Holding the Line in I Corps: The Unintended Consequences of McNamara's Electronic Fence

M107 175mm Self-Propelled Gun, Camp J.J. Carroll, northern I Corps, RVN, 1968

Table of Contents

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The Unintended Consequences of McNamara's Electronic Fence

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ABSTRACT

The primary focus of this thesis is the development, implementation, and results of a multi-billion dollar electronic anti-personnel barrier that once divided North and South Vietnam during America's involvement in the Vietnam War, a conflict that pitted the strongest nation on earth against one of the weakest.

United States participation in the Vietnam War lasted from 1959 to 1975 in one degree or another and conservatively cost the world more than two million lives, among them almost 57,000 Americans, two million Vietnamese, 1.5 million Cambodians, several hundred thousand Laotians, and a smaller number of Thais, Filipinos, Australians, New Zealanders, Chinese, and Russians.

The American military was ostensibly brought into the conflict to prevent the Communist takeover of nominally democratic South Vietnam by Communist North Vietnam. The effort failed.

The North Vietnamese victors, who call America's involvement in Vietnam the "American War," argue America's parsimonious withdrawal from Vietnam was the final days of a 2,000-year struggle to obtain independence from the generations of invaders who have occupied their land.

During the war the United States introduced literally hundreds of new weapons systems, perfected the concept of combined arms and the integrated

battlefield, and solicited the best scientific minds in America to devise ways of defeating the North Vietnamese. Finally it deployed its most devastating weapons short of nuclear warheads, and still lost the war.

America's defeat in Vietnam set the stage for dozens of wars for independence and wars for unification all lumped together as regional conflicts. Currently so-called "Third World" revolutionaries and separatists are taking up arms against both the mighty democracies and proxies and member states of the former Soviet Union using revolutionary models introduced by the North Vietnamese and its proxies to defeat America. And almost thirty-five years after the last shots were fired in Vietnam ideological and philosophical arguments still rage over the validity of America's involvement in that war.

The victor was a backward looking Communist dictatorship equally at home using weapons as primitive as sharpened sticks contaminated with human dung and as modern as the best anti-aircraft missile defenses the Soviet Union and Communist China could produce. Instead of fighting America's might on its terms, the army of North Vietnam tunneled into the ground and melted away only to reappear when it was to its advantage. Frustrated with such simple tactics and unable to cope with the lack of political will manifested by the powerful anti-war movement at home, America eventually lost will to fight. Once that occurred North Vietnamese prevailed over the mightiest military force ever assembled on earth.

The second purpose of this research paper is to demonstrate to the reader the writer's ability to implement currently available digital publishing concepts and

methods in the preparation of this text. While the effort requires paper to satisfy the dictates of Lindenwood University, it could and should be produced, transmitted, disseminated, and read without the use of paper at any juncture of the process, thus reaching the ultimate goal of digital communications.

Introducing the digital publishing process in this effort clearly demonstrates this writer's ability to employ the digital skills the Lindenwood University Master of Arts –Digital Media degree program prepares candidates to utilize in future endeavors.

This research paper was prepared using Adobe Photo Shop, Adobe Illustrator, Adobe PDF Writer, and Microsoft Word Office Suite.

Literature Review

Holding The Line In I Corps: The Unintended Consequences of McNamara's Electronic Fence is the culminating project of approximately 2 years of research. The development of the thesis was initially difficult because most of the technical and strategic decisions that precipitated the implementation of an electronic barrier to monitor and target North Vietnamese Army movements into South Vietnam during the Vietnam War remained classified until March, 2003.

Robert S. McNamara

Determining who was responsible and what those persons' motives were was easier to discover, although anything other than anecdotal records was sometimes difficult to locate and precisely identify.

The obvious mover and shaker behind the development of the so-called "electronic fence" was Robert S. McNamara, an automobile industry "whiz kid" who initially caught the eye of former president John F. Kennedy at the beginning of his administration in 1961. Seeking a top-flight manager to bring Pentagon spending under control, Kennedy appointed McNamara his Secretary of Defense five weeks after he was named president of Ford Motor Company.

Because of McNamara's personal style of running the Department of Defense, members of his team, or doubting journalists and other skeptics armed as much with speculation as hard facts and figures revealed much of the early information about the development of the electronic barrier. In this case,

objectivity, instead of truth, became the first victim of this particular segment of the Vietnam War.

McNamara, despite legions of examples in history to the contrary, candidly acknowledges that a barrier between North and South Vietnam in 1968 was his answer to the massive problem of infiltration by the North Vietnamese Army into the South over the Ho Chi Minh Trail. This is widely discussed in William Shawcross' Sideshow: Kissinger, Nixon and the Destruction of Cambodia, New York: Simon and Schuster, 1979.

Subsequently almost every official reason for the electronic fence was predicated by wishful thinking usually unsupported by facts. Twenty years after ordering the construction of the barrier McNamara admitted he never thought it would work.

"One fear [I had]," McNamara said in a 1995 Public Broadcasting System NewsHour interview, "and I expressed it to President Johnson in December 1965, was that we couldn't win the war militarily. I said to him at that time -- and I quote it in the book -- there's only a one in three chance or, at best, a one in two chance to win militarily. (PBS, Robert McNamara's War Reflections, 4-17-95, p. 1)

To discover the "truth" about the barrier demanded a long and detailed study of small unit histories (still not completed), official "branch" (official histories of the U.S Army, Air Force, and Marines) histories, the examination of autobiographies, anecdotal reminiscents, popular magazine articles, and dozens of

monographs from the various military historical units, schools, and journals produced under the auspices of the American military.

In addition, journalists and writers critical of McNamara's Fence, South Vietnamese generals who fell victim to it and common soldiers who fought and often died implementing the mission of it, all had something to say about the project.

Perhaps the most compelling evidence this writer discovered was an obscure bulletin printed at the University of California-Berkeley in 1971. Even when dismissing the anti-war rhetoric that permeates the document, it was still possible to discover how the electronic barrier was conceived and by whom.

Called The Story of Jason - The Elite Group Of Academic Scientists Who, As Technical Consultants To The Pentagon, Have Developed The Latest Weapon Against Peoples, it was distributed at the University of California-Berkeley during the height of the Vietnam War protests. Coincidentally, the Jason Group findings and conclusions declassified in January 2003 confirm almost completely the contentions detailed in the original pamphlet.

Much of the data included in the thesis comes from books held in the personal collection of the author. Often it is impossible to cite specific pages of these books because more often than not entire passages were referred to instead of specific quotes. Also, in order to give the authors the credit they deserves, the entire book is sometimes cited instead of single pages because the manner in which the

information is presented reflects compilation of many passages integrated into a single theme.

Some of the information comes from anecdotal accounts of soldiers and Marines who served with this student in northern I Corps in 1968 and 1969. The bulk of the information directly quoted in this research paper comes from two sources. The first is the recollections of James Mack Wall, a Vietnam veteran, amateur historian, and subject of the interviews included in this text. Wall has spent many years pursuing specific information about his two tours of duty in northern I Corps, as well as general information he readily makes available to any interested party who asks. His contributions are invaluable.

The second source is a core collection of books and writings that was the framework for everything else placed inside.

Michael Maclear's The Ten Thousand Day War provided the chronological order of events, and ARVN Major General Nguyen Duy Hinh's Indochina Monographs, LAM SON 719 fleshed out the war's implications and impacts from the prospective of the South Vietnamese Army the barrier was supposed to serve.

Other vital resources used in this work are the unit histories of the "Eighth of the Fourth Artillery Battalion," 108th Artillery Group, the parent unit and historical conscience of many of the Army and Marine Corps units assigned to the impossible mission of providing a "secure" barrier to separate the warring factions. Included among them is the history of C Battery, 26th Artillery and F Battery, 26th

Artillery, the record of the only U.S. Army Target Acquisition Battalion assigned to McNamara's Electronic Fence. The fleeting references to F Battery in 8-4's official history provided the trail that led to many of the larger pieces of information included in this project.

Another irreplaceable source of information was the unit histories of the 282nd Assault Helicopter Company, "Blackcats," the only American special operations aviation company operating in northern I Corps. These histories were compiled by young junior officers as an additional duty to their flying routines and often serve brevity better than providing an accurate source of specific information. These company histories do, however, capture the hectic day-to-day routine of an overworked U.S. Army aviation company facing daily combat.

Equally important was Jack Shulimson's , The Marine War: III MAF in Vietnam, 1965 –1971 and The U.S. Marines in Vietnam, 1966, as well as The Easter Offensive, by G. H. Turley, that tell the story of northern I Corps from the Marine's always paternalistic perspective. Finally, a new book with a bit of a revisionist's flavor, John Prados' The Blood Road, The Ho Chi Minh Trail and the Vietnam War , and Washington University graduate and historian Keith William Nolan's The Story of Dewey Canyon II/Lam Son 719, Vietnam 1971provided almost day-by-day accounts of the war as it unfolded in Northern I Corps.

No doubt there are still huge holes to fill and old arguments to reopen. Over time other researchers and historians will get around to examining what happened

along the dividing line. Their task was made easier early this year when the federal government decided it was time to reveal the secrets that always clouded and frequently obscured the realities of McNamara's Electronic Fence. The release of the information was also another of the unintended consequences of McNamara's Electronic Fence during an unpopular and probably futile conflict 10,000 miles and almost 57,000 American lives ago.

Selective Review of Research

Neo-Methodology and the Limitations of Contemporary Means

This paper was prepared using commonly accepted methods of research and documentation, as well as unconventional means of discovery dependent on the myriad sources of electronic information available in server-held databases. These resource include, but are not limited to, the World Wide Web; the electronic libraries of the Library of Congress, the Pentagon, the Smithsonian Institute; the personal libraries of modern American Presidents, and hundreds of privately held collections maintained on both public and private Internet sites.

While some of this electronically gathered information is anecdotal and therefore useless as empirical evidence, often it is carefully researched scholarly accounts about matters of historical importance. When viewed objectively, and introduced contextually, the information is as credible as any other source of empirical data.

For reasons outside the scope of this manuscript many scholars still hold digitally gathered and stored information in less regard than information gleaned conventionally from printed sources. It is almost as if the medium, not the content, defines the quality of the information. Hopefully this paper provides a tiny contribution towards changing such hidebound thinking.

Another realization brought into focus while preparing this paper was the apparently overwhelming urge of many contemporary historians to make sure the information they are presenting is as dry as yesterday's toast.

History should not be dry, it is loud and boisterous - the very essence of life - and should be offered that way. Colorless, unimaginative collections of facts and figures diminish the brilliance of the human spirit, to say nothing of the reader's morale. Electronically driven research methods, coupled with animation, music, interactive maps and graphs, and video presentations, offer the means to change that mind-numbing reality.

This paper is an example of the former way. Perhaps someday it will be acceptable at Lindenwood University and elsewhere to use the digital future to create an exciting virtual past. In the meantime it is up to future researchers and historians to increase history's appeal to both casual and serious students of history.

Obtaining the Facts

Obviously the most direct way to gather pertinent data is to go directly to the source, a witness, a book, a journal, a monograph or popular magazine article, and then follow the trail that preceded it. Until recently it was the generally accepted method of discovering information because it was the *only* way. It has been so since the first written record of history was prepared.

Thankfully those days are slowly passing. No longer is it necessary for researchers to depend on data held in musty morgues and incomplete book stacks.

Digital communications have made it virtually unnecessary to conduct maddening paper chases across geographically separated locations. The advent of digital communications, particularly the World Wide Web and information storage and retrieval technology, has opened up an entire new world for researchers willing to learn how to use their personal computer and an electronic interface to conduct their searches. Digital communications allows students and scholars to conduct their searches more efficiently, cheaper, and in far greater scope and depth than conventional methods.

This project is the final result of discarding as much of the old research methodology as allowed by the mandates of this project. Lexus/Nexus and the Google search engines, the Library of Congress data banks, the Smithsonian collections, and numerous other equally useful sites played as large a role in completing this paper as did going to the library and digging through card stacks and bibliographies.

While the Internet is not a perfect research tool – it has "too much" unsupported information to cite just one example - it is faster, more reliable, and relatively simple to use once the researcher becomes comfortable with the process of "drilling down," cutting through reams of useless and partially useful information to get to the golden nuggets one is looking for.

One caution is offered. Often neophyte Web researchers use the words Internet and World Wide Web (WWW) synonymously, but they are different. The WWW is a component of the Internet that presents information in a graphical

interface. Think of the WWW as the illustrated version of the Internet. It does not enhance the amount of information available, only the manner in which it is presented.

The actual information one is seeking is held on individual server computers owned and operated by public and private entities. Access to this information is controlled by requiring users to have "rights" to view the material, making it essential to understand just what the Internet actually is.

Simply stated the Internet, universally called the "Web," is a vast collection of computers linked together through routers containing millions of computer addresses that act as switchboards to direct information between participating machines.

The phenomena called Internet browsing (surfing) began in the late 1980's when physicist Dr. Timothy Berners-Lee wrote a small computer program for his personal use. This program allowed pages within his computer to be linked together using keywords.

The Web meanwhile remained primarily text based until 1992. That means that users seeking data saw simple text that scrolled downward until it concluded. The only graphic elements were bold headlines and occasional underscored words.

At the same time other Web creators learned to link documents held in different computers, just as Berners-Lee linked individual pages on his computer, as long as the computers resided on the Internet. The document formatting

language they use to link these documents is called HTML (Hypertext Markup Language.)

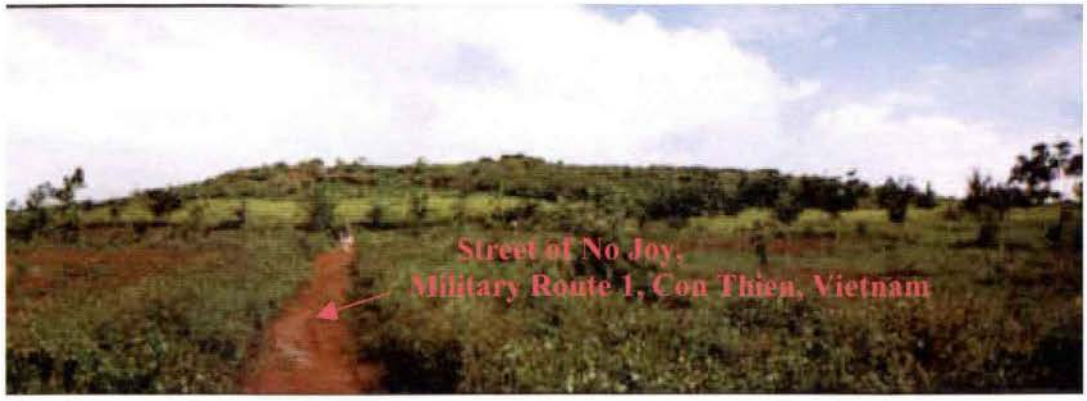
Then two events occurred simultaneously that forever changed the way the Web looked. An American scientists working in Switzerland named Marc Andreesen developed a new computer program called the NCSA Mosaic and gave the program away to anyone who wanted to enhance it. His NCSA Mosaic was the first Web browser.

The browser, the most common being the Internet Explorer and Netscape, made it easier to access the different Web sites that started to appear in the early Nineties. Soon Web sites contained more than just text, they also had sound and video files, something almost never available in conventional libraries.

Within a few years the Internet had completely eclipsed conventional libraries as an efficient research tool. Unfortunately the ease and scope of research possible on the Internet gave rise to suspicion and contempt by scholars who should have known better. Instead of praising the Internet as a window into time, they condemned it for being "too easy" and without standards.

Perhaps it is best; this way the use of the Internet for research will eventually be controlled by a standard of checks and balances undoubtedly necessary to protect the integrity of the information available on the Internet.

Toward that end this research paper is an attempt to demonstrate that 21st Century research methods can co-exist with traditional research requirements and demands.



Con Thien, Quang Tri Province, Vietnam, Spring 2001, Courtesy of former U.S. Marine Ron Zaczel

Holding the Line In I Corps
The Unintended Consequences of McNamara's Electronic Fence

Introduction

German Field Marshall Gerd Von Runstedt observed before World War II that any country that created an insurmountable barrier to invasion would simply be giving cause for the opposition to find a way around it.

