

The Link

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GEN. ALEXANDER, USA, NEW NSA DIRECTOR



LTG Keith B. Alexander

Gen. Alexander, a native of Syracuse, N.Y., was graduated from the U.S. Military Academy at West Point. He has served as Director of Intelligence, United States Central Command, MacDill Air Force Base, Fla., and Deputy Director for Requirements, Capabilities,

Assessments and Doctrine, J-2, for the Joint Chiefs of Staff. In a variety of assignments in Germany and the United States, he has been Commander of Border Field Office, 511th MI Battalion, 66th MI Group; 336th Army Security Agency Company, 525th MI Group; 204th MI Battalion; and 525th MI Brigade.

He held key staff assignments as Deputy Director and Operations Officer, Army Intelligence Master Plan, for the Deputy Chief of Staff for Intelligence; S-3 and Executive Officer, 522nd MI Battalion, 2nd Armored Division; G-2 for the 1st Armored Division both in Germany and Operation DESERT SHIELD/DESERT STORM in Saudi Arabia.

In addition to a Bachelor of Science degree from the U.S. Military Academy, Gen. Alexander has earned Master of Science degrees from Boston University (Business Administration), the Naval Post Graduate School (Systems Technology-Electronic Warfare) and in Physics, also from the NPGS. He also holds a fourth MS degree (National Security Strategy) from the National Defense University.

His military education includes the Armor Officer Basic Course, the Military Intelligence Officer Advanced Course, the U.S. Army Command and General Staff College, and the National War College.

His badges include the Senior Parachutist Badge, the Army Staff Identification Badge and the Joint Chiefs of Staff Identification Badge.

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OVERVIEW

Following the turnover of administration in the Museum, noted in our past two issues, and the departure of Gen. Hayden, to become the first Principal Deputy to the newly created post of Director of National Intelligence (DNI) we welcome the arrival of LTG Keith Alexander as the new Director, NSA. The hiatus between Directors was lengthy, but ably filled by Bill Black as Acting Director. The office of Director of Central Intelligence (DCI) is being abolished, replaced by the DNI. After decades of having one person head both the Intelligence Community and the CIA, only that “second hat” will remain – Director, CIA. After years of serving the DCI, we will have to see the exact nature of change and how duties will be re-assigned. (Presumably DCIDs—DCI Directives—pronounced “dee-skids” will become “NIDs,” – National Intelligence Directives -- or the like.) Gen. Alexander is no stranger to NSA and its products and services. We look forward to acquainting him with the work of the Foundation in support of the magnificent Museum he inherits.

We’re especially appreciative of the donation received from the Army Security Agency veterans of “Torii Station” (Okinawa). Memorializing their service, and that of their comrades at what was a major field facility, we recognize the sacrifice it represents, but it also encourages us to see our

Foundation goals supported by these colleagues of the past. Their donation was earmarked for the New Museum.

V-E Day—Victory in Europe, sixty years ago—was recalled in England in an impressive service recounted here by Dr. Hamer, our “liaison with Bletchley Park.” He also reports the visit here of representatives of BP’s modern Post Office.

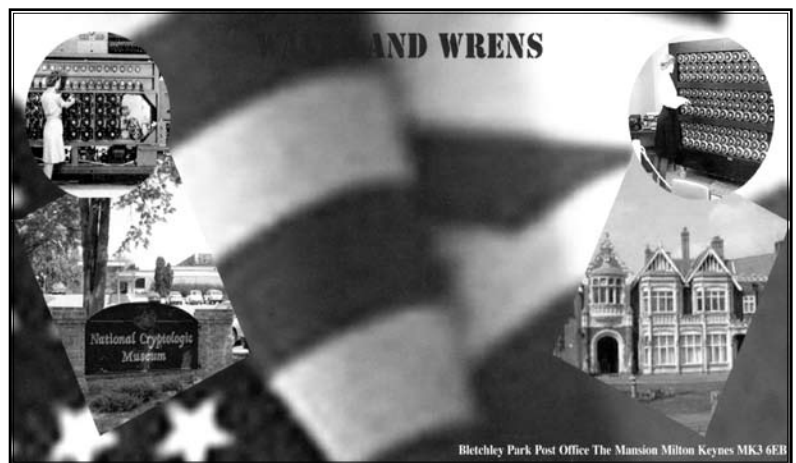
You’ll see that our small but powerful Acquisition Committee has been busy. They have also advertised on the Internet and in other publications our desire to solicit other such items suitable for display or use at the National Cryptologic Museum.

