

The Link

BULLETIN OF THE NATIONAL CRYPTOLOGIC MUSEUM FOUNDATION, INC.

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Fall 2002

NATIONAL SECURITY AGENCY TURNS FIFTY

With this issue we salute the National Security Agency on its Fiftieth Anniversary. From the achievements of World War II – in unprecedented cooperation with our British Commonwealth allies – communications intelligence and security emerged as “crown jewels” among our national assets. The strictest need-to-know guarded that fact, and it is only in the past three decades that public awareness has spread. President Truman ensured that the international wartime cooperation would be continued, but the usual postwar demobilization reduced available resources and intensified competition among the services. In 1949, an effort was made to bring unity to the effort, with the establishment of the Armed Forces Security Agency. It was a hybrid organization in which no one was in charge and everyone was in charge. (A new service component, the U.S. Air Force, had recently been created, drawing resources from the Army to create its own Air Force Security Service – AFSS.). While trying to iron out the organization, we found ourselves caught up in another “small war” – or “police action,” it was called, in Korea. The few senior officials acquainted with ULTRA and MAGIC in World War II were disappointed to see little that reminded them of those days. (Tactical SIGINT, on the other hand, accomplished some things still to be fully appreciated, including some projects refurb-

ished and applied later in Southeast Asia.) This disarray led to President Truman’s mandate to the Brownell Committee, which called for a unified cryptologic effort. And that was the birth, in 1952, of NSA.

It has always been an unusual agency. Not until 1956 did it get into the U.S. Government Organization Manual, prompting the old claim that its initials stood for “No Such Agency.” It carefully preserved proven policies and procedures from the past. Under a flag officer of three stars, with a senior civilian deputy, it employed a mixture of military and civilian personnel, often working side-by-side, with the senior a variable, sometimes an officer working for “a junior,” and a mixture of service affiliation. (Some have argued that cryptology truly embodied the unified service approach which was to have been the capstone of post-war reorganization of the American Military establishment.) In the mid-Fifties, electronic intelligence (ELINT) was added to NSA’s responsibilities. Striving both to accord

ELINT its proper role and to relate it, as appropriate, to COMINT, the British term, signals intelligence –SIGINT – was adopted. That usage also provided “protective coloring” for sources and methods, and, over time, supplanted COMINT. U.S. involvement in

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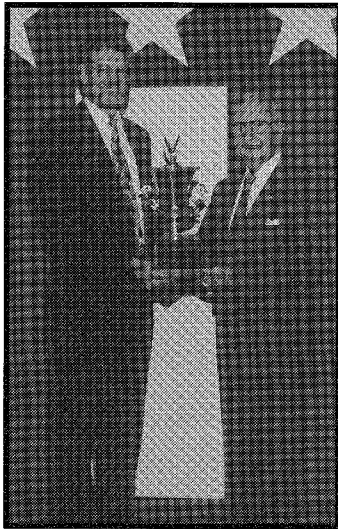
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OVERVIEW

An octogenarian tends to look on those celebrating their fiftieth birthday with a combination of amusement, tolerance, and nostalgia, not unlike the feelings evoked at Christmas, when we see the "visions of sugarplums" and Santa captivating children. We remember how we once felt. In a way, we hunger for those days that, in retrospect, seem to have been so simple. But as we reflect on fifty years of association with an activity – yea, an organization, a bureaucracy – the floodgates of memory open, and we recall the faces (and names, in most cases) of bosses and charges, of associates and colleagues. We think of the adventures we – and they – had, of the incredible things accomplished, of the frustrations and the odds we confronted. We think of ceremonies at change of command and at graveside in Arlington. And somehow the old bones are stirred and the blood is warmed. Not a bad attitude for celebrating a half-century of prideful service by NSA as the year came to an end, and for recharging the old batteries of resolve and commitment on the part of our Foundation.

Given the uncertainties of "war and rumors of war," and the economic picture of the past year, we are encouraged with donations, as you will see elsewhere in this issue. The "Eagle Alliance" (a joint venture by the Computer Science Corporation and Northrup Grumman) sponsors a highly successful Cryptologic Golf Tournament, with a "Foundation Cup" to honor

Timothy Sheahan, General Manager of the Eagle Alliance, presents General Morrison with the new Foundation Cup. The trophy will be presented to the winning team at an annual Cryptologic Golf Tournament sponsored by the Alliance with proceeds to be donated to the Foundation. This year's donation exceeded \$32,000. The Eagle Alliance is a joint venture of the Computer Sciences Corporation and the Northrop Grumman Corporation.



the winning team and proceeds to the NCMF. This year saw a \$32,253.41 donation to benefit the museum. And the National ASA Association is alive, well, and has made its support of the NCM known through a donation to the NCMF. Many thanks, colleagues!