Gerd V. Runstedt was long dead in January 1968 when the U.S. government saw fit to build just such a barrier at a terrible place called Con Thien (pronounced Con Tee In), South Vietnam, which roughly translated means "The Hill of the Angels". It was suddenly part of a hugely expensive, technologically driven form of barrier warfare never before tried at anywhere near the depth and scope with which it was being introduced.

Most of the young soldiers and Marines at Con Thien didn't even know; much less understand the significance of the hill at Con Thien. At 158 meters (about 460 feet) in height, Con Thien wasn't much of a hill, although it was the only elevated terrain between the bleached white sands of Gio Linh seven miles to the east and the scrub jungle seven miles to the west.

At any other time Con Thien would have been barely more than a curious anomaly in the flat, barren landscape it inhabited. During 1963, however, when the North and South Vietnamese began clandestinely militarizing the so-called Demilitarized Zone separating the antagonists, Con Thien had taken on dramatic importance.

After the U.S. Marines occupied the terrain in June 1967 and burrowed a firebase into its flanks it was under constant artillery attacks and frequent infantry and sapper probes for the next two years. Basically, the North Vietnamese wanted it so the South couldn't easily monitor their infiltration attempts, and the United States wasn't going to give it back.

After 1967 and until 1973, Con Thien became the eastern anchor of a

South Gate to Camp J.J. Carroll, 1968 Photo: NRH

chimerical electronic line that ran from the South Chine Sea to Laos following the curves of the muddy Ben Hai River separating North and South Vietnam. Dubbed "McNamara's Electronic Fence" by the skeptical American press, the mutually supporting firebases it was tied to were supposed to prevent the North Vietnamese from entering South Vietnam undetected.

To prevent them from infiltrating once they were discovered were about 20,000 American soldiers and Marines ready to prevent the North Vietnamese Army (NVA) from crossing the Ben Hai River anywhere along its length.

The "Rock Pile", looking west, 1968 Photo: NRH

Looking north to Khe Sahn Combat Base, 1968 Photo: NRH

As the troops would soon discover, to the west along bloody National Route 9 was Camp J.J. Carroll, another vitally important hill top firebase, then the "Rock Pile", a 750-foot almost vertical granite escarpment, and still farther west the infamous Marine Corps firebase at Khe Sahn (pronounced Kay San). Each of these forts was also a pillar in McNamara's Electronic Fence.

Years later, when this student's interest in the Vietnam War evolved from curiosity to infatuation, I began encountering stories about the significance of where I was and what we were attempting to do. At first, most of the stories were of the *Soldier of Fortune* variety as anything of substance was classified information. Later, particularly during the late Eighties, more and more information was declassified until it became a flood of facts, figures, and explanations.

Added to this mix were my own fragmented recollections of things as they seemed to an 18-year-old Army private sent to live among unfathomable Marines. I remembered an 8-inch self-propelled Marine howitzer section at Con Thien that was pointed by some mysterious device I was not allowed to see. I remembered the civilian scientists from Los Alamos Research Laboratory that we literally guarded with our lives while they did something secret inside a huge bunker built by the U.S. Navy Sea Bees.

Later, when I began flying in a helicopter company I reentered the DMZ hundreds of times delivering payloads, men, and cargo of distinctly secret nature. Often we drew heavy fire from North Vietnamese anti-aircraft batteries situated along the Laotian border. Many of my comrades disappeared without a trace flying

Chapter II

The Blackcats


282nd "Black Cats, LZ Vandergrift, 1969

Wall's new home was an obscure, special operations "air mobile light "aviation company allocated a mixed bag of 27 troop transports called "slicks" and armed attack helicopters called "gunships" It primarily operated in "I Corps" (pronounced "Eye" Corps), the South Vietnamese territory nearest to North Vietnam. I Corps terminated in the north at the Demilitarized Zone (DMZ) that runs roughly east-west along the Ben Hai River separating North and South Vietnam. Its southern terminus was the east-west flowing Quang Nai River. To the west is Laos and to the east the South China Sea. The Blackcat's Area of Operations (AO) was the entire corps area, although a majority of its missions were flown in the northern sections of I Corps (Benoit, 4).

More significant was the 282nd's role. It represented the sole source of dedicated aviation assets for the 11,000 men of the 1st Division of the Army of the Republic of Vietnam (ARVN [pronounced Are-Vin]) and the other units either

attached or under its operational control. The most important of these was a battalion of fierce South Vietnamese Airborne Rangers (Biêt Dông Quân [BDQ]) and an unbelievably ferocious Hac Boa special operations company (The Republic of Vietnam Armed Forces, Collection de l' auteur, droits reserves, opodo, FR, Library of Congress).

The traditional Rangers and the Hac Boa, although quartered together, had separate missions. The ARVN Rangers were organized into separate companies to counter the guerilla war then being waged by the VC. Later in the war the Ranger battalion evolved into an on-call strike force because of its aggressive spirit.

The Hac Boa, under the operational control of the Military Assistance Group-Special Operation Group (MAG-SOG), provided theater-level intelligence to the Military Assistance Command Vietnam (MACV). Its primary mission was keeping tabs on North Vietnamese reinforcements literally flowing south along the Ho Chi Minh trail.

"Inserting the ARVN Rangers and spooks (Hac Boa) was always very dangerous because the NVA didn't like them being in their AO (Area of Operations)," Wall remembered. "The ARVNs didn't get the credit they deserved. Some of them were good, unless they were ruff-puffs [slang for ARVN Regional and Popular Forces similar to U.S. National Guard and Reserves."

Also administratively hitched to the 1st Division (ARVN) were a few specialty units performing military communications and political intelligence.

After 1966 the U.S. began rearming South Vietnam's better infantry divisions so they could take a larger role in the war.

"During 1967, the role of the 1st ARVN Div. in I Corps expanded. In an effort to assist the division in adopting a larger role and to assume increased responsibility, planners took certain steps to increase its firepower. Starting in September 1967, the 1st Vietnamese Division's firepower was supplemented by the provision of such crew-served weapons as the 106-mm. recoilless rifle, 60-mm. mortars, and the modern M60 machine gun. Later in the year the issue of the M16 rifle further strengthened the division. There followed a noticeable increase in the morale of the division. With this greatly improved firepower, the division could be counted on for a larger part in the battles in the northern zone. A regiment of the Vietnamese 1st Division later relieved the marines occupying a sector of the defenses facing the demilitarized zone," recorded U.S. Army Lt. Gen. Willard Pearson in 1975 (Pearson, 28).

American efforts to upgrade the division did nothing to improve its air mobility. A single aviation company for an entire infantry division just wasn't much in the way of aviation assets. Throughout the war in I Corps South Vietnamese units were plagued by helicopter shortages, occasionally providing the North Vietnamese Army (NVA) with unimpeded mobility not enjoyed in other regions of Vietnam because of the division's limited ability to respond to NVA moves.

Compared to aviation asset-heavy American airmobile formations, the 1st ARVN Div. was pathetic. For example, while sharing ground near the 1st ARVN Headquarters in Hue, the 1st Brigade of the U.S. Army's 1st Cavalry Division fielded about 4,000 men and roughly 200 Huey "slicks" and AH1A Bell "Cobra" gunships. (Benoit, 35)

Meanwhile, on hand daily at nearby 1st ARVN Headquarters were two slicks. Two standby gunships from DaNang were available about 2 hours after being tasked if weather and other considerations allowed, and the entire 2nd Lift Platoon – eight slicks – could be mustered in an emergency if no other operations were ongoing in I Corps.1

With prior knowledge and planning the Blackcats could provide as many as eight slicks and four gunships for routine combat assaults. On pre-planned combat assaults, the entire company could be tasked to the ARVNs for the day, although this was an infrequent occurrence (Prince, 8 - 12).

Because the 1st ARVN Division was the only complete South Vietnamese infantry division in northern I Corps, its lack of mobility was glaringly apparent in offensive operations. Depending primarily on the Blackcats for air mobility left the division both road-bound and logistically poor. Worse, it had to compete with other I Corps assets for available aircraft whenever a crisis erupted anywhere in I Corps.

Handicapped as it was, the 1st ARVN Division was arguably the best South Vietnamese unit in the war. When adequately supplied it held its own against everything the NVA threw at it.

In addition to supporting the ARVNs, the Blackcats were called upon to support the American-led, super-secret Phoenix anti-insurgency assassination efforts, and the 5th Special Forces teams operating across northern I Corps. Occasionally included in Blackcat's daily tasks was a mission called "Igloo White," the codename of an ongoing operation that was never discussed with the aircrews. Because the crews didn't have a need to know what they were doing, they simply watched while mysterious, closed-mouth Hac Bao troopers threw long, camouflaged objects out the aircraft cargo doors at seemingly random locations. Now and then the North Vietnamese took extreme umbrage and tried shooting them down.

"Gook (Hac Boa) spooks (intelligence types) and Sneaky Petes (Special Forces members) would come on board and we would low-level (terrain following flight profile) from Hue up through the Ashua [Valley] to the Laotian border. Sometimes we were west of Khe Sanh and occasionally over the border. They would drop the spikes (sensors) on a specific flight path at about 40 knots," Wall said. "Even the pilots didn't know exactly what we were dropping, but it wasn't too hard to figure out. Sometimes we would take a lot of fire."

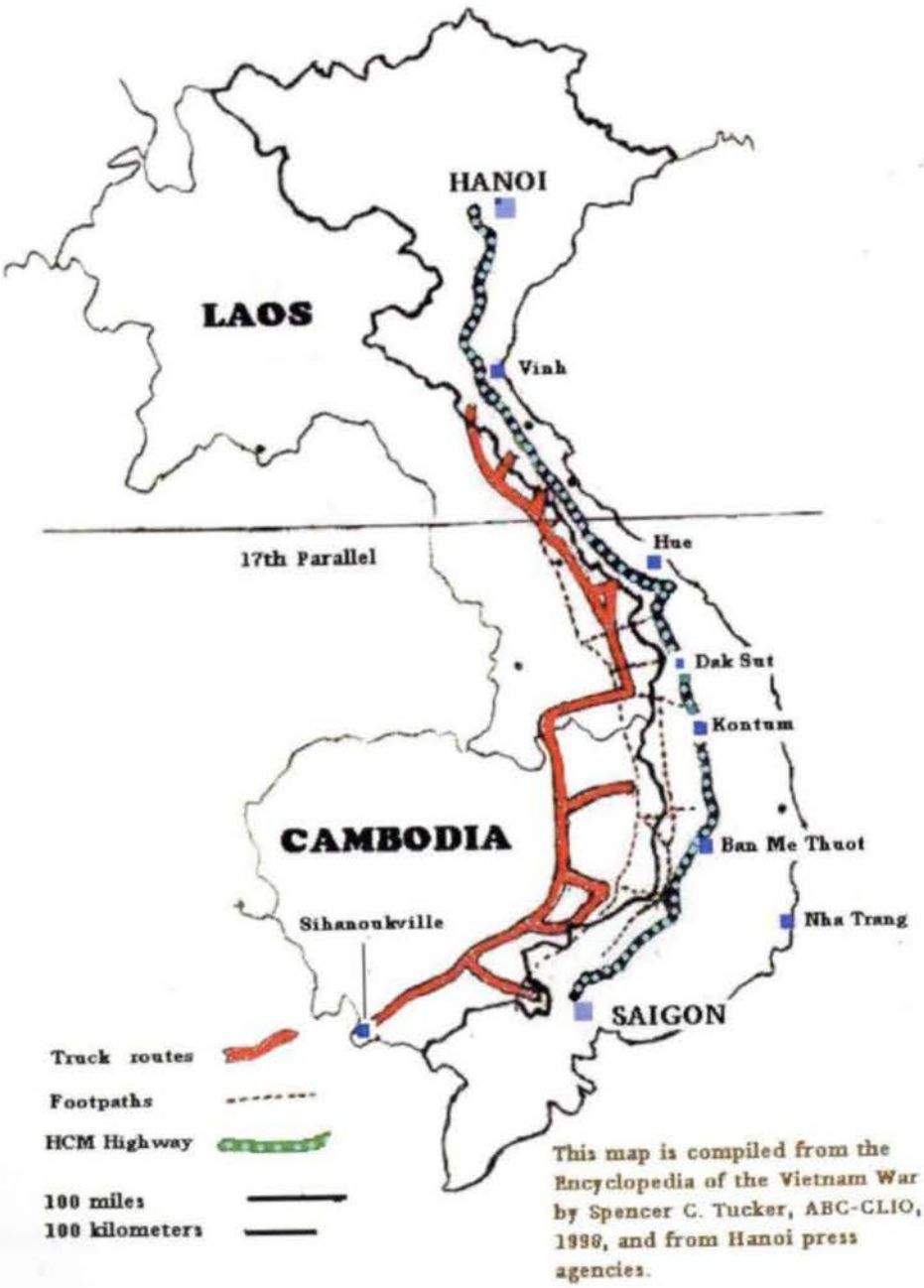
What Wall and his comrades were participating in was the U.S. Defense Department's clandestine effort to electronically interdict North Vietnamese troop

infiltrating to the South along the Ho Chi Minh Trail and over the demilitarized zone dividing North and South Vietnam. Part of that effort was salting the infiltration routes from North Vietnam with a variety of sensors that counted, analyzed and even helped analysts speculate on where the enemy was going. That piece of the operation was called "Igloo White." Before the project ended in 1973 Igloo White operatives used more than 20,000 sensors to monitor the trails from North to South Vietnam.

Because the operation was attributed to Secretary of Defense McNamara, the program was speciously called "McNamara's Electric Fence" or the "McNamara Line" after skeptical reporters discovered what was happening (Edwards).

Chapter III

Coping With Infiltration



This map is compiled from the Encyclopedia of the Vietnam War by Spencer C. Tucker, ABC-CLIO, 1998, and from Hanoi press agencies.

From the beginning of the American involvement in Vietnam the United States recognized that South Vietnam's borders with Laos and North Vietnam were porous and open to the infiltration of men and supplies into the South. In 1961, the head of the US Military Advisory Group [MAG] (later Military Assistance Command Vietnam [MACV]), Lieutenant General Lionel McGarr, made a proposal to Secretary McNamara that a *cordon sanitaire* be created along the Laos-South Vietnam border to prevent infiltration from North Vietnam. Another proposal that year was made under the auspices of the Southeast Asia Treaty Organization (SEATO): SEATO Plan 5/61 proposed to physically seal the border across both the DMZ and the panhandle in Laos with an international force (Herring, 128).

Westmoreland favored a manned barrier to prohibit infiltration from the DMZ and Laotian panhandle into South Vietnam. In 1964 he recommended an international force be used to accomplish this. Westmoreland's proposal was to make the barrier part of a regional development project protected by combat troops to extend a road from South Vietnam across the Laotian infiltration routes to the Thai border. These early proposals were overshadowed by the mistaken belief that heavy aerial bombing would deal with the problem of infiltration (Herring, 128).

Unfortunately for American planners bombing didn't work. By early 1965 South Vietnam was at the point of impending collapse and American policy makers admitted that a continuation of existing policies could lead to defeat for the US and South Vietnam. The US response was to greatly increase its troop levels in the

South (184,000 by the end of 1965; 385,000 by the end of 1966) and to initiate Operation Rolling Thunder, the sustained aerial bombing of North Vietnam (Westmoreland, 154 and 193).

In August 1966, a Pentagon-mustered scientific study group (The Jason Group) was solicited to submit a proposal discussing a broad air-supported anti-personnel barrier system across Vietnam below the DMZ. In late 1966, Secretary McNamara approved plans for the construction of an anti-infiltration barrier below the DMZ.

The Jason Group

At the end of World War II many of the country's leading scientists returned to college campuses. Their departure left a void the military could not live with.

The "modern" military of the post-Korean era had been stung as equally hard as their Vietnam-era counterparts would one day be by America's encounter with the Red Chinese. American military officers did not intend to be ill equipped and technology hobbled in the next war. Neither could the Pentagon afford to replace the experienced pool of scientists familiar with the often confused nor the always-cumbersome way the defense bureaucracy worked.

Conversely, the scientists' felt Washington tied their research hands by being restricted to a particular government agency they consulted for. But perhaps even more illuminating, the scientists found government consulting fee scales to be very low (Stubbs, NEW SCIENTIST).

