit (Prov).
**Command mission transferred to the 509th USASA Gp.
***Detachment J, 3d Radio Research Unit received 1 MUC; 1st Team, 3d RRU received 1 PUC; and 2d Team, 3d RRU received 1 PUC.

101st US ARMY SECURITY AGENCY SECURITY DETACHMENT

Organized: 1 March 1963
Cover Designation: 7th Radio Research Unit
Assigned Command: 82d US Army Security Agency Special Operations Unit
Supported Command: MACV and USARV
Location: Saigon
Reassigned Command: 509th US Army Security Agency on 1 June 1966
Cover Redesignation: 101st Radio Research Company on 10 September 1966
Redesignation: USASA Security Company, Saigon on 15 December 1967
Relocation: Long Binh on 30 March 1970
Relocation: Saigon on 16 March 1971
Discontinued: 1 April 1972
Vietnam Campaigns: 1–17
Vietnam Decorations: 4 MUCs and 1 RVN CGP

175th US ARMY SECURITY AGENCY COMPANY

Organized: 1 June 1966
Cover Designation: 175th Radio Research Company
Assigned Command: 303d Army Security Agency Battalion
Supported Command: MACV and FFV–II
Location: Saigon
Relocation: Bien Hoa on 3 July 1967
Redesignation: US Army Security Agency Operations Company, Bien Hoa on 15 December 1967*
Supported Command: MACV and TRAC as of 30 April 1971
Redesignation: US Army Security Agency Field Station, Bien Hoa on 30 September 1971**
Cover Redesignation: 175th Radio Research Field Station
Reassigned Command: US Army Security Agency Group, Saigon on 30 September 1971
Relocation: Saigon on 29 September 1972
Discontinued: 26 February 1973
Vietnam Campaigns: 3–17
Vietnam Decorations: 5 MUCs, 1 RVN CGP, and 1 RVN CA

*The original redesignation order read US Army Security Operations Company, Saigon
**The Radio Research Field Station, Bien Hoa (Provisional) was in existence from 1 May 1971 to 30 September 1971.

400th US ARMY SECURITY AGENCY UNIT (PROVISIONAL)

Organized: 23 May 1961
Cover Designation: 3d Radio Research Unit
Assigned Command: US Army Security Agency Pacific
Supported Command: MAAG–V
Location: Saigon
Discontinued: 20 September 1961*

*Mission and personnel transferred to the 82d USASA Special Operations Unit.

509th US ARMY SECURITY AGENCY GROUP

Organized: 1 June 1966
Cover Designation: 509th Radio Research Group
Supported Command: MACV and USARV
Assigned Command: USASA Pacific
Location: Saigon
Redesignation: US Army Security Group, Vietnam on 15 December 1967
Discontinued: 7 March 1973
Vietnam Campaigns: 3–17
Vietnam Decorations: 3 MUCs and 2 RVN CGP

US ARMY SECURITY AGENCY FIELD STATION, PLEIKU*

Organized: 30 September 1971**
Cover Designation: 330th Radio Research Field Station
Assigned Command: US Army Security Agency Group, Vietnam
Supported Command: MACV and SRAC
Location: Nha Trang
Discontinued: 1 September 1972
Vietnam Campaigns: 15–17
Vietnam Decorations: None

*The planned relocation to Pleiku never took place.

**USASA Field Station, Pkeiku (Provisional) in existence from 1 May to 30 September 1971.

US ARMY SECURITY AGENCY COMPANY, CAN THO

Organized: 5 April 1971*
Cover Designation: 335th Radio Research Company
Assigned Command: US Army Security Agency Group, Vietnam
Supported Command: Delta Regional Assistance Command
Location: Can Tho
Discontinued: 30 June 1972
Vietnam Campaigns: 14–17
Vietnam Decorations: None

* Residual mission of the inactivated 335th ASA Company.