We have undertaken a project to renovate a backroom storage area to benefit the Museum's exhibit

space, and, most recently we adopted a program to facilitate the extension of some of the fruits of cryptology from the NCM into the public school system classroom. Our Program Committee continues to develop exciting programs and presentations for us. On the "down side," we have lost friends and associates – Bill Filby, our expert and advisor on books and collections passed away in November. And Joe Amato, a "plank-owner" on the Foundation Board, has found it necessary to resign. We deeply appreciate his service, and wish him all the very best. We know he'll be "in reserve" if needed.

You'll also note that we have conferred "emeritus" status on former Vice President Bob Rich.

And we wish you all a new year filled with joy and prosperity.

John E. Morrison, Jr.
President

NSA'S BIRTHDAY PARTY

On Thursday evening, 25 October 2002, NSA observed its Fiftieth birthday with a formal in-house dinner party that included the DCI and other officials of the Intelligence and Security communities, both active duty and retired. On that stellar occasion, Timothy R. Sample, Staff Director of the House Permanent Select Committee for Intelligence delivered the following remarks:

Let me say at the start that the Chairman wanted to be here this evening to recognize this event. Given the fact that USSID-18 restrictions did not allow NSA to help forecast the outcome of the Florida election races, he was forced to be elsewhere. He did, however, ask me to address you this evening on his behalf, emphasizing that he is here in spirit.

These types of anniversaries are extremely important, not just to congratulate an organization and thank a workforce, which we certainly do, but also to reflect on an organization's, and indeed our country's history, especially when that organization has been so critical in ensuring our nation's security and protecting our way of life. And when you get down to it, this is NSA's legacy – protecting our national security by being "on point" in our first line of defense.

NSA's roots are taken from the proud traditions of military and civil service – from the Army's early MI-8

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NSA'S BIRTHDAY PARTY

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Cipher Bureau during World War I to the "Black Chamber." Its roots are steeped in the most complex technology – from aircraft systems, to ground-based sensors, to satellites around the globe, to the most cutting edge and advanced computer and mathematical scientific capabilities. Its roots, and its successes, are born of secrecy. Everyone in this room knows that NSA for many years stood for "No Such Agency." NSA successes provide a rich tradition of overcoming amazing challenges. These include the ULTRA efforts against the German and Japanese encrypted communications systems, and the VENONA analysis against the Soviet Union.

But most importantly, NSA's roots are its people – some famous, many not. They include personalities like Herbert Yardley. They also include many whose identities will never be known. In some cases, they include individuals who paid the ultimate price for their service to this nation. Just outside this building, in the National Vigilance Park, is testament to the many cryptologic professionals who gave their lives in the cause of freedom. From the airmen on board the C-130 that was shot down over Soviet Armenia, to the sailors on board the USS Liberty, to the civilians at countless field stations around the world, an anniversary tribute to NSA would not be complete without recognizing their efforts and their sacrifices. I would ask you to take just a moment to reflect on those souls.

Today, NSA personnel have grown from a very few to over 30,000 worldwide. They include linguists, cryptologists, analysts and contractors, all of whom are dedicated to evolving access capabilities to operate against the most stressing collection problems of today, continually allowing NSA to conduct its myriad missions against many targets that were considered impossible. These individuals thrive on facing the daunting challenges technology brings, especially that utilized by those who would do us harm.

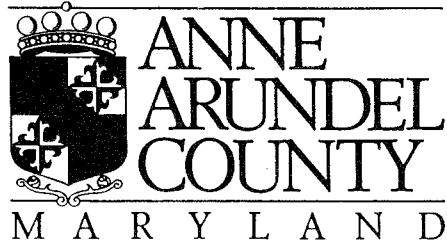
Certainly, there have been setbacks. No one can forget the disaster in collection brought about by the decisions of Secretary of State Henry Stimson after his misguided observation that "gentlemen do not read each other's mail." Ironically, I note that the history of signals intelligence includes skills shortages, the types of which we are dealing with today – for example, the lack of Korean linguists at the beginning of the Korean conflict, and the lack of Arabic linguists today. And it goes almost

without saying that we in Congress don't see eye-to-eye with the Agency all of the time. But you should never mistake our motives – we are all looking toward the same goal – ensuring that we have the strongest intelligence capabilities possible because they and you serve as our first line of defense.