In this issue’s book review, we hail the publication of *A Brief History of Cryptology*, by our former Acquisition Committee Chairman (and former NSA Deputy Director for Research and Engineering), Jim Boone. We have followed Jim’s work on this project and his early drafts as it matured, but what an exciting thing to finally hold a copy, thanks to the United States Naval Institute Press, its publisher. In an unprecedented, but deeply appreciated gesture, Jim has informed us that his royalties will be donated to the NCMF for support of the Museum.

John E. Morrison
President

THE FIRST DAY COVER

For the Sixtieth Anniversary of V-E Day, and the issue of new US Postal Service and Royal Mail stamps, BPPO (page 4) designed a first day cover based on a “Waves and Wrens” theme. The design features both museums, and the 3-wheel British and 4-wheel US-built Bombes that were operated, respectively during World War Two, by Britain’s WRNS (Women’s Royal Navy Service) and the US Navy’s WAVES (Women Accepted for Voluntary Emergency Service). The stamps were cancelled with special postmarks on the first day of issue at the show. For added interest a British diplomatic courier also flew them in and out of the US.



ASA OKI LIVES!

Thanks to the U.S. Army Security Agency Okinawa Association, the NCMF Building Fund became the recipient of a \$5,000 check at a 1 July 2005 ceremony held at the Museum. And the Museum itself became the repository of a plaque commemorating Torii Station (Okinawa) and the ASA/INSCOM personnel and associates who worked there over the years. The achievement of this goal—led by past president William “Bill” Overholt and announced in *The Torii Tribune*, the association’s newsletter, in March 2003—represented both support of the National Cryptologic Museum and dedication to shared memories of the veterans, who raised the amount through membership contributions. Hosting a reception for the occasion, attended by Acting Director Bill Black, NCMF President John E. Morrison commended the Association representatives—including former commanders, Colonels Bill Vernau, Dave Wisyanski, and Walter Cressler—for their past service and thanked them, on behalf of the Foundation and the Museum, for their generous donation and memorial plaque. An open letter to “Fellow Soldiers, Families and others who served at Field Station Okinawa” from NCMF Board Member, MG Thomas J. Flynn, USA (Ret) commended the action and the past service of those at “Oki,” and the Joint Sobe Processing Center (JSPC), and added his personal appreciation. (Special thanks go to Mrs. Sherri Legere, Administrator of the NCMF’s Faurer Task Group, who took the lead in arranging accommodations and tours for the honored guests and to the NCMF Staff, Ms. Mary Faletto and Ms. Bonnie Hohenberger, who arranged for the ceremony and reception.)



(Left to right) Former Torii Station Commanders, Colonels Vernau, Wisyanski, Cressler with General Morrison, Mr. Bill Black, & Mr. Bill Overholt



NCMF ACQUISITION COMMITTEE

In its report to the Foundation Board of Directors, Dave D’Auria (Chairman) and David Hamer (Vice Chairman), summarized acquisitions on behalf of the Museum, including items suitable for background use in exhibits. These included, in addition to books, an audiotape, and other action items:

- an original World War II security poster (with the message, “The Only ‘Secret’ is the One Never Told”);
- a WW II “Gibson Girl” radio transmitter, the standard lifeboat transmitter for distress signals, with hand-cranked generator, a built-in Morse keyer and a long-wire antenna and reel;
- a U.S. Civil War era telegraph key, to replace the one on display in the Museum (determined by visiting expert, Professor Thomas Perera, to have been a mis-identified early 20thC French Postal Service key);
- arranged to receive for the Museum a DVD version of a newly produced documentary, *Dayton Codebreakers*, recounting the story of Joe Desch and his team at National Cash Register, Dayton, Ohio, in developing the Navy “bombe;”
- a very rare WW II Omaha Beach map, (originally classified TOP SECRET BIGOT) carried by non-commissioned officers landing at Normandy on D-Day;
- a British Disk fax machine, an encrypting fax transmitting and receiving device designed, built and used in the UK and elsewhere in the era preceding general use of the Internet and the World Wide Web. (The device was donated to the NCMF by Messrs. Timothy Robarts and Michael Leadbetter of London.)
- facilitated NCM receipt of SIGINT-related space artifacts from the NRO (Bob McDonald and staff, with the assistance of former NRO Director and NCMF Board Member, Keith Hall);
- a KL-7 crypto device, donated by retired NSA R&D project officer, Jerry Moskowitz, along with a personal account of the development of “the last rotor machine used by the U.S.” for high-speed printer. (See *The Link*, Fall 2004.)
- a Russian telegraph (Morse) key;
- cables for FIALKA (missing from the set acquired) and a German-language technical manual for the system;
- relics of Field Station Berlin barracks, originally part of the Royal Prussian Military Academy.