The solution that came to pass was the Institute for Defense Analyses (IDA). IDA was an ostensibly non-profit corporation that worked on the basis of contracts with the Pentagon for particular research problems of interest to the military. IDA promised high pay and flexibility for anyone willing to work for the military. A sub-group of IDA was Jason, a group of young, very bright scientists from universities around the country.

The IDA and Jason were introduced in the light of cold-war ideology. According to IDA literature circa 1967, it arose from "the inescapable realization that International Communism is imperialistic in nature and that its goal is no less than world domination." Finally, the IDA said that "the real war was American science versus Soviet science" and the new scientific corporation would strengthen the Pentagon's application of a "scientific method toward the solution of broad problems of military policy and strategy" (Stubbs).

JASON and the "MCNAMARA FENCE"

The most detailed public account of Jason's contribution to the Vietnam War is contained in the Pentagon Papers, which show that the 1966 Jason Group "Summer Study," gave birth to a new form of technological warfare, now known as the "automated," or "electronic," battlefield (The Story of Jason).

Early in 1965 President Lyndon Baines Johnson launched the program of sustained bombing against North Vietnam: Operation Rolling Thunder. After more than a year of this campaign there was disillusionment among high-level

Pentagon officials over the failure of the bombing to achieve its military objectives.

Early in 1966 a group of Harvard-MIT scientists with high-level connections in Washington persuaded Defense Secretary Robert McNamara to sponsor a special study on "technical possibilities in relation to our military operations in Vietnam" (The Pentagon Papers, New York Times version).

McNamara formally requested that IDA scientists look into the feasibility of "a fence across the infiltration trails, warning systems, reconnaissance (especially night) methods, night vision devices, defoliation techniques and area denial weapons" (The Pentagon Papers).

This special scientific study group was assembled under the auspices of the Jason Division of IDA; the group of 47 scientists Ida represented as "the cream of the scholarly community in technical fields" and a "group of America's most distinguished scientists…" This group met during the summer of 1966, starting off with a series of briefings by high officials from the Pentagon, the Central Intelligence Agency, the State Department and the White House

The Jason report, given to McNamara at the beginning of September, was in four parts:

1. The Effects of US Bombing in North Vietnam;
2. Viet Cong/North Vietnam Army Logistics and Manpower;
3. An Air Supported Anti-Infiltration Barrier:
4. Summary of Results, Conclusions and Recommendations.

This report was regarded as particularly "sensitive" and the only persons to receive copies, outside of McNamara, were General Earl. G. Wheeler, Chairman of the Joint Chiefs of Staff, and Mr. Walter Rostow, National Security Advisor the President.

The writers of the Pentagon Papers evaluated this Jason report as exerting "a powerful and perhaps decisive influence in McNamara's mind," concerning future US policies in Vietnam (The Pentagon Papers).

As the New York Time's presentation of the Pentagon Papers summarizes- "Their [the Jason Summer Study] report evaluating the results of the Rolling Thunder campaign began: "As of July 1966, the U.S. bombing of North Vietnam had had no measurable direct effect on Hanoi's ability to mount and support military operations in the South at the current level.

"They then pointed out the reasons that they felt North Vietnam could not be hurt by bombing: It was primarily a subsistence agricultural country with little industry and a primitive but flexible transport system, and most of its weapons and supplies came from abroad. "These factors, the scientists said, made it 'quite unlikely' that an expanded bombing campaign would 'prevent Hanoi from infiltrating men into the South at the present or a higher rate.

"In conclusion, the Pentagon study says, the scientists addressed the assumption behind the bombing program -- that damage inflicted on a country reduces its will to continue fighting. The scientists criticized this assumption, the study says, by denying that it was possible to measure the relationship.

"It must be concluded', the scientists said, 'that there is currently no adequate basis for predicting the levels of U.S. military effort that would be required to achieve the stated objectives -- indeed, there is no firm basis for determining if there is any feasible level of effort that would achieve these objectives" (New York Times, June 21).

Having submitted a stinging condemnation of the bombing, the Study Group grasped the idea McNamara had suggested - the anti-infiltration barrier. The final product of their effort was a detailed proposal for a multisystem barrier across the DMZ and the Laotian panhandle that would make extensive use of recently innovated mines and sensors. The central portion of their recommendation follows:

"The barrier would have two somewhat different parts, one designed against foot traffic and one against vehicles. The preferred location of the anti-foot-traffic barrier is in the region along the southern edge of the DMZ to the Laotian border and then north of Techepone to the vicinity of Muong Sen, extending about 100 by 20 kilometers. This area is virtually unpopulated, and the terrain is quite rugged, containing mostly V-shaped valleys in which the opportunity for alternate trails appears lower than it is elsewhere in the system.

"The location of choice for the anti-vehicle part of the system is the area, about 100 by 40 kilometers that ran along a roughly north-south axis from the border of North Vietnam to about 40 kilometers south of the Laotian village of Techepone. In this area the road network tends to be more constricted than elsewhere, and there appeared to be a smaller area available for new roads. An

alternative location for the anti-personnel system is north of the DMZ to the Laotian border and then north along the crest of the mountains dividing Laos from North Vietnam."

The second option was less desirable economically and militarily because of its greater length, greater distance from U.S. bases, and greater proximity to potential North Vietnamese counter-efforts.

"A manned "fence" connecting the eastern end of the barrier to the sea would if necessary, supplement the air-supported barrier. The construction of the air-supported barrier could be initiated using currently available or nearly available components, with some necessary modifications, and could perhaps be installed by a year or so from go-ahead."

However, the Jason scientists noted, "We anticipate that the North Vietnamese would learn to cope with a barrier built this way after some period of time which we cannot estimate, but which we fear may be short."

Weapons and sensors which could make a much more effective barrier were not expected to be available in less than 18 months to 2 years, the scientists said. "Even those would eventually be overcome by the North Vietnamese, so that further improvements in weaponry will be necessary."

Having qualified their enthusiasm with reality, the Jason scientists put forward a list of components that could be deployed relatively fast, considering that the final introduction of the equipment would be left in the hands of combat units already stretched to the breaking point by constant combat.

The system the Jason Group ultimately conceived could be available by 1967 or contained the following components:

- Gravel mines (both self-sterilizing for harassment and non-sterilizing for area denial.
- Possible, "button bomblets" developed by Picatinny Arsenal to augment the range of the sensors against foot-traffic.
- SADEYE/BLU-26B clusters, for attacks on area-type targets of uncertain
- location.
- Acoustic detectors, based on improvements of the "Acoustic Sonobuoys"
- developed by the Navy.
- P-2V patrol aircraft, equipped for acoustic sensor monitoring, Gravel
- Dispensing, vectoring strike aircraft, and infrared detection of campfires in
- Bivouac areas.
- Gravel Dispensing Aircraft (A-1's or possible C-123's)
    - Strike Aircraft
    - Photo-reconnaissance Aircraft
    - Photo Interpreters
    - (Possibly) ground teams to plant mines and sensors, gather information, and selectively harass traffic on foot trails.

The Jason scientists specifically detailed how the anti-troop infiltration system (which would also function against supply porters) would operate. "There would be a constantly renewed minefield of nonsterilizing Gravel (and possibly

button bomblets) distributed in patterns covering interconnected valleys and slopes (suitable for alternate trails) over the entire barrier region," they said. "The actual mined area would encompass the equivalent of a strip about 100 by 5 kilometers. There would also be a pattern of acoustic detectors to listen for mine explosions indicating an attempted penetration. The minefield is intended to deny opening of alternate routes for troop infiltrators and should be emplaced first. On the trails and bivouacs currently used, from which mines may - we tentatively assume - be cleared without great difficulty, a more dense pattern of sensors would be designed to locate groups of infiltrators."

To add to the infiltrator's misery air strikes using Gravel and SADEYES would then be called against these targets. The sensor patterns would be monitored 24 hours a day by patrol aircraft. The struck areas would be "reseeded" with new mines, the Jason scientists proposed.

The anti-vehicle system would consist of acoustic detectors distributed every mile or so along all transport-negotiable roads in the interdicted area, monitored 24 hours a day by patrol aircraft, with vectored strike aircraft using SADEYE to respond to signals that trucks or truck convoys are moving. The patrol aircraft would distribute self-sterilizing Gravel over parts of the road net at dusk. The self-sterilization feature was needed so that road-watching and mine-planting teams could be used in this area. Photoreconnaissance aircraft would cover the entire area each few days to look for the development of new truckable roads, to see if the transport of supplies was being switched to porters, and to identify any

other changes in the infiltration system. It may also be desirable to use ground teams to plant larger anti-truck mines along the roads, as an interim measure pending the development of effective airdropped anti-vehicle mines.

The cost of such a system (both parts) has been estimated to be about $800 million per year, of which by far the major fraction was spent for Gravel and SADEYES bomblets and cluster bombs.

The Jason scientists figured out the needs of the mission almost to the last mine. It is repeated here verbatim because it clearly demonstrates how modern war has been reduced to a complex logistical problem completely devoid of humanity.

"The key requirements would be (all numbers are approximate because of assumptions which had to be made regarding degradation of system components in field use, and regarding the magnitude of infiltration):

One million Gravel mines per month; possible 25 million button bomblets per month;

10,000 SADEYE-BLU-26B clusters* per month; 1600 acoustic sensors per month (assuming presently employed batteries with 2-week life), plus 68 appropriately equipped P-2V patrol aircraft; a fleet of about 50 A-1's or 20 C-123's for Gravel dispensing (1400 A-1 sorties or 600 C-123 sorties per month); 500 strike sorties per month (F-4C equivalent); and sufficient photo-reconnaissance sorties, depending on the aircraft, to cover 2500 square miles each week, with an appropriate team of photo interpreters.

Even to make this system work, there would be required experimentation and further development for foliage penetration, moisture resistance, and proper dispersion of Gravel; development of a better acoustic sensors than currently exists (especially in an attempt to eliminate the need for button bomblets); aircraft modifications; possible modifications in BLU-26B fusing; and refinement of strike-navigation tactics.

For the future, rapid development of new mines (such as tripwire, smaller and more effective camouflaged Gravel, and various other kinds of mines), as well as still better sensor/information processing systems will be essential."

Not only had the scientists endorsed the barrier idea McNamara had asked them to consider, they had provided the Secretary with a seemingly attractive, well thought-out and highly detailed proposal as a real alternative to further escalation of the ineffective air war against North Vietnam.

The program was not without risks, the Jason authors showed. They anticipated counter-measures the North Vietnamese might take to circumvent the Barrier.

"Consequently," they reasoned, "assuming that surprise is not thrown away, countermeasures would still be found, but they would take some time to bring into operation."

The most effective countermeasures the Jason scientists anticipated were mine sweeping; providing shelter against SADEYE strikes and Gravel dispersion; spoofing of sensors to deceive the system or decoy aircraft into ambushes, and in

general a considerable step-up of North Vietnamese anti-aircraft capability along the road net.

Apart from the tactical countermeasures against the barrier itself, they had to consider strategic alternatives available to the North Vietnamese in case the barrier is successful. Among these were: a move into the Mekong Plain; infiltration from the sea either directly to SVN or through Cambodia; and movement down the Mekong from Thakhek, Laos (held by the Pathet Lao-North Vietnamese) into Cambodia.

Finally, the scientists concluded, "it will be difficult for us to find out how effective the barrier is in the absence of clearly visible North Vietnamese responses, such as end runs through the Mekong plain" (The Pentagon Papers).

Their work completed, the Jason Group met with McNamara in Washington on August 30 and presented their conclusions and recommendations. McNamara was favorably impressed with the work of the Summer Study because he and other senior staff members flew to Massachusetts on September 6 to meet with members of the Study again for more detailed discussions. Even before going to Massachusetts, however, McNamara had asked General Wheeler to bring the proposal up with the service chiefs to obtain their comments.

After having asked CINCPAC for an evaluation, Wheeler sent McNamara the preliminary reactions of the Joint Chiefs. They agreed with the Secretary's suggestion to establish a project manager (General Alfred D. Starbird) in DDR&E, but expressed concern that, "the very substantial funds required for the barrier

system would be obtained from current Service resources thereby affecting adversely important current programs" (The Pentagon Papers).

The conservatism of the military hierarchy was overcome by McNamara's enthusiasm. The new project, given the deliberately vague name of Defense Communications Planning Group (DCPG), was set up under the Director of Defense Research and Engineering (DDR&E), just another acronym in the bowl of alphabet soup already obscuring just what the electronic barrier was.

Under DCPG the development of the electronic battlefield was rapid. Within a year and a half (late 1967), one part of the anti-infiltration scheme was in operation in much the form proposed by Jason. This was IGLOO WHITE, the air-supported anti-vehicle system extending into Laos from South Vietnam that will be discussed at length in this essay.

Jason and the Secret Case for Nuclear Weapons

The Jason Group at the same time was examining another issue, an issue of such magnitude that it was not declassified until March, 2003: Whether or not to introduce nuclear weapons into the Vietnam War (Robert Weinberg, Op-Ed, Making The Case Against Calamity, Los Angeles Times, March 9, 2003).

In 1966, as a member of the JASON group, Robert Weinberg was one of the authors of a report titled "Tactical Nuclear Weapons in Southeast Asia." Although the report was classified, its title and authorship became public knowledge, a fact

that caused the scientists much public ridicule after the publication of the Pentagon Papers.

Weinberg noted that from the report's title it was natural - though wrong - to conclude that the scientists were offering a plan for the use of nuclear weapons in the region. In fact, the group predicted "terrible consequences" if such weapons were employed, and advised against their use.

The JASON group was divided in its reaction to the Vietnam War. Some members looked at it as a purely military problem, to which our expertise might make a useful contribution. Some thought of it as nasty business, which could best be ended by winning the war. Others simply wanted nothing to do with it, Weinberg claims

"In 1966, we heard rumors that someone in the Pentagon or White House was pushing to use tactical nuclear weapons in Vietnam or Laos. Some of us were appalled, believing this would take the war to a new and horrifying level of destructiveness. It also, I felt, would create a terrible precedent for the use of nuclear weapons for something other than deterrence.

"In the end, I doubted it would help much with the war, but it would open up the possibility of nuclear attacks on our own bases in Vietnam. These immediate reactions, though, were not based on any careful analysis. So we decided to do the analysis and write a report (Robert Weinberg)."

The report concluded that the Vietnam War did not offer plausible targets for nuclear weapons, and that American forces were far more vulnerable to the use of nuclear weapons than its adversaries.

Opposition at the War Front

Senior Marine and Navy commanders opposed the entire concept of creating an "electronic fence," believing it would be a waste of limited resources and would result in unnecessary U.S. casualties. Despite the field general's objections General William Westmoreland ordered the Marines to implement the plan. It was to be a linear barrier 30 kilometers long, extending from the South China Sea to a point north of the Rockpile. It was envisioned to consist of barbed wire, minefields, sensors (Igloo White), watchtowers, and a series of strong points. Artillery positions along Route 9 west to Laos would provide fire support for the barrier.

The Marines were concerned that construction of the barrier would tie up all their resources and fix them in place, limiting their ability to conduct mobile operations. The monsoon weather and fierce NVA resistance hampered construction efforts. The Marines felt that they were unable to adequately defend themselves from enemy attacks and maintain construction schedules at the same time. They estimated that in constructing the barrier, there would be 672 Americans killed, 112 South Vietnamese killed, 3,788 Americans wounded and 642 South Vietnamese wounded. Equipment lost to enemy action during construction would

total $1,622,348. The actual cost was far higher. Eventually the barrier project was abandoned (Shulimson).

In 1966, however, the U.S. strategy for the defense of the DMZ still called for interlocking bands of artillery fire generated from firebases strategically placed across the DMZ. American military commanders were taught to use generous volumes of firepower instead of manpower to accomplish their military objectives and to minimize their casualties. In Northern I Corps, the United States Marine Corps and Army artillery units from the newly formed 108th Artillery Group under its operational control were spread across the DMZ from Gio Linh at the South China Sea to Khe Sanh on the Laotian border. These firebases, although isolated from each other, were close enough together to create the required interlocking fields of fire.