In closing, let me address the NSA workforce directly. I was told a while ago that some believed that Congress held NSA, and the rest of the Intelligence Community, responsible for September 11th. I cannot speak for everyone on the Hill, but I can speak for the House Intelligence Committee members and staff. There is no such view. Indeed, as we take these moments to reflect on NSA's history, we understand that too often, the Intelligence Community blows the horn when those faced with decision making are not prepared to deal with looming crises. We understand that NSA's history is one of overcoming adversity, and continually coming to the fore to triumph over our enemies. Such is the proud history of the people of NSA – such is the conduct of operations today, under the superb leadership of General Hayden. And so, as I close my comments and my tribute, both personal and professional, to those I know here and the countless numbers in the workforce whom I do not know, let me say that I am honored by knowing you and am proud to serve alongside you each and every day. If you would allow me to paraphrase Winston Churchill, "The gratitude of every home in our nation, and indeed throughout the world, except in the abodes of the guilty, goes out to those who, undaunted by odds, unwearied in their constant challenges and mortal danger, are turning the tide of the war by their prowess and by their devotion. Never in the field of human conflict was so much owed by so many to so few."

Churchill's comments, directed to the brave RAF pilots of World War II, are, I believe, just as valid today, given our circumstances when it comes to those in the intelligence field worldwide, and especially to those tonight who work for NSA. Therefore, to the workforce, it is my honor to be with you and to recognize your accomplishments. And I would ask that you all lift your glasses in a toast . . . To the workforce of NSA!





Proclamation

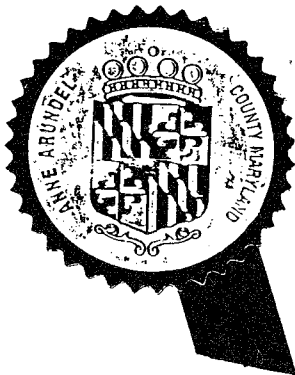
- WHEREAS:** For fifty years, the National Security Agency has served as the United States of America's cryptologic organization - a national asset, providing and protecting critical U.S. communications; and
- WHEREAS:** In times of war, America's code makers and code breakers have provided U.S. policymakers and war fighters with the information they needed to prevail. In the absence of conflict, these same individuals have given our leaders the crucial insights needed to keep the peace; and
- WHEREAS:** By the very virtue of its mission, the National Security Agency has faithfully served our nation in silence. While its rich heritage is laden with countless success stories of shortened wars and saved lives, many such stories remain untold - they must; and
- WHEREAS:** The National Security Agency has proven itself a responsible citizen of Anne Arundel County. Its participation in and contributions to our schools, churches, youth groups and countless other charitable, fraternal and civic organizations have greatly benefitted the welfare of Anne Arundel County and the great Free State of Maryland; and
- WHEREAS:** I urge all Anne Arundel County citizens to join me in honoring the National Security Agency, its "silent sentinels," and its rich legacy of a half century of service to our nation and our community. I ask all citizens to show their appreciation and support for those who continue to protect our national while "serving in silence." Let us celebrate the contributions and the ideals they represent.

**NOW, THEREFORE, I JANET S. OWENS, COUNTY EXECUTIVE
OF ANNE ARUNDEL COUNTY, MARYLAND
do hereby proclaim**

November 4, 2002

National Security Agency Day

**in
Anne Arundel County**




Janet S. Owens, County Executive

IN WITNESS WHEREOF, I have hereunto
set my hand and caused the Great Seal of
Anne Arundel County to be affixed this
28th day of October in the year of our Lord,
two thousand two.

ASA LIVES!

by Wayne Atwell, NASAA Board Member and Treasurer

Saturday, October 5, 2002, was classic “twofer” day for the board of directors of the National Army Security Agency Association, (NASAA). It was the day when the board members met together for the first time in NASAA’s existence, and it was the day when NASAA was able to contribute \$5,000 to the National Cryptologic Museum Foundation. It was a very good day.

In 1997 a group of Army Security Agency veterans put together an Internet organization dedicated to maintaining and preserving the history of the ASA while, at the same time, providing a site where old friendships could be renewed and new friendships created. [See *The Link*, Summer 1999, p. 11.] It was not an easy task. Founding an organization with people who know each other personally and who can get together for meetings is one thing; founding an organization where the members may only know each other through chat rooms and who live in different states is quite another. As a result of the geographical distribution of the members, especially those willing to serve on the board of directors, attempting to get the board together for a once-a-year meeting appeared as difficult as climbing a glass mountain. Not only was money an issue, (board members are all volunteers), a coalescing issue big enough to outweigh time distance/expense problems was missing.