US ARMY SECURITY AGENCY COMMUNICATIONS UNIT, VIETNAM

Organized: 1 June 1966
Cover Designation: 18th Radio Research Unit
Assigned Command: 509th US Army Security Agency Group
Supported Command: 509th US Army Security Agency Group
Location: Saigon
Cover Redesignation: Radio Research Communications Unit, Vietnam on 2 September 1966
Discontinued: 31 January 1973
Vietnam Campaigns: 3–17
Vietnam Decorations: 3 MUCs and 1 RVN CGP

Appendix C

Key ASA Personnel

US Army Security Agency

MG William M. Breckinridge	1 Apr 60–31 May 62
BG Orman G. Charles	1 Jun 62–30 Jun 62
MG William H. Craig	1 Jul 62–7 Sep 65
BG Dayton W. Eddy	8 Sep 65–14 Sep 65
MG Charles Denholm	15 Sep 65–4 Feb 73

US Army Security Agency, Pacific

COL Robert T. Walker	15 May 60–16 Jun 61
COL George A. Godding	16 Jun 61–23 May 64
COL Robert P. Brust	30 Jul 64–21 Jan 67
COL Edgar F. Hoffman	21 Jan 67–19 Oct 67
BG George A. Godding	20 Oct 67–24 Jun 69
COL Arthur W. Hackwood	25 Jun 69–25 Aug 70
BG Herbert E. Wolff	26 Aug 70–16 Nov 72

3d Radio Research Unit

LTC Robert W. Williams	23 May 61–10 Aug 61
LTC William J. Cochrane	11 Aug 61–8 Jul 63
LTC Thomas S. Owen	9 Jul 63–7 Dec 64
COL William M. Hamilton	8 Dec 64–27 Nov 65
COL Clayton C. Swears	28 Nov 65–1 Jun 66

509th Radio Research Group

COL Clayton C. Swears	1 Jun 66—17 Nov 66
COL John J. McFadden	17 Nov 66–18 Oct 67
COL William T. Riley	18 Oct 67–19 Sep 68
COL Allen J. Mauderly	20 Sep 68–5 Apr 69
COL Richard A. Grodin	6 Apr 69–21 Sep 69
COL William W. Higgins	21 Sep 69–18 Aug 70
COL Jack P. Lansford	18 Aug 70–6 Aug 71
COL George R. Hamer	6 Aug 71–1 Aug 72
COL Marion E. White	2 Aug 72–7 Mar 73

224th Aviation Battalion (Radio Research)

MAJ John D. Rieser	1 Jun 66–31 Jul 66
MAJ Donn E. Taylor	Aug 66—Aug 66
LTC Richard A. Rusk	Aug 66–Aug 67
LTC George W. Cadmus	Aug 67–4 Aug 68
LTC Jimmie King	5 Aug 68–24 Jul 69
LTC John P. Brown	25 Jul 69–12 Jul 70
LTC Robert Swanson	12 Jul 70–22 Jun 71
LTC David Richards	22 Jun 71–1 Jun 72
MAJ Gerald E. Lethcoe, Jr.	1 Jun 72–20 Nov 72
MAJ Charles S. Simerly	21 Nov 72–5 Dec 72
LTC James M. Henderson, Jr.	5 Dec 72–3 Mar 73

303d Radio Research Battalion

LTC John J. Masters	8 Jul 64–13 Apr 67
LTC Norman J. Campbell	29 Apr 67–12 Apr 68
LTC Robert W. Price	13 Apr 68–16 Nov 68
LTC William O. Roscher	16 Nov 68–30 Jun 69
LTC James E. Freeze	1 Jul 69–4 Jun 70
LTC Claude E. Vannoy	5 Jul 70–7 Jan 71
LTC Donald E. Grant	8 Jan 71–15 Jun 71

313th Radio Research Battalion

LTC Russell B. Jones, Jr.	15 Jan 65–15 Aug 66
LTC Charles B. Ablett	15 Aug 66–21 Dec 66
LTC Stanley G. Kozlowski	21 Dec 66–26 Jun 67
LTC Richard L. Jones	26 Jun 67–4 Feb 68
LTC George E. Strickland	5 Feb 68–4 Aug 68
LTC James F. Morris, Jr.	5 Aug 68–21 Jun 69
LTC Andrew E. Little	21 Jun 69–5 Dec 69
LTC Joseph J. Muhlherr	6 Dec 69–6 Aug 70
LTC David A. Wisyanski	6 Aug 70–15 Jun 71