THE BLETCHLEY PARK POST OFFICE COMES TO THE USA

David Hamer – NCMF-BP Liaison Officer

The post office at Bletchley Park is a small annex to the mansion. It was used as a mailroom for personal mail during Bletchley Park's period as the Government Code & Cypher School [GC&CS] - forerunner of today's GCHQ. At that time it operated under the seemingly innocuous address: 'PO Box 111, Bletchley'.



The British General Post Office [GPO] designated the annex as an official sub-post office in 1947 when the GPO established its training center at the park.

In 1994, when BP opened as a museum, the Bletchley Park Post Office [BPPO] opened as a gift shop for visitors and in the following year issued the first of its official 'first day covers'. The income generated from sales of these collectible philatelic items enables BPPO to provide funds in support of the activities of the Bletchley Park Trust. The BP Trust receives no funding from the British government.

On Monday, 1 August 2005, the two principals of the BPPO, John Chapman and Terry Mitchell, visited the National Cryptologic Museum accompanied by Terry's son Daniel and by Corporal Darren Percy of the British Forces Post Office [BFPO]. All were en route to a major philatelic exposition in Grand Rapids, MI at which they were to display many of the special 'first-day covers', designed and produced by the BPPO, which relate to the history of cryptology and to the wartime activities that took place at BP. The venture was authorized and sponsored by the BFPO under the auspices of the British Government. Present to greet the BPPO contingent were Jane Hudgins of NSA's Public Affairs Office, NCM Curator Patrick Weadon and the museum staff. Also present were Foundation Vice-President Gene Becker, Administrator Mary Faletto and NCMF-BP Liaison Officer, Dr. David Hamer.

The annual event, held in a different state each year, is staged by the American Philatelic Society [APS]. BPPO was invited to attend the four-day 2005 show and received support from both the British Government and the BFPO to offset the costs of the venture.

At the show BPPO had its own booth plus a separate display area. In conjunction with Bletchley Park Trust, British Postal Museum and the National Cryptologic Museum this space was used to tell the story of the "Waves and Wrens" and their role in cracking the Enigma cipher. NCM kindly lent a Luftwaffe Enigma and display material, and this proved to be a star attraction for the 10,000 or so visitors who attended. Many were families with children who found the historical significance particularly appealing. All publicity brochures for both BP and NCM were eagerly taken up and both venues may experience an increase in visitor numbers as a result.

The impact of the exhibit was such that BPPO have been asked if they would like to produce a similar display for a larger show in Washington next May/June and the American Philatelic Society [APS] show in Chicago, in September 2006. The feasibility of doing this is under review.



Left to right: Daniel Mitchell, Terry Mitchell, Corporal Darren Percy, and John Chapman

Representatives from Bletchley Park in town to pick up the Enigma which the museum loaned to them for the Bletchley Park Post Office participation in the APS Stamp Show held in Michigan in August. The first day cover design is WAVES & WRENS and commemorates the work of women Naval volunteers on both sides of the Atlantic engaged in codebreaking.

KAMI SEYA DISASTER RECALLED

In a memorial salute to departed comrades, the Naval Security Group will observe the 40th Anniversary of an early morning fire in the Operations Complex of their field station in Kami Seya, Japan, 24 September 1965. Even as black smoke filled the building, power failure plunged the complex into total darkness.

Twelve men—an officer, nine Sailors, and two Marines—lost their lives, due mainly to smoke inhalation. Their names are on a bronze plaque that hung for thirty years at the site, and now resides at the Command Display on Corry Station, Pensacola, FL:

Roger ALEX, CTSA, USN
William BRILEY, CTSA, USN
Wilford CORDELL, CTSN, USN
Dennis ETZWEILER, CTSN, USNR
Archie GAROFALO, CT3, USN
John HOUSE, CTSA, USN
Richard MCKNOWN, LCPL, USMC
LTJG Ernest MOODY, USN
Paul RODRIGUES, SGT, USMC
Wayne TOWER, CT3, USN
James WHITMAN, CTSN, USN
Gregory WILLIAMS, CT3, USN

(The above names are also carried on the NSA/CSS Memorial Wall inside the National Security Agency.)

A special service has been scheduled for 23 September 2005 at Corry Station Chapel to mark the event. In the words of the memorial plaque, "Sayonara is not Goodbye but the Promise of Meeting Again."