We’re not certain about the identity of the board member who floated the idea of contributing some money to the museum, but it was probably Charles Ziehl. “CA,” as he is known, contacted Sherri Legere about the museum, and the board took it from there. Wayne Atwell, (Treasurer) followed up with Maj. Gen. John Morrison (USAF, Ret.), and set up the October 5th date when the formal presentation of the check could be made. Initially it looked as though Atwell,

who lives in the Thousand Islands of New York, and who would be attending his ASA FS 8611 reunion in Annapolis, would be the only board member available to make the presentation. But that soon changed. Bill (Jake) Jacobson, who lives in nearby Virginia, indicated that he could make it. Then Bill Luker,

(Chairman), who resides in Georgia, says he’ll definitely be there. Charlie Ziehl, who lives in Tawas City, MI, decides to visit his family in Pennsylvania, attend the FS 8611 reunion, and makes the board meeting. A triple! Lon Mitchell, (Vice-chairman), decides that he can leave the “Big Sky” country of Montana for this seminal event. Don Dodge, (Pennsylvania), our newest board member, signs on and the meeting is a go.

Currently, NASAA has approximately 600 members. We’re always looking for more members, and the opportunity to do well by doing good was just too sweet to pass up when we learned about the matching fund for NCMF, Inc. NASAA members are always asking us what do we do with our discretionary monies. In the past we’ve contributed to memorials for deceased ASA heroes and to the funds for the firefighters and police officers who died on September 11, 2001. This is the first time we’ve been able to direct some dollars into a project that will recognize the contributions made by our fellow ASA veterans. There’s an old saw that says, “they also serve who stand and wait”. Well, we in the ASA served by sitting, listening and feeding vital information into the NSA. It’s time that fact was recognized and acknowledged.

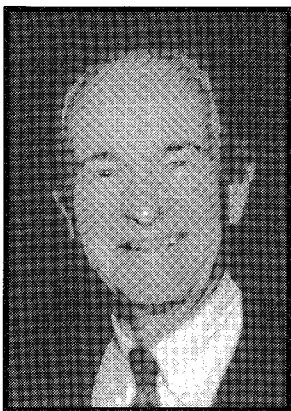
When Maj. Gen. Morrison (Ret.) accepted the \$5000 check from Bill Luker on the “twofer” day, it marked a win-win situation for everyone involved. The



*Officers of the National ASA Association
Receive NCMF Recognition as 2002 Patrons*

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IN MEMORIAM – RICHARD HELMS



(The following obituary from the newsletter of the Association of Former Intelligence Officers (AFIO) is reprinted with permission of their editor, Col. Roy Jonkers, USAF, Ret., who drew from the *New York Times* obituary of 24 October 2002.)

Richard Helms, former DCI and former Ambassador to Iran, venerated by many inside and out of the Agency

as an honorable man and the professional's professional, died of multiple myeloma on October 23rd. He was 89. In the title of his 1979 biography of Mr. Helms, Thomas Powers called him "*The Man Who Kept the Secrets.*" Mr. Helms' memoir, *A Look Over My Shoulder: A Life in the C.I.A.*, is scheduled to be released in the spring by Random House.

Born on March 30, 1913, in St. Davids, PA, Richard McGarrah Helms – he avoided using the middle name – grew up in South Orange, N.J., and studied for two years during high school in Switzerland, where he became conversant in French and German. At Williams College, Helms excelled as a student and leader. When World War II broke out, Mr. Helms was called into service by the Naval Reserve and because of his linguistic abilities was assigned to the Office of Strategic Services, and subsequently transitioned to the CIA. From the beginning, he worked in the agency's operations division, and by the early 1950's he was serving as deputy to the head of clandestine services, Frank Wisner. In that capacity, in 1955, Mr. Helms impressed his superiors by supervising the secret digging of a 500-yard tunnel from West Berlin to East Berlin to tap the main Soviet telephone lines between Moscow and East Berlin. Over the next 20 years, Mr. Helms rose through the agency's ranks, serving under such men as Allen W. Dulles, Richard M. Bissell, John A. McCone and Vice Adm. William F. Raborn. In 1966 he became the first career official to head the C.I.A. serving without problems until ensnared by the Watergate scandal and the notorious Church committee hearings.

DCI Helms clashed with President Nixon, who sought his help in thwarting an F.B.I. investigation into the Watergate break-in. The President then appointed him Ambassador to Iran.

But Mr. Helms soon found himself called to account

when the Senate Select Committee on Intelligence delved into the agency's efforts to assassinate world leaders or de-stabilize socialist governments. The Church committee accused Helms of failing to inform his own superiors of efforts to kill Fidel Castro of Cuba, which the Senate panel called "a grave error in judgment." But the most contentious criticism of Mr. Helms centered on Chile. In testimony before the Senate Foreign Relations Committee, Mr. Helms stated that the C.I.A. had never tried to overthrow the government of President Salvador Allende Gossens or funneled money to political enemies of the Marxist leader. Senate investigators later discovered that the C.I.A. had run a major secret operation in Chile that gave more than \$8 million to the opponents of Mr. Allende, using the International Telephone and Telegraph Corporation as a conduit.