The US Military Command, Vietnam (MACV) subsequently modified the original Jason proposal for an antipersonnel barrier across the DMZ. This MACV plan called for a linear barrier consisting of a 600-1,000 meter wide stretch of cleared ground (or "trace") containing barbed wire, minefields, sensors, and watchtowers backed by a series of manned strong points. These fire support bases were to provide the interlocking pattern of artillery fire envisioned by the planners (Westmoreland).

The system would begin at the coast of South Vietnam below the DMZ (Gio Linh) and continue westward across the coastal plain a distance of about thirty kilometers to the beginning of a more mountainous area. (The plan for interdicting

Marine Corps and half the Army to guard it; even then they'd probably burrow under it (Telfer, 943)."

The North Vietnamese remained uncooperative. Phase II of the North Vietnamese General Offensive-General Uprising took place during Tet in January 1968. By late January, when the McNamara Line should have become operational, it became clear that the North Vietnamese were massing around the Marine base at Khe Sanh in the northwestern corner of I Corps.

All the sensors and related equipment scheduled for installation along the DMZ were given instead to the defenders of Khe Sanh. Seismic and acoustic sensors were quickly dropped on likely enemy approaches by aircraft of the 7th Air Force. Hac Bao special operations groups placed others, and American soldiers assigned to the only target acquisition battery in South Vietnam placed more. Almost immediately the sensors began indicating enemy activity (Pisor, 118).

In April the siege at Khe Sanh finally ended. The sensors deployed there became objects of great praise. Colonel David Lownds, the Marine commander at Khe Sanh, said, "I think the casualties would have almost doubled" without the sensors (United States Congress, 95)."

Until the end of America's involvement in Vietnam the sensors played an important role in determining when and by whom the Ho Chi Minh Trail was being used.

Chapter IV

The Ho Chi Minh Trail

The Ho Chi Minh Trail was the bastard child of the First Indochina War during 1946 to 1954. Beginning as a nameless footpath system that ran north south along the Truong Son Mountain Range of Vietnam, it became known as the "Ho Chi Minh Trail" as it grew in both length and complexity. Before the Viet Minh (Vietnamese nationalists led by Ho Chi Minh who fought the French) drove the French colonialists from Vietnam, the trail was the only reliable source of physical communication between artificially partitioned North and South Vietnam. By the time the French fled in 1954 the Ho Chi Minh Trail was suitable to movement by foot, animals and bicycles. Between 1954 and 1959 it was not maintained and rarely used by any military forces. But the North Vietnamese soldiers who built it had not forgotten how useful it was.

In May 1959, the Peoples Army of North Vietnam (PAVN) incorrectly called the North Vietnamese Army (NVA) by the Americans, activated Transportation Group 559 under the direct control of its Rear Service (Logistics) Department. Group 559 was a special unit in charge of moving men and supplies into the South for the support of the insurgency effort that had just been initiated under the form of a "war of liberation." The trail's old pathways were rehabilitated and widened, and new ones were surveyed and constructed (Hinh Maj. Gen, 8).

At this early stage, the flow was sporadic because the journey was an ordeal for those walking it. But as pathways were eventually enlarged into roads, the means of transportation also improved.

By the end of the 1960's, the Ho Chi Minh trail had become an elaborate system of nearly 2,000 miles of pathways and roads, including some natural waterways. It started at Vinh, North Vietnam and ran through the Mu Gia Pass before penetrating into lower Laos, northern Cambodia, and the "Tri-Border" area of South Vietnam, Cambodia and Laos.

In several areas the trail was a cobweb of crisscrossing roads making up a corridor from 30 to 50 miles wide, complete over and underwater with bridges, culverts, and hidden river crossing ramps. Much of the trail was concealed under dense jungle canopy. With the assistance of Pathet Lao guerrillas (Laotian Communists) an estimated 50,000 troops of NVA Group 559 and 100,000 Vietnamese volunteers and forced laborers maintained this vital artery (Hinh, 5).

To protect the corridor, the NVA established an elaborate defense and security system. The duty of Pathet Lao units was to intensify guerrilla activities and launch periodic attacks in order to keep the Royal Lao Army confined to the cities and towns along the Mekong River.

Group 559 was also tasked with the protection of the trail system and storage areas. Augmented by infantry units and local militiamen, the group defense forces included anti-aircraft units armed with all types of light and heavy weapons,

from 12.7-mm, 14.5-mm and 23-mm heavy machineguns to 37-mm, 57-mm and 100-mm anti-aircraft cannons (Hinh, 7).

From Group 559's forward headquarters in the southern panhandle of North Vietnam it controlled the *'binh trams'* ([pronounced bin tram] troop stations) dotting the trail. In 1970 there were about 40 such stations, from Vinh to the Cambodian border. Each binh tram was a self contained, logistical complex responsible for a well-defined area. Its subordinate units usually consisted of engineer troops, surface and waterway transportation elements, maintenance units, quartermaster and medical units, warehouses, and a certain number of way stations to support troop movements (Hinh, 7).

During the cessation of bombings in North Vietnam, trucks moved by convoy from Vinh down the trail. Upon reaching the Laotian border, they formed units of five to eight vehicles and usually moved only at night or in foul weather in order to avoid the round the clock bombing by U. S. Air Force attack aircraft. As a result a day's journey separated binh trams from one another. (Prados, 79)

New recruits or replacements usually entered the system at Vinh in North Vietnam and often marched over 100 days to reach their final destination in South Vietnam. In view of this long journey, they had to rest and recuperate at way stations where they received food, medicine and indoctrinations. Combat units usually moved by battalions of 500- 600 men each and they often suffered substantial losses from disease and constant bombings by the U.S. Air Force.

The NVA built a fuel pipeline system from Vinh to the Mu Gia Pass in 1968. By February 1969 the main pipeline had been extended to the Muong Nong area in Laos west of the Ashau Valley. Fuel storage areas along this line became one of the major targets for bombings by American planes. Many of the sensors deployed by Operation Igloo White were located in this remote region (Hinh, 12).

From 1960 to 1965 RVN was unable to do anything against the Laotian infiltration route until U.S. Army Special Forces teams helped organize the highlands Montagnards into Civilian Irregular Defense Groups (CIDG) and develop the Vietnamese Special Forces for the defense of the border areas. As the war intensified in South Vietnam efforts to interdict the Ho Chi Minh supply line increased. ARVN Hac Bao units regularly conducted reconnaissance patrols deep into the border areas adjacent to Laos.

Wall remembers: "By the summer of '68 we were inserting spooks (Hac Bao/Special Forces) from Hue Citadel all the time. Sometimes we flew black missions where we left all our identification behind and covered up the U.S. insignias with green 100-knot (duct) tape."

The Ho Chi Minh was never successfully interdicted to a significant degree, even during the period of maximum effort. The surveillance and interdiction of the trail was primarily in the hands of the U.S. Air Force. Its reconnaissance planes covered the trail system around the clock responding to electronic sensors planted along jungle pathways, river crossings, and mountain passes. They were designed

to detect vehicle and other man made noises, transmit the signals to orbiting aircraft planes, which relayed the information to Thailand for interpretation.

The electronic monitoring of enemy activities on the trail system helped record the number of vehicles and men moving along the trail; consequently, intelligence on Communist infiltration was remarkably reliable (U.S. Air Force, 46).

The other major task for the Air Force was interdicting the infiltration routes. All types of aircraft, including B-52 strategic bombers, were used. The U.S. Air Force claimed that its bombs and improved weapons systems inflicted heavy losses to the enemy in terms of personnel, vehicles and materiel moving down the trail. In early 1971 the Air Force released a story that its interdiction was so effective that only one ton out of every 32 tons shipped from North Vietnam ever reached its final destination in South Vietnam.

Despite such grandiose claims the Ho Chi Minh Trail continued to supply about 50 percent of the enemy's combat needs in I and II Corps regions of South Vietnam during 1967/68. As a result, the NVA Transportation Group 559 received special reinforcements and during the second half of 1970 made a determined effort to develop logistical base adjacent to Quang Tri province. This effort would ultimately lead to the last South Vietnamese offensive in the war.

Chapter V

Introducing Operation Igloo White

As already discussed, the Jason Group was solicited to submit a proposal discussing a broad air-supported anti-personnel barrier system across Vietnam below the DMZ. In September, Secretary of Defense Robert S. McNamara established the Defense Communications Planning Group (DCPG) to develop the concept, and later expanded the mission scope to cover an anti-vehicle barrier system across Vietnam, Laos and Cambodia using a variety of eavesdropping sensors.

Initially the U.S. Navy was given the task because of its familiarity with both sonar arrays and delivery aircraft. In addition, I Corps was the sole province of the 3rd Marine Division and its few supporting Army assets, making it easy for the Navy to coordinate the effort. The Navy adapted the airdropped radio sonobuoy for ground use by replacing the hydrophones with microphones and geophones, and modifying existing Anti Submarine Ware (ASW) aircraft for over-land use to accomplish the mission.

The initial phase was called ALARS (Air Launched Acoustical Reconnaissance). In 1967 the mission was dubbed Project TRIM [Trails and Road Interdiction, Multi-sensor] (Jepperson, www.jepperson.com).

In 1968 the US Air Force took over the mission and renamed it Project Alpha, an innocuous name that included Igloo White - the designator for the physical action of placing the sensors.

Drawbacks and Successes

Background noise, physical discovery, marauding animals, American and North Vietnamese interdiction fire, stray bombs and shells, and the weather took a terrible toll on the devices. Yet, despite their technical drawbacks, the sensors did give a limited view into the activities of the elusive NVA. But it was not always enough.

Unbeknownst to Westmoreland and apparently just about everyone else in the U.S. Defense Department during 1967, the North Vietnamese Army (NVA) and its VC partners were assembling the components of the spectacular, militarily ineffective operation called the "1968 Tet Offensive" by the Americans and the "General Offensive, General Uprising" by the Communists. Although a military disaster for the Communists, the campaign ultimately broke the will of the American people to support the war. Named for the holiday on which it occurred, the unexpected offensive disillusioned many Americans who still believed the United States would prevail in South Vietnam (Gallup).

At the heart of the 1968 "Tet" campaign was the North's ability to supply, reinforce and resupply its army in the South using the Ho Chi Minh Trail. The trail

was the primary means of supply for North Vietnamese commanders prosecuting their offensive in South Vietnam.

The NVA expended an inordinate amount of its relatively meager supplies protecting the trails and the Americans and its Allies spent an equally impressive amount of their available interdiction capability and ordinance trying to block them.

Because North Vietnam had no airborne delivery capability, the two options left to them were supply by land or water. The coastal routes of Vietnam and inland waterway as well as the Mekong River systems were monitored and interdicted by South Vietnamese and U.S. Navy interdiction operations. Police and military authorities implemented waterway security programs, and land routes across the Demilitarized Zone were interdicted so effectively that the use of land routes through Laos and Cambodia became the primary means of sending troops and supplies south.

Igloo White Operations

By 1968 the largest building in Southeast Asia was the Infiltration Surveillance Center (ISC) at Nakhom Phanom, Thailand, the command center of U.S. Air Force Operation Igloo White (U.S. Air Force, 72).

Inside the ISC technicians pored over banks of video displays controlled by IBM 360/65 computers and connected to thousands of sensors strewn across the Ho Chi Minh Trail in southern Laos, northern south Vietnam, and as far south as South

Vietnam's so-called III Corps Military region, home of the Parrott's Beak, the tunnels of Cu Chi, and the deadly Bo Loi Woods.

Operation Igloo White electronically monitored the trails in those areas so the troops and supplies entering the South could be interdicted. The long list of code names and call signs associated with the overall Igloo White program has long confused historians about what the program was and who participated in it. For security reasons the project was compartmentalized and disguised as other operations by members working on a strict "need-to-know basis. While all the parts equaled the whole, no single part was aware of all the others except at the highest echelons of MACV and the Pentagon. Naval personnel and later Air Force personnel operated in a partial vacuum of coherent information. Even the staff working inside the Task Force Alpha (codename for the entire interdiction effort) oversight facility at Bien Hoa, South Vietnam was limited by which rooms they could enter and what access they had to information necessary for their specific duties. Complicating an understanding of the overall program that one organization would replace or absorb another's mission when it changed, or, as one technology superceded another.

The management of Project Igloo White was the responsibility of a joint task-force of Army, Navy and Air Force commands tasked by the Department of Defense to integrate their respective intelligence gathering and targeting programs under one mission. The overall operation was called "Joint Task Force 728."

The initial sensor air delivery and attack portion of the program was managed by the U.S. Navy under the code-name Dual Blade, later changed to Dye Marker, and again to Muscle Shoals. Eventually the code name Igloo White was applied and stuck, although Igloo White actually concerned itself only with the electronic sensors. Upon transfer of mission to the Air Force in June 1968 under the expanding umbrella of the 'air war', the ground unit identification was changed to Task Force Alpha.

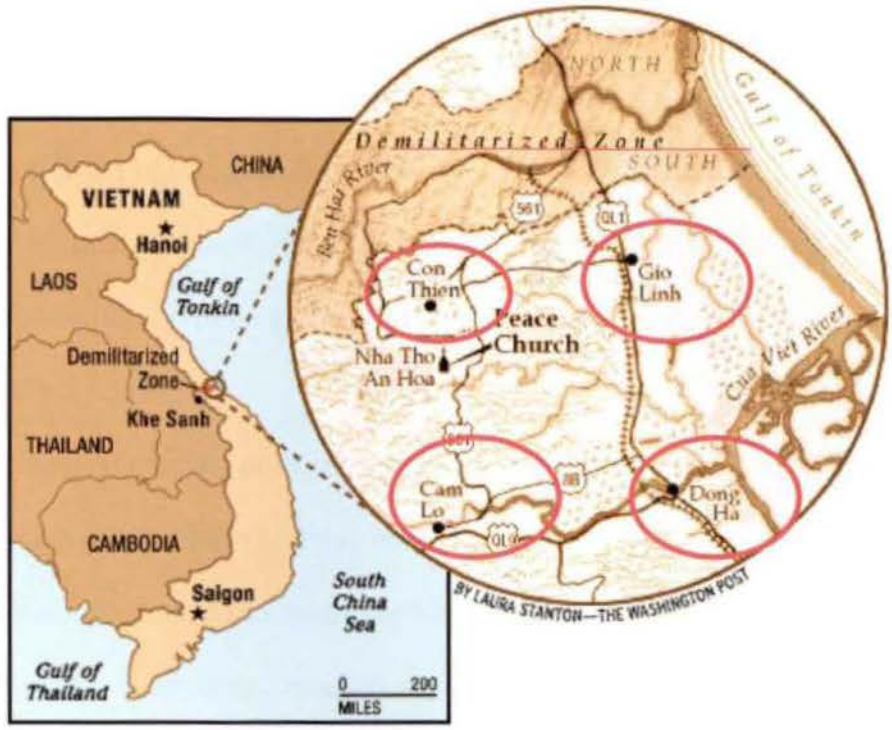
The Sensors

The seismic detectors dropped, manually placed, and buried across the Ho Chi Minh Trail and the DMZ used a transducer called a geophone to convert ground motion into an electrical signal that could be transmitted to a variety of listening posts. Developed for underground mapping studies in oil field exploration, the geophone could detect footfalls and other vibrations at amazing distances. The device consists of a magnet delicately suspended by springs and surrounded by coils of wire that act as electrical contacts if the magnet is disturbed. When it detected a seismic disturbance the sensor transmitted an alert called a "sensor alarm."

The Seismic Intrusion Detector or "SID" was the first seismic sensor introduced in more than prototype quantities, with several hundred arriving in Viet Nam in October 1967. Despite severe technical problems the SID was put to good use in Vietnam by various artillery installations, Special Forces, and the First Air Cavalry. More sophisticated variants arrived in country over the next four years.

One variant, the PSID – Patrol Seismic Intrusion Device - was built with the Grunt in mind. The unit was easily man-portable and could just as easily set up in a hurry. Its receiver could pick up alarm signals from the transmitter at maximum ranges of 500 to 800 meters, depending on terrain and vegetation. The sensors could listen for up to 50 hours on internal batteries. It was quite an edge for special operations soldiers.