8th Radio Research Field Station

MAJ George T. Shearin	1 Nov 64–25 Feb 65
COL Joseph Goldenberg	25 Feb 65–Feb 66
COL Richard A. McMahon	13 Feb 66–Feb 67
COL George F. Garrant	9 Feb 67–19 Jan 68
COL Allen J. Mauderly	20 Jan 68–5 Mar 68
LTC Robert F. Von Dach	6 Mar 68–7 Feb 69
LTC Kenneth F. Coykendall	8 Feb 69–17 Sep 69
LTC Forrest G. Fultz	18 Sep 69–8 Dec 69
LTC Gerald M. Dirkx	9 Dec 69–18 May 70
MAJ Joseph F. Short	18 May 70–18 Jun 70
LTC Eugene S. Sanford	18 Jun 70–8 Sep 70
LTC Nathaniel Alderman, Jr.	9 Sep 70–25 Aug 71
COL Louis W. Powers	25 Aug 71–16 Aug 72
COL Stanley G. Kozlowski	17 Aug 72–31 Oct 72
MAJ Kenneth G. Neiman	1 Nov 72–26 Feb 73

330th Radio Research Field Station

LTC David A. Wisyanski	15 Jun 71–18 Jul 71
LTC Horace S. Kelley	19 Jul 71–22 Jun 72
MAJ Robert J. Adams	23 Jun 72–30 Jul 72

175th Radio Research Field Station

LTC Donald E. Grant	Jun 71–Dec 71
LTC Thomas J. Flynn	Dec 71–Sep 72
MAJ Charles G. Burke	Oct 72–Feb 73

Appendix D

Fallen in Battle

SP4 James T. Davis	22 Dec 61	3d RRU
PFC Donald R. Taylor	9 Feb 64	3d RRU
SP4 Arthur W. Glover	9 Feb 64	3d RRU
SSG Robert F. Townsend	4 Nov 65	371st RR Co
SSG Donald D. Daugherty	13 Apr 66	3d RRU
CPT James D. Stallings	25 Sep 66	337th RR Co
1LT John F. Cochrane	24 Oct 66	409th RR Det
SFC John F. Stirling	8 Mar 67	335th RR Co
SFC Robert D. Taylor	26 Nov 67	335th RR Co
SGT Diego Ramirez, Jr.	26 Nov 67	335th RR Co
SP5 Michael P. Brown	26 Nov 67	335th RR Co
CPT John M. Casey	25 Mar 68	371st RR Co
SP4 Christopher J. Schramm	13 May 68	371st RR Co
SP4 Jeffrey W. Haerle	13 May 68	TDY
SP5 Samuel C. Martin	17 May 68	101st RR Co
SGT Thomas J. Tomczak	23 Jul 68	403d RR SOD
SP5 Harold D. Biller	25 Feb 69	175th RR Co
SP5 Harry J. Colon	21 Jun 69	409th RR Det
SP4 James R. Smith	29 Nov 69	371st RR Co
PFC Henry N. Heide, II	29 Nov 69	371st RR Co
SP4 Robert E. Dew	30 Aug 70	330th RR Co
SP5 Carl H. Caccia	21 Feb 71	404th RR Det
SP5 Robert J. Thelen	21 Feb 71	404th RR Det
SGT Robert J. Potts	21 Feb 71	404th RR Det
SP5 Mitchell B. Smith	21 Feb 71	404th RR Det
SP5 Gary C. David	1 Mar 71	371st RR Co
SP4 Frank A. Sablan	1 Mar 71	371st RR Co
CPT Michael W. Marker	4 Mar 71	138th Avn Co
CW1 Harold L. Algaard	4 Mar 71	138th Avn Co
SP5 Richard J. Hentz	4 Mar 71	138th Avn Co
SP5 Rodney D. Osborne	4 Mar 71	138th Avn Co
SP6 John T. Strawn	4 Mar 71	138th Avn Co
SP5 Gary P. Westcott	30 Mar 72	8th RR Fld Sta
SP4 Bruce A. Crosby, Jr.	30 Mar 72	8th RR Fld Sta