Mr. Helms pleaded 'no contest' in 1977 to two misdemeanor counts of failing to testify fully four years earlier to the Senate Foreign Relations Committee. It is to be noted that this is not a guilty plea, only a no-contest one. His conviction, which resulted in a suspended sentence and a \$2,000 fine, became a rallying point for critics of the Central Intelligence Agency who accused it of dirty tricks, but also for the agency's defenders, who hailed Mr. Helms for refusing to compromise sensitive information. "I had found myself in a position of conflict," he told a Federal judge at the formal proceeding on his plea bargain with the Justice Department. "I had sworn my oath to protect certain secrets. I didn't want to lie. I didn't want to mislead the Senate. I was simply trying to find my way through a difficult situation in which I found myself."

Mr. Helms said outside the courtroom that he wore his conviction "like a badge of honor," and added: "I don't feel disgraced at all. I think if I had done anything else I would have been disgraced." Later that day he went to a reunion of former C.I.A. colleagues, who gave him a standing, cheering ovation, then passed the hat and raised the \$2,000 for his fine.

Ambassador Helms enjoyed a full life, an interesting and rewarding life. He was a patriot. His troubles with the storms of national politics only served to give him more depth, serving as an example of a man of character and principle to others dedicated to national service. He was liked and highly regarded. He knew that in the final stages of his life, and it must have been a great comfort. We salute, as the bugler blows taps for one of our great intelligence leaders. (Burial took place at Arlington 20 November 2002 with full honors.)

NATIONAL SECURITY AGENCY TURNS FIFTY

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Southeast Asia in the late Fifties and over the next two decades, as involvement turned to warfare, competed for resources with efforts against the Soviet Union and Communist China. This was a period of both physical and technological growth and improvement: the Agency moved to new buildings, centered at Fort George G. Meade, MD; the National Cryptologic School consolidated Agency training and a "war college" establishment; a unified body of staff policy and operational and technical directives served to bring NSA and its military counterparts into accord; NSA became a full member of the United States Intelligence Board (USIB – now the National Foreign Intelligence Board); and innovation and a "can do" spirit pervaded NSA's activities. Even as the overseas military bases left by World War II were closed down, technology offered substitutes on land, sea, in the air, and in space. An NSA presence became an essential component of military headquarters and executive departments. That presence ensured direct, secure communication of reports and trained personnel readily at hand to serve the user. The advent of the computer era saw NSA a leader and an early proponent of merger of communications and computer resources. Experiments in organization were reflected in the NSA-Defense Intelligence Agency operation (DEFSMAC) concerned with missiles and space objectives, in telemetry, and in "special collection" efforts.

These are but some of the accomplishments and involvements that have emerged over the past fifty years from the protective mist of NSA's secrecy. A visitor to the National Cryptologic Museum can learn of a much earlier past and, with a little imagination, infer quite a bit about what the latest practitioners of this ancient craft we call *cryptology* have been up to. As an organization pledged to enhance that learning experience, the National Cryptologic Museum Foundation proudly salutes the National Security Agency and wishes it a happy birthday that will extend to "many happy returns of the day."

■

FOUNDATION INITIATES MUSEUM RENOVATION PROJECT

Responding to the critical need for near-term expansion of the museum area that can be used for exhibits, the Foundation has initiated a project to convert about 750 square feet of "back room" storage space to exhibit use. The concept for the project, which was developed by the Facilities Committee in coordination with the Museum Curator, takes advantage of the last area of the building that is at all practical to use for public access. It will nevertheless require extensive engineering and renovation work. On October 18, the Foundation signed a contract with Washington Group International (WGI), a prestigious engineering, construction, and maintenance company, for the design architecture phase of the project. The additional space will allow the museum to display more of its extensive collection of important cryptologic holdings to better support its educational mission. In the long-range, the ambition of the Foundation is to obtain a new world-class facility for the museum.



General Morrison signing contract with WGI for design architecture services. Shown, left to right, (seated) Thanh Pham (WGI Department Manager), Gen. Morrison, Cheryl Stevens (WGI Architect); (standing) Chairman Rod Sorokin and Frank Saus (NCMF Facilities Committee)

ASA LIVES!

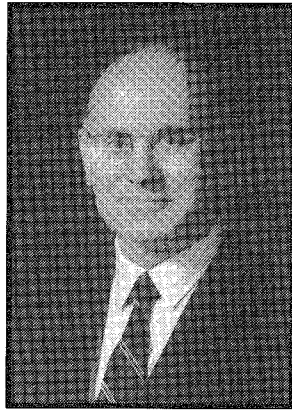
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NASAA board of directors got the chance to prove that they're serious about NASAA's mission and are more than just a bunch of guys killing time on a chat site. And the museum foundation can use NASAA's participation in the funding process to encourage other military sig/int groups to help raise money for a bigger and more all-inclusive National Cryptologic Museum.