Another variant called ASIDS - for Air Delivered Seismic Intrusion Detector - was a family of sensors dropped from aircraft along potential NVA march routes. They used the same technology as man-delivered units, but were more robust and powerful. ASIDS were dropped in strings along a predetermined target line in a series of 4 to 15 or more sensors depending on the priority of the target area. Equipped with spring-steel antennas, the devices were designed to bury themselves into the ground and blend in surrounding foliage by resembling tree branches and plants. ASIDS were continuously monitored twenty-four hours a day by U.S. Air Force intelligence gathering aircraft orbiting overhead (Jeppeson).



Chapter VI

Operation Hastings and the Birth of the McNamara Line

In early 1966, the North Vietnamese Army (NVA) began massing forces in the northern provinces of South Vietnam and U.S. Marines were ordered north to counter. On July 15 1966 the Marine's 3rd Marine Division (3rdMarDiv) was deployed from Okinawa to defend the DMZ. The enemy had heavily infiltrated the area between Con Thien and the sea. The 324B NVA Division that had crossed the DMZ was quite capable of taking on the Marines. Marine reconnaissance patrols were unable to stay in the field for more than a few hours - and many for only a few minutes - before it was necessary to extract them under heavy enemy fire.

On July 15 1966 Operation Hastings began with the insertion of five Marine infantry battalions into landing zones to establish blocking positions along enemy

trails and kill enemy infiltrators crossing the DMZ. A reinforced battalion of Marine artillery (12th Marines) accompanied this task force. Its headquarters was established at Dong Ha, located about 12 miles from the DMZ and 12 miles from the coast of Vietnam. From Dong Ha, the Marines pushed westward along National Route 9, establishing firebases at Cam Lo and farther west at a 700-foot mountain known as "the Rockpile."

For the next year the predominantly Marine force barely held its own. After seizing the high ground about halfway between Dong Ha and Lang Vei, near the future infamous firebase at Khe Sanh, the Marines established Camp J.J. Carroll, the linchpin of the entire DMZ interdiction program.

G Co., 2nd/26th Marines in action, Operation Hastings, 1967, northern I Corps, USMC Photo

The biggest problem the Marines faced beside a tenacious enemy was terrain. The 12 miles of barren ground between Dong Ha and Cam Lo is level. As one moves westward, the terrain becomes more rugged changing into a series of ridges and steep hills rising to elevations of over 1,600 feet. The NVA could look directly into American firebases on the plain and direct artillery and rocket fire into them.

After Operation Hastings ended in August 1966, the Marines adopted the tactic of launching deep reconnaissance patrols into these hilly areas. On July 28, one of the Marine patrols operating near the Rockpile noted the presence of approximately 200 NVA troops. Artillery fire was called in on the enemy force, resulting in 50 killed North Vietnamese. The marriage of reconnaissance and artillery support used in that patrol was termed "Sting Ray," and Sting Ray patrols came to be considered one of the major innovations of the war.

The Introduction of Target Acquisition

"C" Battery, 26th Artillery, 18th Airborne Corps – Fencepost in the Line

The success of the Sting Ray missions encouraged the Pentagon to order "C" Battery, 26th Artillery, Target Acquisition Battalion (TAB), 18th Airborne Corps, to northern I Corps. Initially, the unit was "on loan" from the 18th Airborne Corps. In theater it would be redesignated "F Battery, 26th Artillery" and placed under the operational control of the 12th Marine Regiment and/or the 108th Artillery Group.

"C" Battery, 26th Artillery, 18th Airborne Corps, was cobbled together by letter order from a combination of World War II and Korean War veteran non-commissioned officers who had actually served in target acquisition battalions, recent enlisted airborne training school graduates levied from infantry and artillery schools, local misfits, and officers shanghaied from line companies and batteries at Fort Bragg. The new unit received two weeks of training and then deployed to Vietnam aboard U.S. Air Force transport aircraft. 4 C Battery was at best an ad hoc option for preventing infiltration along the vaunted DMZ.

After settling in at Dong Ha, C Battery was split into penny-packet units of radio operators and flash rangers acting primarily as forward observers and shipped to Marine outposts. The battery's two remaining platoons, one of "sound" rangers supplied with air and land delivered audio sensors, and radar operators manning antiquated Q10 counter-battery acquisition radar, was sent to Marine firebases at Con Thien, Gio Linh, the Rockpile, and Camp J.J. Carroll. The Battery garnered two "honors" during its four-year deployment in South Vietnam: 1.) I t was the only target acquisition battalion to serve in theater; 2.) It was the only U.S. Army unit inserted into the mythical line popularly called "McNamara's Electronic Fence."

Fire mission, Con Thien, 1968 Photo: NRH

History of C Battery, 2nd TAB, 26th Artillery, 18th Airborne Corps.

Letter Order Number 3731, Headquarters, XVIII Airborne Corps and Fort Bragg, dated 4 October 1967, mobilized this battery on 29 September 1967 for movement to Vietnam. The battery is scheduled to return to Fort Bragg and its parent unit upon completion of its mission. ("C" Battery, 26th Artillery Unit History)

The battery trained, equipped, and packed for movement in two weeks before an advance party of battalion and battery personnel departed Fort Bragg by air on 7 October 1967.

The main body of battery personnel and equipment were air lifted from Fort Bragg directly to DaNang, RVN from 16 October to 28 October 1967, utilizing 17 C-130 and C-133 aircraft. As elements of the battery arrived, they were moved to a staging area established, at Red Beach, just north of DaNang. The two weeks spent at this location were used to process equipment, procure additional supplies, and conduct environmental training for personnel.

On 27 October 1967, an advance party of 60 men proceeded to Dong Ha by overland convoy to begin construction of a permanent base camp. The remainder of the battery arrived in Dong Ha on 5 November 1967.

Two weeks later the sound ranging platoon was deployed to Gio Linh and Con Thien where two-second sound bases utilizing GR-8 sound ranging sets were placed in operation on 4 November and 12 November 1967. The same day C

Battery was designated F Battery, 26th Artillery and placed under the operational control of 12th Marines, 3rd Marine Division.

In May 1968 a US Navy jet "accidentally" destroyed the radar at Con Thien with a Shrike anti-radiation missile, killing one radar crewman and severely wounding four others in addition to wiping out the radar platoon's special capability. The official version of the attack says, "On 4 May 1968 an air to ground missile released by a U. S. Navy aircraft, homed in on the AN/MPQ-IOA radar at Con Thien, killing one and wounding 4 others."

The remaining members of the platoon were subsequently transferred to the "Flash" Platoon and assigned to various Marine outposts standing watch in the AO.

On 14 May, a single Marine AN/MPQ-IOA radar was placed in operation at Camp Carroll. The radar has been utilized mainly in performing registrations for artillery located in that area. It too failed after a time and the idea of using counter-battery radar to find NVA tubes along the DMZ was put to rest.

On 15 June the battery recorded its first sightings of unidentified aircraft in the DMZ, suspected to be enemy helicopters. This caused a flurry of activity when a multitude of generals and their staffs flew into Con Thien for a quick look. The unidentified flights over North Vietnam continued until September and then mysteriously stopped.

On 20 June, the super-classified "Fire Watch" acoustical detection and laser range fining system came online at Con Thien under the direction of the Los Alamos Scientific Laboratory (LASL) at A-4 [Con Thien].

Fire Watch was a civilian-manned acoustical detection system slaved to a computer-aided laser range finder in a huge concrete off-limits underground, air-conditioned bunker built by the Navy Seabees. The apparatus was apparently connected to two Marine Corps 8-inch self-propelled howitzers (SP) that fired across the DMZ whenever active NVA artillery was located. Everything about Fire Watch was classified and subject to rumor.

In December 31 1969 "F" Battery troopers detected 674 targets that were brought under attack by a variety of means. Of these, Flash accounted for 433 targets, Sound for 73 targets, and Radar for 158 targets.

Holding the Line

Farther to the west North Vietnamese gunners stepped up their attacks against the Marine firebases dotting the high ground overlooking Highway 9. The largest and most important of these targets was Camp Carroll, which was never the focus of NVA ground attacks until the very end of the war. Rocket attacks, however, were launched at Camp Carroll on March 6 and March 12, 1967, but no ground attacks followed. This cycle of attacks continued whenever the NVA conducted a move or hit somewhere else

The Marines deduced that artillery attacks on Carroll were secondary to larger North Vietnamese tactical goals. One such attack occurred in April 1967, when the NVA made plans to overrun the combat base at Khe Sanh. The long-range guns at Camp Carroll could easily augment the defenses of Khe Sanh, which

was 13 miles away. The NVA's plan to isolate Khe Sanh included attacking Camp Carroll and other bases with artillery and rockets in order to create a diversion and minimize the Marines' ability to provide supporting fires. The NVA fired roughly 1,200 rockets, mortar, and artillery rounds in these attacks. (Jack Shulimson)

The North Vietnamese also matched the buildup of Marine forces along the DMZ. In the spring of 1967, the NVA introduced rockets, mortars, and heavy artillery into the zone to support their ground actions. The most powerful enemy guns were capable of hitting targets at ranges greater than ten miles, putting most firebases, including Camp Carroll, within range. According to American intelligence reports on the enemy order of battle, the NVA had 130 artillery pieces in the area north of the Ben Hai River at the time. To counter that threat, the American forces increased their own artillery deployment to 180 tubes.5

The biggest problem for the Marines in the region was determining the precise location of the Communist artillery. Ground observation was limited by political and military restrictions against operations in the DMZ. Aerial observation was hindered by NVA missile and anti-aircraft fire. After the arrival of C Battery, which augmented the Marines limited counter-battery resources, the odds got better, although the Army unit generally fared no better than the Marines it supported. The tactical deployment of the Marines to fixed positions located on prominent terrain features gave the NVA had a clear choice of targets for their gun crews. The Americans repeatedly blasted suspected NVA gun positions with

artillery, air strikes, and naval gunfire, but despite those measures, the Communists were still able to inflict significant casualties.

In May 1967, the Marines became concerned with the NVA's use of the southern half of the DMZ for rocket-launching and artillery sites. The South Vietnamese National Police removed altogether 12,000 Vietnamese civilians from the operational area. After the civilians had been moved out, the entire area was considered a free-fire zone. The Marines then launched several operations in the region between the Ben Hai River and Route 9 to destroy enemy units, installations, and supplies. (Purnell's Illustrated Modern Warfare, Part 11, p.201)

To counter the growing Marine threat the North Vietnamese positioned their heavy artillery pieces just beyond the range of U.S. 105mm and 155mm artillery, the most common guns in the U.S. artillery arsenal (with 10,500 and 14,800 meter ranges, respectively). The Soviet 152mm guns had a range of 14,955 meters, while the 130mm field piece could shoot 31,000 meters (about 19 miles). That meant that the NVA could fire on most American artillery bases with little threat from effective return fire (Pearson, 213).

175mm, M107 in action, 1968, Photo: Tom Tate

From a tactical perspective, therefore, the U.S. Army 175mm self-propelled gun was the most important weapon at Camp Carroll. The 175mm guns put Camp Carroll on the map, particularly the tactical maps of the North Vietnamese forward observers. The most powerful American field artillery tube, the 175mm could fire a 148-pound projectile 32,690 meters and effectively return fire on any enemy gun that could hit it. These guns were mounted on a tracked chassis and powered by a turbocharged diesel engine. The top speed of this 30-ton monster was 35 mph, and it could fire at a rate of about one projectile every two minutes. The 175mm guns' 34 foot-long barrels, made at the Watervliet Arsenal in Troy, N.Y., would burn out after firing 300 rounds. Used barrels were half-buried in the mud, forming effective speed bumps to ensure that base traffic did not exceed the 5 mph speed limit at Camp Carroll.

Captured American-made "Pack 75"

Further west on Route 9, past Camp Carroll and the Rockpile, is Khe Sanh, which the Marines were ordered to reinforce in the summer of 1967. At Khe Sanh, the NVA supply lines were short while American supply lines were long. The NVA could bombard the base with long-range artillery hidden in Laos, where U.S. forces were not allowed to strike back. The primary American supply route to Khe Sanh was a truck convoy from the Marine base at Dong Ha. In August, the Marines dispatched a convoy of 85 trucks with several 175mm cannons to Khe Sanh. After

the NVA ambushed the convoy along Route 9, west of Camp Carroll, the Marines decided to leave the 175mm guns at Camp Carroll while the convoy continued on to Khe Sanh. In early August, the convoys to Khe Sanh ended. That stretch of Route 9 was closed by the NVA and would remain closed for the next nine months. During the fighting around Khe Sanh that followed, Marine artillery, including the guns at Camp Carroll, would fire more than 150,000 rounds against the North Vietnamese.

During the early evening hours of 29 February 1968 a string of sensors indicated a major movement of troops along Route 9. The fire support control center at the base directed all available assets against the area. The firepower was massive. Artillery, radar-guided fighter-bombers, and multiple B-52 strikes pounded the enemy's route of march.

Hac Boa troopers inserted in the region from 282nd aircraft had successfully deployed the sensors that discovered the enemy movements. The Hac Boa soldiers were safely extracted before both slicks disappeared with the loss of both crews and all the Hac Bao troopers. Wall's aircraft was sent from Hue to search the northern Ashua Valley, which terminates near Khe Sanh, to find the missing aircraft. Low clouds and persistent anti-aircraft fire hindered the search until it was called off, Wall remembered.

"They went down on a two-ship CA [combat assault} southwest of Khe Sanh and both ships disappeared," Wall recalled. "We never found anything until

1969 when we found Mr. Stanley's [WO1 Charles I. Stanley, Cleveland, OH, deceased] ship. Nobody was there but the ship was all shot up."

Stanley's remains – bone fragments and teeth - were discovered in 1999 near the location where his Huey crashed in 1968. A joint U.S.-Vietnamese search team located his remains. The Army says that tests to match the discovered remains with his mother's genetic signature confirmed it was Stanley. (Elizabeth Sullivan, Cleveland Plain Dealer Sunday Magazine, April 30, 2000) No remains from the other seven missing crewman or the Hac Bao passengers have been discovered.

After the Tet and post-Tet Offensives of 1968, the Communists re-evaluated their military position in northern I Corps. The North Vietnamese shifted their tactics away from an attempt to win an immediate victory to a policy of prolonging the conflict while reducing their own casualties. Communist strength in the area fell from 94 battalions in mid-1968 to 29 battalions by year's end. While some of this success can be attributed to the NVA's new strategy, much credit has to be given to the soldiers and airmen who maintained Operation Igloo White. Their actions were so successful "that by the end of 1968 NVA artillery fire from within the DMZ onto U.S. positions had all but ceased." (Turley, 34)

Camp Carroll diminished in significance after the 1968 offensives. The 3rd Marine Division began adopting U.S. Army tactics, relying on highly mobile operations rather than remaining in fixed positions as sitting targets. Other Marine units that had been positioned along the DMZ began receiving orders to leave the country.

"The withdrawals were a partial implementation of President Nixon's policy of "Vietnamization" -turning the war against the Communist insurgents over to the South Vietnamese. Remaining Marine units extended their lines to plug the gaps left by departing units. As the Marines pulled out of the artillery bases in the western sector, the South Vietnamese rejected the offer to occupy the vacated Marine bases" (Nolan, 97).

By October 1968, the Marines noted that enemy attacks in their area of responsibility had fallen by more than 50 percent compared to preceding months. ARVN forces dismantled Vandergrift Combat Base, built during the siege at Khe Sanh and located west of Camp Carroll on Route 9. Salvaged materials from Vandergrift were used to construct a new ARVN combat base at Camp Carroll. In October, the Marine base at the Rockpile was closed, leaving Camp Carroll as the westernmost major installation along Route 9. As the Marines left the DMZ area they passed control over to units of the U.S. Army (5th Mechanized Infantry Division and 101st "Screaming Eagles" Airborne Division (Airmobile) and the ARVN. After a time, no U.S. forces were located in the western portion of northern I Corps; the North Vietnamese slowly began to rebuild their base areas along the Vietnam-Laos border.

"When the Marines left northern I Corps it really quieted down. The ARVN 1st Division was the only active group up there. We still supported Special Forces and spooks, but the level of activity changed dramatically after Khe Sanh was

abandoned," Wall said. "Later the ARVN Second Division arrived. It was a sorry bunch."

Chapter Seven

The New Success of Signal Interception

Within the National Archives are more than 2,000 hours of tape-recorded discussions and briefings at Military Assistance Command, Viet Nam (Long Binh) made during the four years GEN Creighton Abrams was in command. They were declassified last year and are available for limited inspection through the National Archives in Washington, D.C.