LAST WW II COMANCHE "CODE-TALKER"

On 20 July 2005, Charles Chibitty, last surviving member of the U.S. Army's Comanche "Code-talkers" of WW II, passed away in Tulsa, OK. He was 83. Following a trail blazed by Choctaw soldiers in WW I, Chibitty and sixteen other Comanches assigned to the 4th Signal Company, 4th Infantry Division (European Theater of Operations), used their native language to baffle the enemy and facilitate secure tactical communication. Their contributions, and those of the WW II Marine Navaho Code-talkers, are recalled in an exhibit at the National Cryptologic Museum.

VICTORY COMMEMORATION AT BLETCHLEY PARK

David Hamer - NCMF-BP Liaison Officer.

To celebrate the 60th anniversary of VE Day, the end of the Second World War in Europe, Bletchley Park, Britain's premier cryptologic museum, arranged 'The Big Street Party' on Sunday 8th May, 2005. Sixty years ago Britain's streets were filled with trestle tables and chairs, and decorated with bunting and flags of the Allied nations. Though food rationing was still in effect the fare included jam sandwiches, sponge cakes made with powdered egg and other wartime delicacies. VE Day street parties were organized the length and breadth of Britain to celebrate the end of the war with Germany. Bletchley Park re-created the events of May 1945:



RAF Memorial Flight over Buckingham Palace
<http://www.deltaweb.co.uk/bbmf/aircraft.html>

The Park's own streets were decorated with flags, and tables laid out for visitors to enjoy the street party atmosphere. A brass band played wartime songs and there were traditional games like tug-of-war, the stocks, egg and spoon races, and a coconut shy. 1940's re-enactors gave the Park a real wartime feel and military vehicles completed the setting. Some visitors and Park volunteers dressed in 1940's clothes, both military and civilian, and helped bring the Bletchley Park of 1945 back to life.

A highlight was the low-level fly-over by the Battle of Britain Memorial Flight of the Royal Air Force, an Avro Lancaster bomber escorted by both Supermarine Spitfire and Hawker Hurricane fighter aircraft. The magnificent chorus of those six Rolls-Royce Merlin engines was musical nostalgia at its finest. ■

FOR THE BOOKSHELF

Traditionally (if that word can be applied to an Agency barely over the half century mark), in NSA, cryptologic history has been the purview of former analysts, mostly of the World War II generation. They were literate and accustomed to analytic research and exposition. Their exposure and experience stemmed from the wireless age—the age of radio. Their definitions were grounded there, and their outlook was that of the practice of COMINT, communications intelligence (or, as the US Navy preferred at one time, radio intelligence). Seldom did they consider whether there existed any relevant history before Marconi, perhaps with the exception of cryptography, the use and study of codes and ciphers. This outlook is best illustrated by the way “official” history was laid out by the late 1960s/early 1970s, in a structure that consigned everything prior to their era to “Series I” (the American Revolution to 1914) and started seriously with Series II (World War I), followed by III (the Inter-war years), IV (World War II), V (the Armed Forces Security Agency period, 1946[sic]-1952), and VI (the NSA period from 1952). Even as files and monographs were being developed on that structure, David Kahn’s seminal work, *The Codebreakers* (1956)—the scholarly work of an outsider—shook the foundation. Only William Friedman’s classic “Lectures” had suggested such a sweeping scope.

A new look, afforded by the establishment of the Center for Cryptologic History in 1989 and the assignment of the Agency’s first scholar-in-residence, Dr. Ralph E. Weber of Marquette, resulted in the 1993 publication of his (unclassified) monograph, *Masked Dispatches: Cryptograms and Cryptology in American History, 1775-1900*. It bore the designation, “Series I, Volume I” in the corpus of Agency histories, and it “connected the dots” to sketch America’s two-plus centuries of cryptologic history.

Two major weaknesses existed in the resources available to the Agency history program—an appreciation of the world of COMSEC (communications security, the “other half”

of cryptology) and the world of engineering research and development. It seemed axiomatic that engineers were always looking ahead, seldom concerned with their own past. (Jokes were made about “English as a second language” for apparently inarticulate engineers, more interested in “making things” than in reflecting and writing.)