Incidentally, all six of us board members, plus my wife, Eleanor, and Ruby Dodge, enjoyed the tour very much, especially the asides by Gen. Morrison. Nothing like getting it straight from the top.

P. W. FILBY

The death of ninety year old "Bill" Filby on November 2002 was another break in the chain that has bound us with the first generation of modern Anglo-American cryptology. It deprived us of a staunch advocate and supporter of cryptologic history and the Museum, and a member of our Foundation. Genealogists world-wide mourned the loss of the man most identified with the compilation of volumes of "passenger lists" – names and dates of emigrants by sea to the New World – and other authoritative works.



Those ninety years saw a remarkable life for Percy William Filby. Born 10 December 1911 in Cambridge, England, he was active in field sports as a boy, playing cricket, rugby and tennis. As chorister (and later bass soloist) at Trinity College, Cambridge, music played a major role in his formative years (as with numerous others who later entered the field of cryptology). But two activities shaped his future: his love of books and his interest in the German language. In the rare books division of the Cambridge University Library, where he was employed, he developed a life-long appreciation for literary rarities and what is now termed library science. (A part-time job as secretary to Sir James Frazer, the blind, paralyzed compiler of the classic on mythology, *The Golden Bough*, and Lady Frazer, who was deaf, brought him into contact with an extraordinary couple.) But it was in 1940 that he volunteered for service in the British Army Service Corps. His knowledge of German attracted attention and soon saw his transfer to the Intelligence Corps. In that capacity he was assigned to Bletchley Park. After war's end, he served under the Foreign Office with the rank of lieutenant colonel. During that time he met and wed Vera Ruth Weakliem, an American.

In 1957 he immigrated with his wife to the United States, where he became librarian and assistant director at the Peabody Institute Library in Baltimore. His work there included an exhibit on calligraphy that was held at the Walters Art Gallery, the Baltimore Museum of Art, and the Peabody. He also compiled a select bibliography on American and English heraldry that was acclaimed by the staff of the Library of

Congress. From the Peabody, he went to the Maryland Historical Society, where he reorganized the manuscript collection – and wrote a small classic on the true facts involving the "Star-Spangled Banner." In 1972 he became Director of the Maryland Historical Society, and was a well-known speaker, writer, and book reviewer.

To NSA, where his wife, Vera Filby, was employed as a highly respected instructor and authority in reporting, Bill became a frequent visitor and supported the cryptologic history program, even as age gradually deprived him of his mobility. (*The Link*, Spring 2000, p. 3, has a picture of Bill and Vera at the NCMF program on Americans at Bletchley.) To the Foundation, in addition, he was a highly respected authority and appraiser for books, manuscripts, and similar materials offered to the Museum. (His dry comment on the stammering and other mannerisms attributed to the late Alan Turing in recent media productions, "Strange how one can work alongside a person and be unaware of such things," illustrates the value to a later-day historian of having had an on-the-spot authority available for consultation).

Bill's body was returned to England for burial. His wife, Vera, continues her retirement service to the National Cryptologic Museum as a library volunteer, pursuing activities Bill loved. We extend to her and the family our sympathy in her – and our – loss, and our appreciation for having shared Bill's life and pursuits with us. As for Bill, how can we escape the thought that, somewhere, "over the rainbow," he has been admitted to the Book of Life, taken one look at the many volumes, sketched a finding aid, and already begun a proposal for re-arranging the collection. 33.

NEW CHIEF OF CENTER FOR CRYPTOLOGIC HISTORY

In November 2002, COL William J. "Bill" Williams, USAF, was assigned as chief of NSA's Center for Cryptologic History (CCH). He is the first serving officer in this post and its fourth chief. With a doctorate in history and a master's in library science, he brings to NSA an unusual combination of academic qualifications and military service. He served in the 1970s with the North American Air

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NEW CHIEF OF CENTER FOR CRYPTOLOGIC HISTORY

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Defense Command and as weapons controller with Tactical Air Control units in Korea and Germany. He shifted to Intelligence and, during the 1980s, was Instructor Supervisor for all Officer Operations Intelligence courses at the Armed Forces Air Intelligence Training Center, Lowry AFB, Colorado, following which he served as Senior U.S. Air Analyst at the Combined Forces Command in Korea. For seven years he was Senior Associate Professor of History at the Air Force Academy, Colorado Springs. There he taught and directed courses in American, world, and military history and in historiography. In 1995 he served as a policy and issues analyst on the Staff Group of the Secretary of the Air Force at the Pentagon, then headed the National Air Intelligence Center's National Capabilities Division (Falls Church, VA), where he was responsible for providing worldwide intelligence support to the Chief of Staff, USAF. After a tour as chief of the Alert Center Division at the National Military Joint Intelligence Center (NMJIC) in the Joint Staff's J2 Directorate at the Pentagon, he returned to Germany in October 2000 as deputy chief of the European Technical Center in Wiesbaden, where he served until October 2002.