The main story that emerges from these tapes is that of a different and arguably better war being waged during the years 1968–1972, better in contrast to the earlier years of American involvement — especially between 1965 and1968 when Westmoreland commanded - and when the "new" war was conducted by Abrams, U.S. Ambassador Ellsworth Bunker and Ambassador William Colby, in charge of the euphemistically named "Pacification" effort.

The most dramatic information revealed by the tapes has to do with signals intelligence of the movement of men and materiel down the Ho Chi Minh Trail from North Viet Nam through Laos and Cambodia and then into South Viet Nam.

Signal intelligence, usually considered an adjunct to eyes and ears on the ground before Vietnam, grew to maturity during the latter days of the Vietnam War. Denied troops on the ground after 1969, and relying primarily on Igloo White sensors that produced intelligence "too classified" to be pushed downward to the

field commanders, current intelligence rarely reached the troops in time to be immediately useful.

Before 1968 estimates of the enemy's infiltration down the trail were just that — estimates. Efforts to track and calculate the enemy's movement of men and units were both difficult and controversial.

Often months would pass before intelligence officers could identify with any assurance the number and destination of NVA units who had come down the trail. The image they presented was made from prisoner-of-war interrogations, captured documents, and reports passed by Hac Bao and U.S. Special Forces MAG-SOG units, and clandestine CIA agents. Recalculations and revisions of earlier figures, carried out repeatedly as more information was obtained, undermined the credibility of MACV infiltration estimates in the eyes of those who did not understand the system (Sorley, 56)."

That, in turn, contributed to the order of battle controversy that raged during the latter stages of Westmoreland's tenure, erupting again some years later as a result of the CBS television documentary The Uncounted Enemy: A Vietnam Deception and Westmoreland's failed libel suit against the network

After General Creighton Abrams' tenure began in 1968 came the acquisition of a new and remarkably accurate means of determining details of enemy movements south. U.S. intelligence began to intercept, break, and read encoded enemy radio traffic that accurately and consistently reported the numbers,

progress, and destinations of infiltration groups moving down the Ho Chi Minh Trail.

"Under GEN Abrams," said his J-2 (Intelligence Officer) BG Phil Davidson, "the commander is pleased with his intelligence, acts upon it, and has forced the staff to act upon it. That is what has changed in the last four or five months (Sorley, 59)."

North Vietnamese traffic on the trail was controlled by the General Directorate of Rear Services (GDRS) in Hanoi and administered by a Commo Liaison (Communications-Liaison Bureau) unit through a series of military way stations, already introduced as *binh trams,* along the route. Each station was numbered and, therefore, individually identifiable. Binh Tram 33 in Laos, for example, was in the vicinity of Base Area 604 near Tchepone.

The system of binh trams, later further expanded, extended initially from Hanoi through North Viet Nam and Laos to the tri-border area where North Viet Nam, Laos, and South Viet Nam meet. "Almost the entire Cambodian-South Vietnamese border area is one continuous staging area," later concluded MACV analysts, with 20 or so bases in the expanded complex.

The binh trams controlled a second type of facility associated with the trail, known as "T-stations." These also were numbered — for example, "T-10." The mission of the commo-liaison groups was to facilitate movement of units traversing the trail.

There also was a series of what were called "K-facilities," providing permanent supply warehouses at intervals along the route.

A headquarters designated the 559th Transportation Group, located in Base Area 604, operated the trail in Laos under direction of the GDRS. Each binh tram exercised operational control over its supporting security forces, transportation, anti-aircraft, medical, and engineer units, as well as the commo-liaison stations, an aggregation that reached approximately regimental size for each binh tram. Altogether an estimated 40,000 people were engaged in operating the trail under the 559th Group.

Suddenly the allies had gained access to a tremendous source of information on all this activity, one whose significance went far beyond simply logistics.

"Through interception of Rear Services messages," said one MACV analyst, "we've been able to determine the rate at which infiltration groups are put in the pipeline for movement south and their probable destinations in South Viet Nam." (Sorely, 60)

Calling it a "new dimension" in knowledge of enemy infiltration, MACV's infiltration expert noted that this all began on 1 Nov 1967 with the first recorded intercept of a North Vietnamese Rear Services communication containing references to a numbered infiltration group. It took several months to grasp the significance of this new source, but by mid-March 1968, when 14 groups had been detected, the analysts realized that a large infiltration effort was underway.

During March and April, following the 1968 Tet Offensive, 114 groups, totaling nearly 66,000 men, were identified in intercepted communications as infiltrating south.

Then, beginning in mid-June 1968, groups containing large numbers of sick and wounded were detected in apparent northward movement. Some of these groups also contained substantial numbers of apparently able-bodied men, and the analysts at MACV concluded that this represented withdrawal of the 304th NVA Division. They were dead wrong, but this wasn't determined until after the war ended.

During the summer and into autumn of 1968 infiltration tapered off dramatically. In subsequent years, similar cyclical variations in the traffic were observed.

The NVA apparently was also was careful not to ship men south too soon lest they had to provide rations and other support for them over a longer time than necessary, thereby increasing the logistical burden.

Allied forces complemented interdiction of the Ho Chi Minh Trail with preemptive strikes into enemy base areas to seize supplies that had gotten through. In late September 1968, for example, MACV J-2 estimated that 191,000 men had infiltrated south from North Viet Nam since the beginning of the year and projected an additional 16,000 for arrival during October–December, giving a total for the year of 207,000, according to MACV J-2 BG Phil Davidson.

By October 1968, Davidson could tell the visiting Secretary of the Navy, "I think the intelligence is many times better than what it was six months ago." First "the breakthrough that we got on infiltration gave us a great lead on the enemy we never had before. (Sorley, 64)

Davidson also underscored the importance of this intercept capability at a conference on intelligence collection in the autumn of 1968.

"I think unquestionably one of the things that has caused success is communications intelligence," he said. "That's really changed a hell of a lot of things."

Abrams agreed. "Replacements are a thermometer of anticipated combat activity," he observed, and, "with the new intelligence capability, it was possible to know where those replacements were headed, in what numbers, and on what schedule. Such information was invaluable when it came to arranging a proper reception." (Sorley, 66)

Chapter VIII

The Secret Bombing of Cambodia

B-52 "Arc Light" Mission over Cambodia, 1970,Photo: USAF

In February 1969 the United States Air Force began secretly bombing North Vietnamese positions detected inside Cambodia. These bombing, which lasted almost two years, became known as the "Secret War." Remarkably, it was only secret to the U.S. public and even that was not a very well kept one.

In part the Cambodian bombing campaign was a reaction to North Vietnamese moves in Cambodia to find safe sanctuary for its logistical bases. U.S. efforts to interdict the Ho Chi Minh Trail had pushed the North Vietnamese farther west, where they could infiltrate with fewer casualties. This allowed them to build up "sanctuaries" in Cambodia they thought would be unassailable.

The North Vietnamese movement west was also another unintended consequence of McNamara's Electronic Fence because of the heavy introduction of U.S. bombers and special operations units that had infiltrated the eastern portions

of the trail. Their presence resulted in devastating air strikes that decreased the efficiency of the trail and destroyed morale among the NVA soldiers. One commonly heard litany among the young North Vietnamese troops was, "Born in the North to die in the South."

Finally, a frustrated U.S. military leadership that was impatiently ordered by President Richard M. Nixon to do something useful brought the Secret War. Despite spending billions of dollars trying to decrease infiltration from the North, the U.S. continued to witness an inexorable flood of NVA troops into South Vietnam, Laos, and now Cambodia. Nixon demanded that it end.

Once again the U.S. relied on a bombing campaign. To counter Presidential criticism the United States Air Force bombed Cambodia more than 43,000 times between 1969 and 1971. When it was over a million Cambodians were dead, wounded or missing, and the North Vietnamese were firmly entrenched in Cambodia and would remain so for almost ten more years.

The Secret War unfolded after Cambodian Prince Norodom Sihanouk refused to become an American client and allow Cambodia to become yet another Southeast Asian battlefield.

On February 9, 1969, US military intelligence reports suggested there was a significant NVA base just inside Cambodia – perhaps the elusive Central Office for South Vietnam, Headquarters (COSVN HQ) that dogged U.S. planners. Whether it was discovered by radio intercepts, human intelligence, or Igloo White sensors have never been revealed.

Regardless, Abrahms was confident that a series of precision B-52 bomber strikes could eliminate the COSVN base camp, assuming he could convince the new Nixon administration to go along with him. B-52s airstrikes could be used to carpet bomb large swaths of land, targeted in "boxes" of approximately two miles by one half-mile square.

In a memo to General Earle Wheeler, Chairman of the US Joint Chiefs of Staff, Abrahms argued: that "there is little likelihood of involving Cambodian nationals if the target boxes are placed carefully. Total bomber exposure over Cambodian territory would be less than one minute per sortie." (Shawcross, 21)

The idea was pitched to Nixon, who quickly approved the bombing with the assistance of his national security advisor Henry Kissinger. The first airstrikes were set for March, barely one month after the initial intelligence reports. With the demonstrated lack of sensitivity that marked the entire war the assault was codenamed "Operation Breakfast."

Kissinger suggested to Nixon that the attacks occur in secret. Nixon concurred and General Wheeler informed his staff:

"In the event press inquiries are received following the execution of the Breakfast Plan as to whether or not US B-52s have struck in Cambodia, US spokesman will confirm that B-52s did strike on routine missions adjacent to the Cambodian border but state that he has no details and will look into the question, Wheeler ordered." (Shawcross, 22)

On the 9th of March, 48 boxes - approximately 48 square miles of Cambodian territory - were carpet bombed for Breakfast.

Over the course of the next 14 months, the US conducted 3630 B-52 bombing raids in Cambodian territory. Each major operation followed on a tradition started with Breakfast; subsequent plans included Operations Lunch, Snack, Dinner, Dessert, Supper.

As Shawcross explained in Sideshow, "Once the decision had been made in principle that Communist violations of Cambodia's neutrality justified aggressive reciprocal action, it was not difficult to repeat the performance." (Shawcross, 29)

Arguably without the permission of Sihanouk, the US continued to bomb NVA and VC targets within Cambodia. Very little information was mentioned publicly - in April and May of that year there were several small references in the press concerning bombings over the border, but for whatever reason it wasn't considered a major story. Later that would change, when hindsight became 20-20

Despite the months of airstrikes, the bombings did little to slow down NVA activities. On the contrary, communist forces crept further and further into Cambodia. The US bombers followed suit. Significant populations of Cambodian peasants were now at risk, though no one knows with absolute certainty how many of them were killed during the campaign. The U.S. policy was to count the Cambodians "per acre." Such policies provided the previously weak Khmer Rouge guerrilla force new currency. Run by disenfranchised leftist politicians, it grew dramatically in the wake of the bombings.

The bombings also reinforced the Khmer Rouge's taste for violence. Suddenly the war in Cambodia was escalating, spiraling out of control. Sihanouk, whose greatest evidence of leadership was that he had kept his people out of the war, no longer had the right to that claim. His days were numbered.

In January 1970, Sihanouk left Cambodia on tour, with plans to visit France, the Soviet Union and China. General Lon Nol, Sihanouk's prime minister, began a series of steps that would soon spell the political end of Sihanouk.

In early March 1970, Lon Nol organized anti-Vietnamese demonstrations across Cambodia and gave the Vietnamese an ultimatum to leave Cambodia or face an attack. On March 12, thousands marched in Phnom Penh, sacking both the North Vietnamese and Viet Cong embassies. By March 15, Lon Nol's ultimatum deadline had come and gone, so he requested and received shelling from South Vietnamese artillery against North Vietnamese forces entrenched near the border.

The immediate impact of the Lon Nol coup was the end of Cambodian neutrality. Because Lon Nol requested military support from South Vietnam, the US concluded that this meant Lon Nol would also support American military involvement. Somehow the United States had wrongly assumed it was the "will of the people" to see the Prince gone and an obscure general put in his place.

In the country villages, where support of Sihanouk remained strong, rioting soon broke out. Lon Nol's brother Lon Nil was literally butchered and cannibalized by one mob. Also coming to Sihanouk's side were the communist forces of China,

North Vietnam and the Pathet Lao of Laos, ready to supply his fledgling army with weapons and training.

Pol Pot's Khmer Rouge seized the opportunity and offered their support for the deposed prince. Once a rag-tag guerrilla army of former politicians, monks and teachers, they now had a cause for which the country people would fight. It was the beginning of full-scale civil war in Cambodia.


LZ X-Ray, Cambodia, 1970, Photo: NRH

Because it appeared Lon Nol wanted US military support, Nixon decided to expand attacks into Cambodia in the hopes of eliminating COSVN, the phantom Vietnamese command center the US believed to be operating in Cambodian territory. In late April, 15,000 US troops supported by over 4,000 ARVN troops crossed the Cambodian border as part of a search-and-destroy mission. Once again the Nixon administration hoped to keep the maneuvers secret, but a series of press leaks forced Nixon's hand. On April 30, Nixon gave his televised speech in which he outlined and justified the invasion.

"If," Nixon explained, "when the chips are down, the world's most powerful nation, the United States of America, acts like a pitiful, helpless giant, the forces of totalitarianism and anarchy will threaten free nations and free institutions throughout the world. (CBS News Archives, Nixon, April 30, 1970)

Kent State University, 1970

Public reaction to the invasion was swift. Hundreds of American universities shut down as thousands of students protested and marched against the Cambodian invasion. At Kent State University in Ohio, where Sihanouk had once visited in his campaign for Cambodian independence, students sacked the campus ROTC building. Ohio governor James Rhodes responded by ordering National Guard troops to quell the riots. By the end of the day 15 students had been shot by the Guard, including four killed. Before the week was over nearly 100,000 protesters had converged upon the White House.

The U.S. Congress, dismayed and angry over the president's refusal to seek their consent when starting new wars, passed the Cooper-Church Amendment. The amendment forbade Nixon from military engagements in Cambodia beyond June 30th as well as preventing US support of the Cambodian armed forces with training and air support.

For all intents and purposes, the war in Cambodia was now illegal as far as the Congress was concerned. It was the first time in US history that the legislative branch had ever restricted the war powers of the executive branch.

Despite the passage of the Cooper-Church Amendment, Nixon was undeterred. US ground forces pulled out of Cambodia by the end of June, but the administration continued its B-52 bombing campaign supported by tens of

thousands of ARVN ground troops fighting the North Vietnamese within Cambodia.

The US encouraged the South Vietnamese air force to become its proxy in Cambodia, which the Vietnamese gladly did without regard for civilian casualties. The White House also tried to enforce a long-term strategy for assisting Lon Nol's army with weaponry, cash and military training. Cambodia was now a full-scale test of the Nixon Doctrine, which Nixon described as protecting American interests by supporting foreign troops in the fight against communism. In a matter of months, Cambodia had devolved from a country plagued by isolated skirmishes to full blown free-fire zone.

As the fighting escalated Nixon dispatched army colonel Alexander Haig to Phnom Penh in order to appraise the situation as well as their new partner-in-war, General Lon Nol. What Haig found in Lon Nol was discouraging, a "disturbing foreshadowing of the fate of Cambodia," Shawcross noted.

Shawcross reported that during their meeting Lon Nol broke out into uncontrolled weeping and tremors. The US invasion had pushed the violence even further into Cambodia, and now Lon Nol literally was begging for help, for his army was too weak to save itself. Haig assured him that Nixon was his friend and would help the Cambodians fight the communists.

To bad Lon Nol was an indecisive, emotional man with more faith in the occult and other mystical mediums than his leadership skills. He would often consult with monks who claimed to be spiritual channels to the ancient kings of

Angkor. As one US cartoonist joked at the time, "The only thing we know about Lon Nol is that Lon Nol spelled backwards is Lon Nol," Shawcross reported.

Yet the Nixon administration, committed to pursuing an honorable end to the war in Vietnam, adopted Lon Nol and began to supply his forces.