Appendix E

Airborne Systems

Beaver (U–6A)	Mar 62–Mar 72	HF DF
Seminole (U–8D/8F)	Jan 63–Feb 73	HF DF
PATHFINDER Caribou (CV–2B)	Jan 66–Apr 67	HF/VHF DF/Collection[1]
HAPPY NIGHTS/CAFÉ GIRL Otter (U–1A)	Mar 67–Jan 71	HF DF/Collection[2]
CRAZY CAT/CEFLIEN LION Neptune (P–2E)	Jun 67–Apr 72	HF/VHF ECM/Collection[3]
LEFT BANK Huey (UH–1D/1H)	Aug 67–Jun 72	HF DF RFP/Collection[4]
LAFFING OTTER Otter (U–1A)	Dec 67–Jan 71	HF DF/Collection
HOMING PIGEON Mohawk (OV–1C)	Jun 68–Sep 69	VHF DF
LAFFING EAGLE Ute (U–21D)	Dec 68–Feb 73	HF/VHF DF/Collection[5]
LEFT JAB Ute (U–21A)	Dec 70–Feb 73	VHF DF/Collection

[1] Used only in HF

[2] Configured as a LAFFING OTTER by 1970

[3] Used only in collection capacity

[4] RFP/Collection positions removed in 1970

[5] Not used in HF DF until Oct 70 and never in VHF

Appendix F

Chronology

29 Apr 61	Presidential decision approves ASA COMINT effort in South Vietnam.
13 May 61	3d RRU arrives at Ton Son Nhut AFB—the first Army unit to be deployed.
15 May 61	WHITEBIRCH Phase of operations begins with manual Morse coverage.
27 Jun 61	3d RRU intercept vans move to ARVN compound, Trai Tran Hung Dao.
29 Jun 61	WHITEBIRCH DF Net becomes fully operational.
Aug 61	Mobile AN/PRD–1 DF teams are deployed.
4 Sep 61	3d RRU personnel conduct SABERTOOTH class for ARVN SIGINT specialists.
22 Dec 61	SP4 James T. Davis is killed in ambush while advising ARVN DF team.
Jan 62	3d RRU conducts joint mission with ARVN counterpart.
27 Jan 62	3d RRU personnel complete their first COMSEC monitoring mission.
Mar 62	First ARDF platform (U–6) arrives in Vietnam.
Apr 62	3d RRU moves to new quarters at Ton Son Nhut AFB, named in memory of SP4 James T. Davis.
27 May 62	ARDF results in a major tactical success.
28 Jun 62	3d RRU occupies Phu Bai as a DF site.
Jan 63	A U–8 aircraft equipped with ARDF capability becomes operational. The twin–engine aircraft gives the 3d RRU an all-weather capability.
1 Mar 63	Newly organized 7th RRU assumes responsibility for COMSEC mission.