COL Williams is the author of *The Wilson Administration and the Shipbuilding Crisis of 1917: Steel Ships and Wooden Steamers* (1992) and editor of *A Revolutionary War: Korea and the Transformation of the Postwar World* (1993). He has also written a number of articles on American naval, maritime and aviation history, receiving an award in 1996 for the best article on US naval history in a scholarly journal.

As he turns his attention to US cryptologic history, the role of the CCH, and NSA's cryptologic history program, COL Williams will be working closely with Dr. David A. Hatch, NSA's Senior Historian, both for the benefit of the Agency's mission and that of the National Cryptologic Museum as well. Welcome, Colonel.




BUILDING NAMED FOR FRIEDMANS

In an impressive ceremony on 30 October 2002, the original NSA facility at Fort Meade was officially dubbed "The William and Elizebeth Friedman Building." Russian-born William Frederick Friedman (1891-1969), a veteran of WWI military cryptologic service who succeeded Herbert Yardley to create the Army's Signal Intelligence Service and lay the scientific foundation for modern cyptology, and his wife and companion in cryptologic research, Elizebeth Smith Friedman (1892-1980), are inseparably linked with the late-1950s edifice that first housed NSA's consolidated headquarters and operations. (Mrs. Friedman had earlier attended the dedication of the Friedman Auditorium in the building, bearing the name of her late husband.)

With the posting of the colors by NSA's Joint Service Color Guard and a stirring rendition of the National Anthem by NSA's Parkway Chorale, NSA Historian Dr. David A. Hatch welcomed those present and introduced Deputy Director William B. Black, Jr., for opening remarks. Mr. Black in turn introduced the Friedmans' son, John, who spoke movingly about growing up with parents whose professional lives were a mystery to the children. "Wherever they are," he said, "and in spite of the electronic isolation of this building, they are intercepting and reading the vibes of this ceremony with great pleasure." (His childhood memories deserve treatment in full, so we plan to print them in the Winter issue of *The Link*.)

Following Mr. Friedman's remarks, he joined the Deputy Director for the unveiling of a plaque, which declared the Friedmans to be "Pioneers in modern cryptologic training, leaders in the application of cryptology to law enforcement and national defense." The National Cryptologic Museum Foundation hosted a reception at the Museum for attendees.

Long known simply as "Ops 1," the Friedmans Building is the latest to benefit from a change in official policy that once rejected such naming. (One advocate, as previously noted, took the uninspiring designations of the two later high-rise towers and called his suggestion "2B or not 2B.")



FOR THE BOOKSHELF

Lou Kruh, NCMF Member and an editor of the quarterly, *Cryptologia*, for which he writes a regular feature, "Reviews and Things Cryptologic," has discovered one that got past us: Mark Urban's *The Man Who Broke Napoleon's Codes* (New York, HarperCollins Publishers, Inc., 2002). With his permission, here is his review, from the October 2002 issue of *Cryptologia*:

"History books report that it was the strategic and intelligence-gathering brilliance of the Duke of Wellington that culminated in Britain's defeat of Napoleon Bonaparte at Waterloo, in 1815. Nearly 200 years later, many of Wellington's subordinates are still remembered for their crucial roles in these historic campaigns. But Lt. Col. George Scovell is not among them. The reason is an army riven by class warfare, in which the rich and the aristocratic bought commissions and dictated orders, while the lowborn and the poor made up the also-rans. Scovell was firmly in the latter category.

"An apprentice engraver, Scovell seemed destined for a tradesman life. Instead he joined Wellington's army and, in his eagerness to advance, accepted many jobs other officers with higher social standing would not. In 1811, when Scovell's natural linguistic skill caught the attention of his superiors, he was handed an old handwritten copy of an unusual text, *Cryptographia, or The Art of Decyphering* by David Arnold Conradus (Galland's bibliography dates the 73-page text in 1739). Urban describes its contents and how Scovell made us of it. In time French codes improved but so did Scovell's skills. Urban provides many examples of how Scovell applied his cryptanalytic expertise to enemy ciphers. His greatest feat was unraveling Bonaparte's legendary Great Paris Cipher which contained 1,400 codes elements. Urban chronicles Wellington's campaigns against the French from the battle of Corunna in 1809 to the 1815 victory at Waterloo, showing how Scovell's decoding of enemy communications was pivotal to Napoleon's defeat.

"This is an excellent book about a little known code breaker who helped to change the face of history. It belongs in your personal library."