James V. Boone’s *A Brief History of Cryptology* (Annapolis, MD: Naval Institute Press, 2005) is the corrective. In less than 200 pages of terse exposition, this former NSA Deputy Director for Research and Engineering (1978-’81), draws upon his own experience as an officer in the US Air Force Security Service, prior to converting to civilian status with NSA, as well as the shared experience and collaboration of former colleagues (principal among them, Robert O. Alde, Albert E. Babbitt, Robert E. Conley, James J. Hearn, Melville H. Klein, and the late Thomas A. Prugh). The range and depth of talent seem tailor-made to supply the missing side of the picture. Boone (who was also a dynamic committee chairman in the early days of the NCMF) has devoted much thought and reading to his profession. As a teacher at the university level, he developed lesson plans and interacted with students. He reflected upon events related to cryptologic history, but saw them through fresh eyes. Drawing upon his former colleagues, he sought both to chart the evolution of cryptology to the present and to demonstrate the symbiotic relationship that exists among cryptology, communications, and computers. The latter observations make his work unique. Although a chronological approach is used, the three disciplines considered by Boone offer an investigative framework that places cryptology in a novel context and establishes a logical foundation for history. In that sense, the title must be understood.

A foreword by Dr. William J. Perry (among other achievements, U. S. Secretary of Defense, 1993-’94) commends the book, “and the National Cryptologic Museum that inspired it,” as “a tribute to

[Continued on page 7](#)

FOR THE BOOKSHELF

Continued from page 6

the remarkable achievements of intelligence teams of the past and...a challenge to intelligence teams of the future, from whom we will need even more remarkable achievements." In the opening chapter, "Overview," Boone observes that "Advances in one field drive advances in another. No matter where the motivation for technological advancement comes from—government, industry, or the powerful drive of the high-technology marketplace—those responsible for the cryptologic capability of a nation must obtain and apply the latest techniques. ...History shows that second place status in either cryptography or cryptanalysis is unacceptable." While noting the importance of recording and data storage technology, as well as "extensive knowledge of linguistics" (and mathematics, which goes without saying), among the "essential ingredient[s] in the total cryptologic mix of talent and technology," he argues that communications and computational capability have the strongest influence, since "they are naturally embedded in the process of secure communications" (p. 7). Accordingly, "communications and computer development are the benchmarks for the cryptologic timeline we presented." He concludes his introduction by encouraging the reader to "use your imagination as you examine what was, guess what might have been, and ponder what can be."


Well illustrated, the book begins by describing the development of mechanical aids between 1200 and 1800. The 19th Century introduction of the telegraph, the telephone and mechanical computing aids (1800-1895) follows. The appearance of radio at the end of that century, and the applications spawned by "the wireless age" (1895-1939) prepare us for the Second World War, which accelerated developments in all fields (mid-1930s-1950). The introduction of solid-state electronics and satellite technologies (1950-1969) leads to "extended networking concepts [that] bring closer integration to all three technologies" (1970-2003). Then, as a good teacher or lecturer would, Boone ends with a concise summary. Appendices present brief essays on cryptology and the origins of NSA, followed by

endnotes to the text, a brief glossary, bibliography, and index.

Are there shortfalls in his approach? There is always a risk that a concise treatment of a broad subject may distort or overlook some aspect near and dear to the heart of another. For example, can a lay reader fully grasp the subject without at least some understanding of the role played by radio traffic analysis (T/A) in the development of COMINT (or even COMSEC)? Traffic analysis, as an aid to interception, a natural complement to crypt and linguistic exploitation, and a substitute, all too often, for "readability," emerged from World War II as a worthy partner to cryptanalysis. Some felt that, if C/A was the Queen, T/A was the King in the chess game of wits. Drawing on some of the same technological and scientific influences sketched in *A Brief History*, T/A became increasingly sophisticated, leading some to embrace the term "crypto-T/A" to express the complexity it attained and the value of the yield. Other readers may want to expand the outline in other ways.

But Boone has "stuck his neck out;" he has taken the risk of laying out an informed primer on the subject and laid it before us. Refinements can come over time, as its value—the value of his unique insight—is tested. It may be argued that, for the first time, NSA has been given a "textbook" for all new employees, all new students at the National Cryptologic School—a primer that can be retained as a desk reference for the future. Taken with Weber's *Masked Dispatches* and Kahn's seminal *The Codebreakers*, the trio would begin a professional bookshelf. Taken alone, "Boone" should be required reading for "outsiders" seeking to understand NSA and its field of specialization.

(To anticipate a charge of self-interest, it should be added that the above review was written before learning that Mr. Boone is donating profits from the sale of the book to the National Cryptologic Museum Foundation for the furtherance of our work. That did not influence the reviewer's enthusiasm and admiration for what Jim Boone has accomplished with the publication of *A Brief History*, but the gesture certainly deserves a special note of appreciation to the author—and hope for good sales! —Ed.)