Nixon's War: The American Bombing Of Cambodia

"*There are no American combat troops in Cambodia. There are no American combat advisers in Cambodia. There will be no American combat troops or advisers in Cambodia. We will aid Cambodia. Cambodia is the Nixon doctrine in its purest form....*" - President Richard M. Nixon, November 1971 (Op-Ed Page, November 21, 197*1,* New York Times Editorial Page)

Nixon secretly approved the bombing of Cambodia with the assistance of his national security advisor Henry Kissinger. The first airstrikes were set for March, barely one month after the initial intelligence reports. In honor of the breakfast meeting at the Pentagon that led to Nixon's approval of the strike, the assault was codenamed Operation Breakfast.

As suggested by Kissinger, Nixon ordered that the attacks occur in secret, and all attempts to expose the bombing should be stopped.

General Wheeler informed his staff: "In the event press inquiries are received following the execution of the Breakfast Plan as to whether or not US B-52s have struck in Cambodia, US spokesman will confirm that B-52s did strike on

routine missions adjacent to the Cambodian border but state that he has no details and will look into the question." Shawcross, William, p. 24)

On the 9th of March, 48 boxes - approximately 48 square miles of Cambodian territory - was carpet bombed for Breakfast.

Over the course of the next 14 months, the US conducted 3630 B-52 bombing raids in Cambodian territory. Each major operation followed on a tradition set out by Breakfast; subsequent plans included Operations Lunch, Snack, Dinner, Dessert, and Supper. It had taken a change of presidential administrations to start these attacks, but once the bombing began, a new routine of escalation fell into place. As Shawcross explains in *Sideshow*, "Once the decision had been made in principle that Communist violations of Cambodia's neutrality justified aggressive reciprocal action, it was not difficult to repeat the performance. (Shawcross, William, p. 26)

To this day, there is still debate whether Sihanouk himself approved of the bombing of his own territory. Sihanouk denies it entirely, while Henry Kissinger has stated otherwise. It really didn't matter whether Sihanouk approved it or not, Sihanouk lacked the military might to prevent it.

Regardless the US continued to bomb NVA and VC targets within Cambodia.

Henry Kissinger later explained, "It was not a bombing of Cambodia, but it was a bombing of North Vietnamese in Cambodia." (Shawcross, 28)

Because of the failure of McNamara's Electronic Fence to prevent the infiltration of North Vietnamese troops into the south the war in Cambodia was totally out of control.

Another unintended consequence was the death of "old" Cambodia. It had been destroyed forever.

CHAPTER VIIII

The New War

1st ARVN Div. Insignia

Northern I Corps remained relatively quiet for the next 18 months, until the NVA regrouped from its terrible beating south at Hue in the spring and summer of 1968 and southwest in the Ashua Valley in 1969 at the hands of the 1st ARVN Div. and the 2nd Brigade, 101st Airborne. The Screaming Eagles had replaced the 1st Cavalry Division in I Corps after the Tet Offensive and Allied "Counter-Offensive" in the summer and fall of 1968. Headquartered out of Camp Evans, near Phu Bai and Hue, the 101st cleared the NVA almost completely out of the populated regions of I Corps while driving them into the inhospitable jungles along the Laotian border. It was something the Marines and McNamara's Line had not managed to accomplish in the preceding three years.

In early 1970 the war in the north heated back up. This time the ARVN was carrying the ball and the U.S., already reducing its troop strength dramatically, was there only for support. The Americans still there didn't know it yet, but the 5th Mechanized Infantry Div. and the 101st would soon begin the last American offensive operation conducted in the Vietnam War.

For about 10 months after taking over operation control of northern I Corps from the Marines, the ARVN secured Highway 9 west to Laos and patrolled the

region from LZ Vandergrift, a former Marine Corps firebase that acted both as the ARVN 1st Division's fortress and logistical supply base in northwestern I Corps. Much of the airlift provided by American forces came from the 282nd, which had been soldiering along in dignified obscurity since the Tet Offensive, occasionally losing men and equipment to NVA gunners dug in on the ridges overlooking the western border of northern South Vietnam. (Brown)

"We had switched our operations down south – along the Hoi An River in Quang Nai Province, " Wall recalled. "Down there we were against local force VC. Most of our stuff involved Phoenix. There was a lot of blood letting. Up North it was ash & trash (resupply) and medivacs (medical evacuations)."

The big push in northern I Corps came on February 8, 1971 in an operation the South Vietnamese called "Lam Son 719" and the Americans "Dewey Canyon II." The operation was an attempt to duplicate the success of the 1970 invasion of Cambodia. The ARVN 1st Infantry Division, 1st Airborne Division, Vietnamese Marine Corps Division, 1st Ranger Group, and the 1st Armor Brigade participated in the offensive into Laos and the 101st and 5th Mechanized Infantry supported them inside South Vietnam. So did almost every operation aviation battalion left in Vietnam.

Staging, Photo: U.S. Army

Luckily, Wall left Vietnam before Lam Son 719 began. He arrived home in time for Christmas 1970.

"We knew something big was up before I left. The ARVNs and the 5th Mech (U.S. Army 5th Mechanized Infantry Division) had rebuilt Vandergrift and were building and fixing all kinds of new roads pointing straight into Laos. Then somebody reopened Khe Sanh…" Wall recalled. "The ordinary Vietnamese kept telling me we were invading North Vietnam. My hooch (hut) maid even said so."

In October-November 1970, domestic and political pressure forced Nixon and Kissinger to accelerate the timetable for U.S. troop withdrawals from South Vietnam. By the beginning of 1971, roughly 180,000 American troops remained in Vietnam (about one third of the peak U.S. strength). (Palmer, Bruce, Lt. Gen, p. 105) The American drawdown envisioned that by the summer of 1972 only a small force of about 40,000 American personnel would remain. (Palmer, 217)

Therefore MACV commanders decided the dry season of 1970-71 (October-May) would be a good opportunity for the South Vietnamese to take the offensive. In effect this would be a "coming out party" for ARVN, and a chance to show the Communists they could conduct large operations without major U.S. involvement.

This was the basic rationale that led to a White House proposal to launch an invasion into Laos in February 1971.

Politically, the objective of the Laotian campaign would allow the final phase of Vietnamization to move forward on schedule. Militarily, the operation was to seize the Communist logistic complex in the Tchepone area. This region was a key strategic junction of supply routes along the Ho Chi Minh Trail. A successful

campaign was considered necessary by Abrams to help buy time for ARVN to reach its training and modernization goals.

Operation LAMSON 719, the South Vietnamese designation given the operation, involved some of their best troops - the 1st ARVN Division, 1st Armored Brigade, and three ranger battalions from I Corps; and most of the elite Airborne Division and the Vietnamese Marine Division. The overall commander of LAMSON 719 was incapable Lt. General Hoang Xuan Lam, commanding general of I Corps.

The entire operation was a race against time. In December 1970 the U.S. Congress had imposed a limit on the expenditure of money for any American ground forces operating outside South Vietnam. This would mean that the ground operations in Laos would have to be conducted solely by South Vietnamese troops without American advisors. Thus, U.S. forces were allowed to support LAMSON 719 with only limited tactical air support and long range artillery operating from South Vietnamese bases

With Lam Son 719 Nixon was counting on the ARVN invasion of Laos to achieve two political objectives, as well as its military goals: 1.)To show the Communists that ARVN had become a viable fighting force, and 2.): Pressure Communist officials in Paris to respond more favorably to Kissinger's peace initiatives.

Although LAMSON 719 began on schedule on 8 February 1971, just about everything went wrong from the beginning. Bad weather limited tactical air support

the first day, and heavy rains on 9 February turned Route 9 into a quagmire. Five days into the invasion and meeting only light resistance, an operation slated to last three months, stalled. It was later claimed that on 12 February South Vietnamese President Nguyen Van Thieu, feared that some of his best units were at risk, ordered his commanders to proceed cautiously and to cancel the operation once 3,000 casualties had been incurred. Former South Vietnamese President Nguyen Van Thieu has always denied the assertion.

Though ARVN units were allowed to resume the operation, the "taint" of the casualty directive by Thieu, and the fact that ARVN was meeting much stiffer resistance than anticipated caused the government in Saigon to re-assess the operations objectives. Now instead of keeping an ARVN presence in Laos for ninety days, Thieu merely wanted to capture Tchepone, apparently for political and morale reasons

General Abrams, by now extremely frustrated with Thieu's actions summed up the situation in a message sent to General Lam, Abrams stated, "You go in there just long enough to take a piss and then leave quickly (Kimball, 245)."

Finally, on 7 March the South Vietnamese occupied the deserted village of Tchepone, and on 8 March they abandoned it. Leaving behind many of their 1,830 casualties to an uncertain fate in the hands of the North Vietnamese (Haldeman, 486).

On 7 April 1971, Nixon proclaimed in a televised speech to the American people that the South Vietnamese had demonstrated in Laos that, "without

American advisors they (ARVN) could fight effectively against the very best troops North Vietnam could put in the field. Consequently, I can report tonight that Vietnamization has succeeded (Haldeman, 488)." Privately, however, Nixon and Kissinger thought LAMSON 719 "was clearly not a success," and had exposed lingering deficiencies in Vietnamization (Haldeman, 489).

The other major problems caused by the debacle of LAMSON 719, was that the North Vietnamese viewed the operation as "a big defeat" for Vietnamization, which encouraged the communists to persist and endure, realizing that American de-escalation would very shortly be completed (Haldeman, 490). The operation also exposed a gigantic logistical problem that the South Vietnamese were never able to rectify; that being without American logistic experts in country, ARVN was extremely hard pressed to move the supplies needed for large operations. This would come to haunt ARVN the following April when the Communists initiated their largest attacks of the entire war.

The stated strategy behind the invasion of Laos was to cut NVA supply lines along the Ho Chi Minh Trail. In January, the base at Khe Sanh, which had been abandoned in 1968, was reopened to provide a logistics center for the invasion. Marine helicopters were used to move supplies and artillery from Camp Carroll to Khe Sanh. By that time, the Marines had received 175mm guns of their own. The single Marine artillery battalion in northern I Corps was the 175mm gun battery located at Camp Carroll. Still quietly soldiering on, F Battery continued to

provide support to the Marines from Camp Carroll, searching for ever more elusive NVA tube and rocket artillery.

The South Vietnamese had been preparing for the invasion of Laos since 1969 although the operational specifics were either classified secret or not yet written.

During 1969 the term "Vietnamization" was coined. Essentially Vietnamization called for the ARVN to take on a larger combat role so Americans could go home.

"Vietnam proclaimed a new course of action, which the U.S. referred to as Vietnamization (Hinh, 8). Under the doctrine of Vietnamization, the United States would begin removing its combat troops and turning over the prosecution of the war to the soldiers of the Republic of Vietnam. To facilitate the withdrawal of United States troops, the Armed Forces of the Republic of Vietnam were rapidly expanded and modernized.

"The years 1969 and 1970 brought unprecedented development to the armed forces of the Republic of Vietnam. Their total strength was rapidly increased from 700,000 in early 1968 to nearly one million in late 1970, reported ARVN Maj. Gen. Nguyen Duy Hinh. ARVN combat forces consisted of ten infantry divisions fully equipped with modern weapons, including heavy artillery and armored vehicles. The general reserve forces consisted of the Airborne and Marine Divisions, both up to strength and thoroughly combat worthy. In addition, armor, artillery, engineer and logistic capabilities were rapidly improved and training

facilities were developed in order to provide for the needs of a million-man army (Hinh, 8).

What Happened During Lam Son 719

The Lam Son 719 incursion into Cambodia in February 1971 was the last and arguably the worst run offensive operation during America's involvement in Vietnam. American aviation companies, including the 282nd, were sent north to Dong Ha Combat Base, 12 air miles from Khe Sanh, to prepare for the invasion. Security was tight and all they knew was that the weeks ahead were going to be very dangerous. Nixon had restricted any U.S. ground troops from entering Laos – even U.S. advisors – except for aviation assets resupplying and otherwise supporting the ARVN adventure. The aviators would be on their own.

Without even knowing where or why it was in Dong Ha, the 282nd prepared for the biggest and most hazardous missions it flew during the entire war. At 1000 hours, February 9, 1971 American aviation assets combat assaulted ARVN Airborne and Hac Bao special operations units onto the escarpments overlooking the border and across the Tchepone River into Laos. As soon as they had secured the critical passages, the rest of the ARVN invasion force was scheduled to follow. The idea was to capture the Laotian village of Tchepone, sever the Ho Chi Minh Trail there, and destroy the NVA support troops and bases in the area before the NVA could react. The ARVNs were expected to reach their objectives within three days (Nolan, 123)."

Seven aircraft, including a Blackcat slick, were shot down the first day. North Vietnamese anti-aircraft fire was so thick that entire areas around Tchepone were left alone. Of special dread to the Huey crews were the lethal 12.7 machine guns the NVA used to "hose down" the helicopters as they flew overhead.

Despite the initial resistance, the invaders had a relatively easy time for the first four days of Lam Son 719. They cut numerous branches of the Ho Chi Minh Trail, uncovered hundreds of empty bunkers while encountering very few NVA soldiers.

That all changed on the fourth day. Vicious firefights broke out all over the region as NVA regulars from the 324B Division – veterans of fighting U.S. Marines for four years - streamed into the area to defend the trail. Subsequently the ARVNs were routed from Laos. For three weeks American televisions were filled with disheartening images of South Vietnamese soldiers scrambling for their lives after abandoning weapons and heavy equipment without a fight. Through it all the 1st ARVN Division maintained its integrity and withdrew in good order, although it sustained more than 2,000 casualties.

During the three-week invasion American helicopters flew more than 90,000 sorties into Laos. At least 219 aviators were killed and 11 were listed as missing-in- action. In addition, 107 helicopters were lost, including 53 Hueys, and another 609 were damaged. The Blackcats lost 23 flight crewmen, including 13 dead and four missing-in- action.

"A lot of them were friends of mine," Wall said. "It was such a stupid, poorly done [expletives deleted] I still don't believe it 30 years later."

Chapter X

The Last Gasps Along McNamara's Fence

In March 1970, after the ARVNs retreated back to LZ Vandergrift, the 12th Marine Provisional 175mm Battery ("5th Battery") - six 175mm SP guns that had been stationed at Camp Carroll - left Vietnam. The guns were turned over to the ARVN. Except for a handful of advisors the Marine Corps was finished with Camp J.J.Carroll.

So was F Battery. It was withdrawn to Dong Ha, stood down, and its colors retired. In four years it had made many small but important contributions toward securing I Corps. When it withdrew enemy activity in the region was at a standstill and the war seemed a stalemate. The South Vietnamese grudgingly manned the fire support bases built along the DMZ by the Americans. Despite the potential dangers as close as 700 meters away across the Ben Hai River, the bases were minimally manned by South Vietnamese troops.

On June 13, 1971, Secretary of Defense Melvin Laird announced that 90 percent of the combat responsibility for the war in Vietnam had been assumed by the ARVN armed forces. Vietnamization was proceeding on schedule, he said (U.S.M.C, 147).

U.S. Marine Corps presence in I Corps had fallen from 80,000 men to 250. By the end of 1971, enemy activity along the DMZ was at its lowest level since the days of Operation Hastings in 1966. The 3rd ARVN Division, a new unit of 11,203

men, was assigned to duty along the DMZ. The troops were only marginally trained, with little experience fighting in the area. The center of ARVN defenses along the DMZ was Camp Carroll, where an infantry regiment and five artillery battalions were located, making it the largest ARVN base in I Corps (U.S.M.C147).

On March 30, 1972, the NVA launched its largest offensive so far in the Vietnam War. Nearly 30,000 soldiers, with tanks, artillery and missiles, crossed the DMZ. Hundreds of rockets and artillery shells slammed into Camp Carroll and every other ARVN installation in the area. Carroll received more than 200 rounds of Soviet 130mm fire in the first hour of the attack. Igloo White sensors detected the moves, but U.S. foreign policy now prevented American forces from taking preemptive action. The NVA closed on northern I Corps for the second time.

The U.S. Army adviser to the ARVN at Camp Carroll noted that the enemy incoming rounds caused tremendous morale problems because the South Vietnamese were not used to being on the receiving end of accurate artillery fire. Three regiments of NVA artillery continued to pound the ARVN firebases, firing more than 11,000 rounds in the first day of the "Eastertide Offensive (U.S.M.C, , 123)."