In the same issue, Mr. Kruh takes note of the National Cryptologic Museum monograph, *Solving the Enigma: History of the Cryptanalytic Bombe*, which we have been serializing, and says that it is "A terrific publication and it's FREE." He also takes note of the new printing of *Masked Dispatches*, by Dr. Ralph Weber, first resident historian in NSA's Center for Cryptologic History: "An outstanding collection first published in 1993, [it] has a new format including colorful front and back covers with historic ciphers." Reprinting his review from *Cryptologia* of April 1994, Mr. Kruh concludes that "numerous footnotes and a bibliography provide many leads for further research or reading on these fascinating events. It is an outstanding collection," he repeats, "and available free of charge." Now retired from Marquette University, where he headed the History Department, Prof. Weber traced American cryptography from the Revolutionary War to the advent of radio and the dawn of the electronic era.

FOUNDATION PROGRAMS

We'll save for the Winter issue our report on the Foundation's 16 December 2002 program on Station CAST, the U.S. Navy's cryptologic operations on Monkey Point, Corregidor. Suffice it for now to say that it was another highly regarded and successful observance of Pearl Harbor and the immediate aftermath, attended by veterans of those turbulent times.

Don't forget to mark your calendar with the next NCMF program, 24 April 2003. Former Soviet KGB officers Oleg D. Kalugin and Vasily Aksilenko will join facilitator Robert "Lou" Benson for a discussion of the KGB strategy against the United States and the Soviet experience in Afghanistan. To register your attendance or for further information, contact the NCMF office as indicated on the back page.

MEA CULPA

Mistakes do seem to creep into any printed matter, usually visible clearly *after* publication. Our abject apology to NSA Deputy Director for Information Systems Security Mike Jacobs, who is very much on the job (see *The Link*, Fall 2000), for confusing him with our own Foundation committeeman Ed Jacobs (SCE Ret'd) in citing a unique appearance on the "Larry King" television program (*The Link*, Summer 2002). A sneaky typo changed our former admin staffer, Jan Leach, into Jan *Leake* (a terrible gaffe in the intelligence and security arena) – sorry 'bout that, Jan. And, finally, in that same issue, an alert reader, retired Navy Captain Ray Schmidt, caught another typo: By false analogy to WACs and perhaps WASPs, the monograph on the *bombe* referred to the WAVES. Ray properly reminds us that the "S" was part of the acronym (*Women Accepted for Volunteer Emergency Service*) applied to the WWII US Navy Women's Reserve program. Apologies and thanks. (And please don't write to correct the intentional error that began this notice.) – *The Editor*

SOLVING THE ENIGMA: HISTORY OF THE CRYPTANALYTIC BOMBE CONCLUSION

The following tribute by author Jennifer Wilcox concludes our serialization of her monograph on the "bombe" of WWII cryptanalysis (less the appendixes of the original). As earlier noted, free copies of the illustrated monograph are available at, or from, the National Cryptologic Museum.

Because the U.S. Navy, like the British, went to great lengths to disguise the source of their information, very few ever knew of the cryptologic contribution. The dedicated men and women working in OP-20-G played an important role in maintaining one of the best-kept secrets of World

War II. Threatened with death if they spoke of their activities, and reminded of their oath when they were discharged from the service, these Americans did not reveal their war work to anyone.

In 1974 F. W. Winterbotham, a former group captain in the Royal Air Force, wrote about the work done at Bletchley park. This was well before the United States planned to declassify the Enigma secret, but the story was out. Slowly, the United States began to reveal its information and role in the Allies' cryptanalytic successes. However, notifying the thousands of men and women involved in the project more than thirty years later was impossible.

Nearly fifty years after the war, during a vacation to Washington, D.C., former Wave Sue Eskey learned the Bombe had been declassified. As many tourists do, she walked into the Smithsonian's National Museum of American History. Upon finding an exhibit that included an actual Bombe and picture of a Wave, she blurted out, "My God! That's me! I'm on the wall of the Smithsonian Institution!"⁴⁸ Later that day she called one of her Wave friends with whom she'd remained in contact. Feeling almost guilty for speaking of it over the phone, she told her friend what she'd seen.

Unfortunately, many of those involved passed away before they were able to tell their stories. Joseph Desch never explained to his family what a major role he played in winning the war against the Germans by designing the American Bombe. Alan Turing, designer of the British Bombe, died before the secret had been disclosed. Jerzy Rozycki, one of the first three Polish mathematicians hired to work against the Enigma in 1932, drowned when the ship he was on sank in a storm, possibly after hitting a mine, in 1942. The loss of their experiences is great. But through the memories of those who survive, the story of the Bombe and the people involved with it is now told.

Some historians claim that World War II could have gone on for as much as two more years, with an untold loss of life, had it not been for the Allies' ability to read Enigma messages. Those messages could not have been read without the Bombes and the men and women who built and operated them.

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