"POLLY" BUDENBACH

Mary Hughes "Polly" Budenbach, 91, of Sea Pines, SC, one of the "grand ladies" of American cryptology, died Thursday, June 23, 2005, after a short illness.

Born 18 April 1914 in Scotch Pines, NJ, she was graduated from Smith College and served as a civilian analyst in World War II with the OP-20G, the US Navy's cryptologic organization. There she worked on Japanese naval cryptosystems, for which she received the Navy's Meritorious Civilian Service Award in 1945.

She went to work for the nascent Central Intelligence Agency and then the National Security Agency, where she worked on the "Russian problem." She directed a group of experts in a think-tank charged with solving the toughest cryptanalytic problems. In 1960 she was recognized as the highest technical authority in the US security agencies in several specialized fields. She was the first woman to attain a super grade within the intelligence community and was awarded the Federal Women's Award. As deputy and a close colleague of Frank Raven for a number of years, she retired in 1975 after 32 years of service, and was awarded the National Security Agency's Meritorious Civilian Service Award.


During much of her government service with NSA, Mrs. Budenbach was a weekend commuter to the New Jersey home she shared with her husband. Mrs. Budenbach moved to Hilton Head in 1984. Wife of the late Theodore Budenbach, who predeceased her, she was a member of the Sea Pines County Club and a life member of the American Contract Bridge League. She was buried in Plainfield, NJ

"NORM" KLAR

As the US Naval Security Group is re-thinking its role and composition, note must be taken of the passing of a man who—for many of us—seemed to personify the best of the traditions and accomplishments, the professional, technical prowess that characterized the men and women of OP-20G

and its successor, the Naval Security Group (NSG). That man was Norman Klar—Captain, USN (Ret.), "Norm" to associates and friends. Born 29 March 1929 in Brooklyn, NY, he was graduated from Brooklyn Technical High School in 1947, from City College of New York (BS) in 1951, and received an MA from New York University in 1953. Commissioned through Officers' Candidate School, Newport, RI, in 1954, he served first at Kodiak, received Chinese language training at Defense Language Institute (East), Anacostia, 1955-'56, and served at NAVCOMSTA, Kami Seya, Japan, 1956-'59. From 1959-1963 he served at NSA, where he impressed instructors, colleagues and others with what seemed to be an inherent ability in cryptanalysis. Foundation member (and sometime C/A instructor) Ray Schmidt (CAPT USNR Ret), a frequent contributor to these pages, recalled that Norm was "one of a few natural cryptanalysts I had the pleasure of watching in action."

Norm was rotated to a field assignment as Officer-in-Charge NAVSECGRU Activity, Taipei, from 1963-1965, a period in which his reminiscences have graced the pages of Cryptolog, our sister publication from the US Naval Cryptologic Veterans' Association. From there he returned to NSA, serving 1965-'69. (At some stage in his NSA postings, he gained certification as Cryptanalyst in the rigorous professionalization program.) In 1969 he completed the five-month course at the Armed Forces Staff College, Norfolk, VA (now the Joint Forces Staff College, with multiple, but abbreviated courses). He served as NAVSECGRU Department Head at NAVCOMMSTA, Philippines 1969-1972, dual-hatted as Executive Officer 1971-'72.

He returned to NSA for his final period on active duty, retiring in 1984, after some 31 years of service. His awards included the Legion of Merit (twice), the Defense Superior Service Medal, the Meritorious Service Medal, and the Navy Commendation Medal. In "retirement," CAPT Klar continued part-time at NSA as a senior (and highly regarded) cryptanalyst. Renee, Norm's wife of 28 years and mother of their three children, died in 1978. Norm joined her on 25 March 2005, just short of his 76th birthday. To many of his colleagues, Norm Klar was "the last of the Old Breed." This sketch of his career (that portion which is unclassified) recalls a leader and a "pro." 

PAUL E. NEFF

Paul E. Neff, COL (USAR Ret.) died in May 2005 at 88. He was a civil engineer for the Federal Power Commission when he was drafted in March 1941 and assigned to the office of the Chief Signal Officer in the Munitions Building in Washington, DC.

His wartime service took him to England, and later France and Germany, providing signals intelligence support to the European Theater of Operations. Among other things, he sought out German cryptologists in the spring of 1945, gaining information that proved valuable in the work on Soviet wartime espionage.

He also served as deputy chief of the Army Security Agency in 1946 and was released from active duty in October 1948. The short-lived Armed Forces Security Agency (AFSA) was formed the following year. Paul was one of the architects of the merger of Army & Navy cryptologic efforts into the National Security Agency in 1952, and became the first Comptroller of NSA.