14 May 63	3d RRU awarded Meritorious Unit Commendation, the first unit to be so honored in Vietnam.
4 Aug 64	Phu Bai warns of imminent danger in Gulf of Tonkin.
1 Nov 64	Det J, 3d RRU at Phu Bai is replaced by a field station (8th RRU).
9 Jun 65	First Direct Support Unit (the 404th ASA Det) arrives in country.
Jun 65	Vietnamese born linguists, DANCERS, are used by the 3d RRU as transcribers.
Aug 65	ASA units prove a key factor in the first large-scale battle involving US forces (Operation STARLIGHT). ARDF deploys in a direct support mode during battle.
Jan 66	The Nestor series of secure voice equipment is introduced in the field.
Mar–Apr 66	303d and 313th ASA Battalions arrive to support Field Forces.
1 Jun 66	3d RRU is replaced by the 509th RR Group. The 224th Avn Battalion is activated to assume responsibility for airborne mission.
1 Jul 66	ARDF Coordination Center is created to manage Air Force/Army ARDF missions.
27 Sep 66	403d RR SOD arrives to support the 5th Special Forces Group.
Oct 66	330th RR Co is named Collection Management Authority for II CTZ and the 175th RR Co for III CTZ.
Oct 66	ARDF indicates the presence of 325th NVA Division within South Vietnam.
17 Apr 67	Project MUSTARD (Wideband intercept) is inaugurated at the 330th RR Co.
29 Jun 67	CEFLIEN LION (EW) platforms arrive.
Jul 67	LEFTBANK heliborne DF platform becomes operational.
Jan 68	Direct Support Units received authority to issue their own tactical reports (TACREP) which allowed for passing of perishable information in a sanitized format.
23 Feb 68	8th RR Field Station at Phu Bai assumes control of Direct Support Units for the first time.
29 Mar 68	CEFLIEN LION platforms flown by 1st RR Co begins airborne collection.
May 68	Initial steps taken by COMSEC specialists to move away from monitoring and to begin to emphasize advice and assistance role.
15 Jun 68	Processing and Analysis Section is established at the 509th RR Group to look at country-wide analytical problems.
28 Jan 69	LAFFING EAGLE U–21 aircraft arrives and becomes operational.
13 Apr 69	Deployment of the experimental Tactical Automated Data Processing System signals the increased use of computers in the field.
1 Jul 69	ARVN Special Technical Detachments are organized.
15 Oct 69	SSG Donna P. Baldwin becomes first WAC to be assigned to the 509th RR Group.
20 Dec 69	Project TOUCHDOWN exploits capture of an NVA COMINT Intercept Team.
24 Dec 69	335th RR Company moves to Can Tho and assumes responsibility as the CMA to the Delta.
Feb 70	RATRACE Team deploys to Ben Luc to provide analytical and transcription assistance.
3 May 70	During the Cambodian Incursion, LEFT BANK platform produces information leading to the discovery of "The City," a large logistics center.

4 May 70	First ASA unit (the 409th RR Detachment) enters Cambodia to perform low-level voice intercept.
10 Jun 70	Project EXPLORER becomes operational on Hill 950.
31 Jul 70	The Division Advisors Radio Research Support (DARRS) Detachments are established.
Oct 70	Installation of the ARD–23 V–Scan on the LAFFING EAGLE platforms represents major upgrade in Army ARDF.
13 Nov 70	The Vietnamization Improvement and Modernization Plan is formally implemented to begin shifting the fighting responsibilities to the ARVN.
8 Jan 71	LEFT JAB airborne platform becomes operational.
Apr 71	303d and 313th RR Battalions redeploy to CONUS.
1 May 71	Field stations are organized at Bien Hoa and Nha Trang.
Jul 71	Center Advisory Radio Research Support (CARRS) Detachments are established at the South Vietnamese SIGINT centers.
30 Mar 72	Two members of the 8th RR Field Station killed by incoming rockets. Their deaths brought the total ASA soldiers killed in action to 34.
1 Apr 72	101st RR Company is discontinued, effectively ending the 509th RR Group's COMSEC mission.
30 Jun 72	328th RR Company and the 405th RR Detachment represents the last of the Direct Support Units to be either inactivated or redeployed.
Feb 73	8th and 175th, the last of the field stations, are discontinued.
16 Feb 73	A U–21 LEFT JAB crew flies last ARDF mission for the Army.
7 Mar 73	509th RR Group is discontinued, ending ASA's 12-year presence in South Vietnam.

Appendix G

Acronyms

Abn	airborne
AC	armored cavalry
ACC	ARDF Coordination Center
ACSI	Assistant Chief of Staff for Intelligence
AFB	Air Force Base
Am	Americal
ARDF	Airborne Radio Direction-Finding
Armd	Armored
ARVN	Army, Republic of Vietnam
ASA	Army Security Agency
ASTD	ARVN Special Technical Detachments
Avn	aviation
Bn	battalion
CAAT	COMSEC Advice and Assistance Team
CARRS	Center Advisory Radio Research Support
Cav	cavalry
CDR	commander
CG	commanding general
CMA	Collection Management Authority
COL	colonel
Comm	communications
COMINT	communications intelligence
COMUSMACV	Commander, US Military Assistance Command, Vietnam
COMSEC	communications security
CONUS	continental United States
CORRECT	COMSEC Role Recast