As ARVN gun crews sought shelter, their counter battery fire became less and less effective, and the NVA offensive continued to intensify. The only guns that could reach the NVA 130mm artillery were the 175mm guns at Camp Carroll and Dong Ha. Whenever the ARVN 175mm guns fired, the NVA countered with a heavier barrage. The ARVN artillerymen abandoned their positions.

With the fall of ARVN bases in the west, a new defensive line was established with Carroll at the forefront. Artillery attacks on Camp Carroll intensified as the NVA sought to eliminate the biggest danger to their attacking infantry. NVA artillery observers watched every helicopter attempting to resupply Camp Carroll and fired at the landing zone when the helicopters were releasing their loads. The Blackcats lost two more ships although their crews were recovered. By April 2, eight ARVN firebases had fallen, and the NVA began ground attacks on Camp Carroll.

The commander of Camp Carroll was Lieutenant Colonel Pham Van Dinh, who had become a national hero for his actions during the Tet Offensive of 1968. Dinh had assisted in raising the South Vietnamese flag over the Citadel in Hue when it was retaken from the NVA. As the situation worsened near Camp Carroll, the ARVN division commander told Dinh to act "as he thought proper (Hinh, 12)."

At 1430 hours on April 2, 1972, Dinh communicated to the NVA via radio that Camp Carroll would surrender, and a white flag was raised over the main gate of the camp. The NVA would hold the region until the end of the war.

The American advisers were stunned by the camp's surrender, which left a catastrophic void in the shrinking ARVN defensive line. The South Vietnamese government begged for B-52 strikes against Camp Carroll in an effort to deny its use to the North Vietnamese, but before they could strike the NVA had moved out

the self-propelled guns. Later, the most powerful guns once in the South Vietnamese armory were used against them.

Less than 24 hours after his surrender, Lt. Col. Dinh made a broadcast over Radio Hanoi stating that he had been well-treated by the Communists and urged all ARVN soldiers to refuse to fight. Today, Dinh is a high-ranking official of the Communist government in Hue.

CHAPTER X1

Operation Linebacker I & II

B-52 taking off from Guam, Photo USAF

The last big American battle of the Vietnam War was an air battle. Stopped on the ground by a well-equipped and marginally stronger South Vietnamese land force, and exasperated in its attempts to hold out for a political win, the North Vietnamese had adopted the strategy of stalling for time. For almost a year North Vietnamese negotiators in Paris had been dragging their heels over minor matters contained in the so-called "Paris Peace Accords."

Nixon, who had promised the American people he would obtain "peace with honor" in Southeast Asia, was not a happy man. He wanted peace, he wanted it now, and he wanted American prisoners of war returned home. None of these demands were negotiable, at least publicly. So the United States, in response to the North Vietnamese policy of intransigence, adopted a policy of military coercion.

The seeds of the Linebacker campaigns were planted on March 30, 1972, when North Vietnam launched a large, three-pronged invasion of South Vietnam, using tanks and mobile armored units. Warned by Igloo White sensors, human intelligence, and radio intercepts, the South Vietnamese were partially prepared to defend their country.

The biggest battle came at An Loc, a backwater town in central Vietnam where, by the end of June, the NVA had lost all of its tanks and artillery to South Vietnamese and American air power. When the offensive came to a halt, however, North Vietnam had occupied much of South Vietnam below the DMZ and a strip of land along the South Vietnamese border with Laos and Cambodia.

Because of the North Vietnamese offensive, Nixon on May 8, suspended peace talks and ordered Operation Linebacker I, the renewed bombing of North Vietnam and the aerial mining of its harbors and rivers. Although not as large in scope as Linebacker II, the campaign fired huge protests from anti-war groups, condemnations from the world community, and more American casualties. When North Vietnam appeared ready to talk peace in October, yet another bombing halt was ordered. It appeared that Nixon's get tough policy had worked

North Vietnam then balked for two months over some of the cease-fire provisions. Frustrated, Nixon ordered on December 18, 1972 the heaviest bombing of the war against Hanoi and Haiphong, dubbed "Operation Linebacker II."

For 11 days, the USAF pounded every possible military and transportation target it could identify with B-52s and tactical fighters. This brought a North Vietnamese agreement on December 29 to return to the peace table. Unlike previous bombing campaigns, Linebacker II provided the Air Force and Navy forces with specific targets by removing many of the cumbersome, restrictive rules of engagement restrictions that previously caused such demoralizing frustration with Pentagon planners.

Linebacker II, also called the "Christmas Bombing," was ordered after Nixon told the Joints Chiefs of Staff to find him an acceptable peace… and he didn't care how they got it as long as they didn't introduce nuclear weapons.

Operation LINEBACKER II was the third largest aerial campaign since World War II. Only the two Gulf War air operations are larger.

More than 3,000 sorties and 40,000 tons of bombs later Linebacker II was over. At the conclusion the United States armed forces had overwhelmed the most concentrated air defenses in the world, penetrated deep into the most heavily defended region in North Vietnam, and literally destroyed large swaths of North Vietnamese territory, including formerly "hands off" targets in and around Hanoi and Hai Phuong, Harbor.

The North Vietnamese dubbed the venture "The Elephant Walk" (Boyne, Vol. 80, No. 11) because of the clumsy, predictable routes taken by the B-52s on their way from Guam and Thailand.

Targets for the first sorties were the Hoa Lac Airfield, Kep Airfield, Phuc Yen Airfield, Kinh No vehicle repair facility, Yen Vien railroad yards, the Hanoi railroad repair The Air Force was supported by Navy tactical air attack sorties centered in the coastal areas around Hanoi and Haiphong. There were 505 Navy sorties in this area during Linebacker II. The carriers operations: *Enterprise, Saratoga, Oriskany, America and Ranger* participated in Linebacker II (http://www.fas.org/man/dod-101/ops/linebacker-2.htm).

Aircraft of the Seventh Fleet performed the most extensive aerial mining operation in history, blockading the enemy's main avenues of supply during the Linebacker operations. The Linebacker I reseeding of the mine fields was resumed and concentrated strikes were carried out against surface-to-air missile and anti-aircraft artillery sites, enemy army barracks, petroleum storage areas, Haiphong Naval and shipyard areas, and railroad and truck stations.

Between 18 and 22 December the Navy conducted 119 Linebacker II tactical strikes in North Vietnam. The attacks targeted Haiphong and included surface-to-air missile and anti-aircraft artillery installations, railroads and highways. Also hammered was the Thanh Hoa Army barracks, the Haiphong Naval Base, petroleum centers and other targets. Most of these targets were also pounded in Linebacker I

Until the cease-fire ending US combat operations in Vietnam took effect on 28 January 1973, *USS America* and the other carriers patrolled off the coast of Vietnam, conducting strike operations in support of troops and targeting strategic targets throughout North Vietnam.

One immediate result of the Christmas bombing was that the stalemated peace talks resumed on January 8, 1973. Within 30 days North Vietnamese negotiator Le Duc Tho and U.S. Secretary of State Henry Kissinger reached a final agreement and signed the Paris Peace Accords on January 27, 1973. Sixty days after that, 591 American prisoners of war were released to return home to the United States and America's involvement in Vietnam was almost over.

Linebacker II, although the "last" battle fought in Vietnam by American forces, was not without a heavy cost. Before the eleven-day bombing campaign was over North Vietnam's Russian-supplied SA-2 Guideline anti-aircraft missiles would shoot 26 US aircraft down. Fifteen of these aircraft were Boeing B-52 Stratofortresses. Thirty-one of the B-52 crewmembers shot down were captured and held as POWs. At the end of the eleven-day mission, ninety-three other crewmembers were listed as missing in action.

In the United States, however, the issue of who won the battle fought those eleven December nights in less important than the long-term impact of Linebacker II. Linebacker II was the first time that conventional bombing alone was perceived as having brought about an end to a conflict, and when the cost of the bombing was compared to the cost of the land war in Vietnam the difference was stark.

Discussion and Conclusion

On March 30, 1972, the NVA launched its largest offensive so far in the Vietnam War. Nearly 30,000 soldiers, with tanks, artillery and anti-aircraft defenses, crossed the DMZ. Hundreds of rockets and artillery shells slammed into Camp Carroll and every other ARVN installation in the area. Carroll received more than 200 rounds of Soviet 130mm fire in the first hour of the attack. Igloo White sensors detected the moves, but U.S. foreign policy now prevented American forces from taking preemptive action. The NVA closed on northern I Corps for the second time (U.S.M.C, 121).

The U.S. Army adviser to the ARVN at Camp Carroll noted that the enemy incoming rounds caused tremendous morale problems because the South Vietnamese were not used to being on the receiving end of accurate artillery fire. Three regiments of NVA artillery continued to pound the ARVN firebases, firing more than 11,000 rounds in the first day of the "Eastertide Offensive (U.S.M.C, 121)."

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With the fall of ARVN bases in the west, a new defensive line was established with Carroll the hinge. Artillery attacks on Camp Carroll intensified as

the NVA sought to eliminate the biggest danger to their attacking infantry. NVA artillery observers watched every helicopter attempting to resupply Camp Carroll and fired at the landing zone when the helicopters were releasing their loads. The Blackcats lost two more ships although their crews were recovered. By April 2, eight ARVN firebases had fallen, and the NVA began ground attacks on Camp Carroll.

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At 1430 hours on April 2, 1972, Dinh communicated to the NVA via radio that Camp Carroll would surrender, and a white flag was raised over the main gate of the camp. The NVA would hold the region until the end of the war.

The American advisers were stunned by the camp's surrender, which left a catastrophic void in the shrinking ARVN defensive line. The South Vietnamese government begged for B-52 strikes against Camp Carroll in an effort to deny its use to the North Vietnamese, but before they could strike the NVA had moved out the self-propelled guns. Later, the most powerful guns once in the South Vietnamese armory were used against them. But B-52s were no longer available for

tactical missions. It would take something really big to bring them out in the political climate that existed in 1972 (Shulimson).

Less than 24 hours after his surrender, Lt. Col. Dinh made a broadcast over Radio Hanoi stating that he had been well-treated by the Communists and urged all ARVN soldiers to refuse to fight. Today, Dinh is a high-ranking official of the Communist government in Hue.

Shortly after the loss of Camp Carroll, American airpower and determined South Vietnamese resistance from the 1st ARVN Infantry Division shattered the invading North Vietnamese Army. Badly wounded, the NVA pulled back into its sanctuaries in Laos and Cambodia to regroup. The next 18 months in the region passed with relative peace. Some historians have since argued that during the quiet time the North was simply waiting for the American presence to disappear before it finished off its hated adversary; thereby proving that the McNamara Line was at best a nuisance and at worst an expensive exercise in futility.

The few proponents of the McNamara Line claim that the new abilities of the ARVN, coupled with American electronic technology, deterred the North Vietnamese from attacking again until 1974, giving the South Vietnamese plenty of time to prepare its defenses. They argue that it was the Allies' political and military will, not the failure of the electronic fence, which caused the ultimate defeat of the South Vietnamese in northern I Corps.

The McNamara Line never stopped North Vietnamese infiltration into the South, and it never physically stopped a powerful NVA thrust across the border.

Yet twice the NVA had stormed across the western border of South Vietnam and twice McNamara's Electronic Fence had sounded the alarm.

Even the determined North Vietnamese and its Communists backers could not afford the material losses inflicted on it by massive U.S. air strikes on targets identified by Igloo White sensors. It was enough to give American and South Vietnam commanders adequate warning to prepare counter-measures. Because the North Vietnamese feared American firepower and knew massing along the northwestern corner of South Vietnam would bring it to bear, the concept and execution of McNamara's Electronic Fence was a ringing success.

Proponents could argue it worked it worked so well in fact that the North Vietnamese made a strategic and political decision to move the war into Laos and Cambodia where U.S. interests were more precarious and the perceived need for involvement even less popular than in South Vietnam.

The North's decision to do so opened a Pandora's Box that wasn't closed until the U.S. gave up and left Southeast Asia for twenty years.

More troubling, the decision to bomb Cambodia secretly set a dangerous precedent for American policy makers. Since the Cambodian exercise the United States military has frequently found justification for coloring potentially earth-shattering operations to "protect national security." It is generally unclear whom those secrets are being protected from.

Hence, it is appropriate to once again quote Kissinger, "Once the decision had been made in principle that Communist violations of Cambodia's neutrality

justified aggressive reciprocal action, it was not difficult to repeat the performance (Shawcross, 26).

To this day deposed and reinstated Cambodian leader Prince Sihanouk denies he ever approved the bombing of his Cambodia. Sihanouk denies it entirely and constantly twenty-nine years later, while Henry Kissinger continues as adamantly to claim otherwise. It really doesn't matter anymore whether Sihanouk approved it or not. Cambodia has been destroyed and rebuilt twice since then, each time coming back weaker and poorer.

Because of the success of McNamara's Electronic Fence to prevent the infiltration of North Vietnamese troops into the south solely through Laos the Communists moved their infiltration routes west and south, forcing the war in Cambodia spiraled entirely out of control. It was another unintended consequence of McNamara's Electronic fence.

Ironically, one positive by-product of bombing Cambodia in rubble, as well as forcing the North Vietnamese to negotiate solely using air interdiction, was its relatively cost-effective nature. An air campaign is considerably cheaper to mount and sustain than invasion forces, standing armies, and tenuous supply lines and threatened garrisons.

The concept of "cheap war" generated by the twin bombing campaigns in Cambodia and North Vietnam – to which the destruction of Laos is grossly underrepresented - was not lost on American political leaders. For the next two decades air assaults have provided a low cost policy option. The first Gulf War

amplified the perception, and the second Gulf War will no doubt assure that this trend will remain. America's first choice for military action to achieve a political solution was now conventional air strikes—another unintended consequence of McNamara's Electronic Fence.

Ultimately the success of the Igloo White operation in warning the South Vietnamese of impending invasions from Laos and North Vietnam prolonged the conflict instead of bringing it to its bitter end. Had McNamara's Electronic Fence failed to warn the South Vietnamese defenders of the Easter Offensive, U.S. air assets used for the Linebacker operations would probably have been needed in South Vietnam, forestalling any coercive pressure on the North to come back to the peace table. Revisionists claim that without the barrier the South would have fallen in 1972. But it was there and the North Vietnamese were stymied in their attempt to conquer the South for another 30 months.

Regardless of the successes of McNamara's Electronic Fence, American political and military support for the war eventually dried up. Without its customary U.S. air power and winged mobility the ARVN in I Corps slowly yielded the initiative to the NVA. Meanwhile, America's massive electronic presence along the Ho Chi Minh trail powered down, leaving the South Vietnamese suddenly lost in the impenetrable fog of war.

During the first week of May 1974 the North Vietnamese again went on the offensive in northern I Corps. Without Igloo White sensor to sound the alarm the offensive was a relative surprise. In short order I Corps, then II Corps fell. Huge

columns of North Vietnamese tanks and artillery thundered southeast across Military Region One and Two, the names the South Vietnamese preferred for identifying the former northern corps areas. Without the facilities of Igloo White and its thousands of sensors and attending strike aircraft the NVA moved with virtual impunity through the Northern provinces, often surprising local defenders and routing them with barely a fight.

In the summer and fall of 1974 most of Military Region Three fell, threatening the South Vietnamese capitol at Saigon. The writing was on the wall and America completely turned its back on its former ally. The following spring the NVA conquered the remainder of the country, capturing Saigon and ending the war on April 30, 1975. Without McNamara's electronic legacy it would probably have fallen long before. Saigon's fall was the final unintended consequence of McNamara's Electronic Fence.

Epilogue

James Mack Wall survived his two 12-month tours in Vietnam. Today he is a wealthy, successful, 53-year-old businessman receiving 100% disability from the Veterans Administration for Post Traumatic Stress Disorder and several service-connected physical maladies. He served a 14-month Federal prison term for tax evasion in the late Eighties and suffered a subsequent mental breakdown that left him residing in a cardboard box behind the Cincinnati Salvation Army Headquarters for a few months.

During his 24 months of almost daily combat Wall garnered several medals for valor, received shrapnel wounds, was shot down twice, crashed once, lost two door gunners to enemy action, and helplessly watched his platoon leader and crew die a fiery death 100 meters away. He attributes both his fortune and misfortune to his 24-month combat tour flying helicopters in I Corps during some of the fiercest battles of the war.

Maps & Photographs

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