As a "senior manager," in 1955 he attended the Industrial College of the Armed Forces (at Ft McNair), returning to become Deputy Director for Communications. At the time of his retirement from NSA in 1972, he was Inspector General.

He was also a "Life Master" bridge player and a gourmet cook.

Services were held at the Old Post Chapel, Ft. Myer, VA, on 28 June 2005. Interment took place in Arlington National Cemetery with full military honors.

"VINCE" WILSON

Note is taken of the passing of Vincent R. Wilson, Jr., who died 10 May 2005 after a lengthy illness. He was 84. Vince retired from NSA in 1981, after 25 years of service as an Editor-Writer and, for a relatively short time during the early 1970s, Agency historian. In collaboration with the late Ed Fishel (The Link, Vol. 1, No. 1, Spring 1998), he was instrumental in promoting professional literature within the Agency and the developing cryptologic profession. Under the banner of the National Cryptologic School Press, the two edited the flagship NSA Technical Journal, as well as other publications, both classified and unclassified. Both men were exacting and demanding in the standards they advocated and sought to represent in their own writing. Fishel's earlier experience as a time-sensitive journalist was a natural complement to Wilson's academic style, both seeking clarity and economy in expression, with intellectual and rhetorical rigor. That was a heady time. Under their tutelage and urging, young Henry "Hank" Schorreck pursued a graduate degree in history, and was proudly welcomed into their ranks as "NSA Historian" (The Link, Vol. 7, No. 1, Spring 2004, which noted his passing in June of that year at 67, remembered as Historian Emeritus).

As occasional speechwriter or editor, Vince was acquainted with the leaders of that period. In retirement, when he continued his interest in history on a professional basis, he was sought out to assist the legendary Frank Rowlett and others in shaping their memoirs. From internal history as a "cottage industry" back at the Agency, Vince lived to see its maturity and embodiment in the Center for Cryptologic History and the National Cryptologic Museum. His burial at Arlington is set for August.

CORRECTIONS

In the photo caption of the Raytheon presentation to the Foundation (The Link, Winter 2004/2005, p. 4) Raytheon Vice President for Intelligence, Space, and Geo-Spatial Programs, Arthur Grant was incorrectly identified as "Arthur Green," the former NSA employee mentioned in earlier issues. We apologize to Mr. Grant for this "goof" and take this opportunity to correct the error and renew our appreciation for Raytheon's 2005 donation.

In The Link, Spring 2005, p. 3, the name of Sandi Buss, administrator of the Eagle Alliance Golf Tournament was misspelled. Our apologies, Sandi! We have administered three lashes to the typo-gremlin.

SAFFORD PAPERS FOUND, DONATED

CAPT Laurance Safford, USN (1890-1973) is perhaps the least known of the founders of modern



Robert Fry & General Morrison

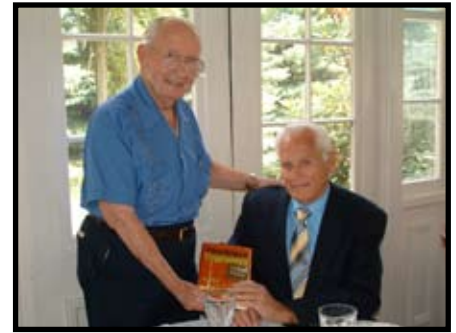
American cryptology but a key figure in developing the specialty in the U.S. Navy. A 1916 graduate of the U.S. Naval Academy, the Massachusetts native was commissioned Ensign and served a tour of duty in China, returning in 1924 to take charge of the "Research Desk" of the Code and Cipher Section under the Director of Naval Communications. "Research" was a euphemism for study and cryptanalysis of foreign communications, and Safford was an able student of the legendary Agnes Myer Driscoll. Equipped with a copy of the Japanese code book known as "Red," which had been photographed in a clandestine entry of the consulate in New York by Naval Intelligence operatives, Safford was aided by a Lieutenant named Joseph Rochefort in establishing a competent effort, fed by intercepted messages from the "On-the-Roof Gang," as their listeners were called. This led to the transfer and redesignation of the effort as OP-20-G, the Navy's equivalent of Army's Signal Intelligence Service and the cryptologic center prior to and during WW II—forerunner of the Naval Security Group Command. Safford worked quietly and somewhat unofficially with William F. Friedman's team of Army civilian specialists—the team that finally broke into the infamous Japanese PURPLE code and shared exploitation with the Navy in pre-Pearl Harbor days.