CPT	captain
CTZ	corps tactical zone
DARRS	Division Advisors Radio Research Support
DDRE	Director of Defense Research and Engineering
Det	detachment
DF	direction-finding
DIRNSA	Director, NSA
DITS	DANCERS in the sky
DMZ	demilitarized zone
DOD	Department of Defense
DRAC	Delta Regional Assistance Command
DSU	direct support unit
ECM	electronic countermeasures
ECOM	US Army Electronic Command
ELINT	electronic intelligence
EW	electronic warfare
FFV	Field Force, Vietnam
FS	field station
FSB	fire support base
HF	high frequency
HQ	headquarters
GEN	general
GP	group
Inf	infantry
JGS	Joint General Staff
LLVI	low-level voice intercept
LT	lieutenant
LTC	lieutentant colonel
LTG	lieutenant general
MAAG–V	Military Assistance Advisory Group, Vietnam
MAC–SOG	Military Assistance Command-Studies and Observation Group
MACV	Military Assistance Command, Vietnam
MAF	Marine Amphibious Force
MG	major general
MR	Military Region
MUC	Meritorious Unit Commendation
MRDF	medium range direction-finding
NCOIC	noncommissioned officer in charge
NSA	National Security Agency
NVA	North Vietnamese Army
Off	officer
Ofc	office
Op	Operations
OPLAN	operation plan
Plt	platoon
Prov	provisional
PUC	Presidential Unit Citation
RFP	radio fingerprinting
RR	radio research
RRCUV	RR Communications Unit, Vietnam
RRU	RR Unit
RVN	Republic of Vietnam
RVN CA	RVN Civil Action
RVN CGP	RVN Cross of Gallantry with Palm
Scty	security
SF	Special Forces
SFC	Sergeant First Class
SI	special intelligence
SIT	special identification techniques
SOC	special operations command
SOD	special operations detachment
SP	specialist
SRAC	Second Regional Assistance Command
SPAR	special agent report
SRDF	short range direction-finding
SSO	Special Security Office (Officer)
TACREP	tactical report
TAREX	target exploitation
TDY	temporary duty
TRAC	Third Regional Assistance Command
VC	Viet Cong
US	United States
USA	US Army
USAF	US Air Force
USARV	US Army, Vietnam
USASA	US Army Security Agency
USASAPAC	USASA, Pacific
VHF	very high frequency
WAC	Women's Army Corps

Appendix H

Unit Insignia

Because of security considerations, ASA personnel in Vietnam were not allowed to wear the agency's official shoulder sleeve insignia or its distinctive unit insignia. However, personnel from each of the battalions were authorized and did wear their own unit crests. At the same time, there were many unofficial "beer can" insignia, so called because of the aluminum metal used by local Vietnamese vendors to manufacture them. What follows are representative of the various official and unofficial (unless otherwise noted) insignia carried by various ASA units from time-to-time.

224th Avn Battalion
(authorized)

303d ASA Battalion
(authorized)

313th ASA Battalion
(authorized)

1st RR Company

3d RR Unit

3d RR Unit
(Davis Station)

Det J, 3d RRU

8th RR Field Station

101st RR Company

144th Avn Company

146th Avn Company

156th Avn Company

175th RR Company

265th RR Company

303d RR Battalion

335th RR Company

371st RR Company

509th RR Group

Communications Unit, Vietnam

ASA Distinctive Unit Insignia
(authorized but not worn)

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

ISBN 0-16-051284-0

ISBN 0-16-051284-0

90000

9 780160 512841

"It is always easy for the people to see the performance of an infantry battalion or brigade in fighting and winning the battle. The performance of a support unit is not so obvious, and yet in your case [303d RR Battalion that supported the II FFV], you have probably contributed to the winning of more battles than any maneuver element in the country."

LTG Frederick C. Weyland, Commanding General, II Field Force Vietnam