NCMF VP Becker with Fry & Morrison

Safford's position also placed him in the uncomfortable limelight of 1946 Congressional hearings on the 7 December 1941 disaster at Pearl Harbor and the

attempt to find why warning information had not been provided to field commanders. Caught up in the search, Safford's future career was blighted. He continued as an Assistant Director for Cryptologic Research for Naval Communications and, in 1949, with the establishment of the Armed Forces Security Agency—predecessor of NSA, he served as special assistant to the Director, returning to the Navy in a similar capacity. His active duty ended 2 March 1953. He died in 1973. But recognition of his role as "the father of Navy cryptology" made him one of the original eight men and women selected for the Hall of Honor at the National Cryptologic Museum in March 1999. (See *The Link*, Vol 1, No. 4, Winter 1998-1999.)



A token of appreciation: Jim Boone's book

Safford never dropped his search for the truth about cryptologic warning of the Pearl Harbor attack, convinced that the Japanese "Winds code" message had been intercepted. He also maintained a fascination with the mystery of the fate of pioneer aviator Amelia Earhart. That interest came to the attention of Robert Fry, a historian who shared a long time attraction to the Earhart story.

Fry was planning an international symposium on Amelia and while interviewing Amelia's sister she told him that CAPT Safford had written an unpublished book on Amelia's last flight. The search for CAPT Safford's artifacts led him to Riggs Bank, in Washington, DC, to the unpublished manuscript on Amelia, other personal papers and affects belonging to CAPT Safford. Bob Fry told an associate of his—Bob Payne (editor of the Navy Cryptologic Veterans' publication *Cryptolog*)—about finding the cache of Safford's personal affects and papers. Payne, who hopes to complete a biography of Safford, recognized the rarity of the items, and suggested Fry contact the NCMF to determine if we were interested in the artifacts. We were indeed. As the photographs show, a formal presentation and acceptance took place at the Museum 10 August 2006. Our thanks to Bob Fry—now a member of the NCMF.



THE MESSAGE CENTER

“Attention: The Editor of “The Link”

“My copy of the 2004 fall issue of The Link (Volume 7, Number 3) arrived recently. I read it with great interest. I am writing to call into question some things on p. 5, immediately under the picture of the Flowers family, father and sons.

“The text refers to ‘the M228 SIGCOM’. For most of 1945 I was a cryptographic-equipment repairman (MOS 805?) in the Pacific. Our installation (on Iwo Jima) had a single cryptographic teletype machine which I recall having the nomenclature ‘SIGCUM’. It relied for its cryptographic strength on five rotors similar to those used in the 10-rotor SIGABAs. We also had a single one-time-tape machine, which was called a SIGTOT, not a SIGCOT. There was no electrical or mechanical connection (other than sharing the same source of AC power and resting on the same floor) between the SIGTOT and the SIGCUM/SIGCOM.

“To the best of my knowledge, these two cryptographic devices were seldom if ever operated ON LINE. Teletype operators in the non-cryptographic section of the Joint Communication Center handed incoming SIGCUM/SIGCOM and SIGTOT messages to the cryptographic section on punched paper tapes, preferably made by a typing reperforator. I have no recollection of outgoing messages being enciphered by these devices. The SIGABAs met the island’s needs in that regard.

“Next November it will be 60 years since I walked out of the Iwo Jima JCC for the last time. My memory may be playing tricks on me. If so, I apologize for troubling you. I am looking forward to reading future issues of The Link.”

William W. Ward P. E., Ph. D.
Newton, Massachusetts 02461-1008

(We thank Dr. Ward for taking the time to correct the account carried in “The Link.” As best we have been able to determine, the problem lay in a Tar Heel ear and errors in transcription, not in delivery, and we appreciate Dr. Ward’s valued recollection in the spirit of “And I Was There.” – Ed.)

MEMORIAL REGISTRY

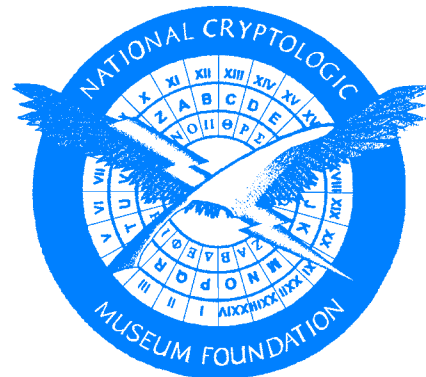
The Foundation’s “In Memorium” registry was initiated in 2002 (The Link, Vol. 4, Nos. 1 and 2, and Vol. 5, No. 4) to provide for member recognition of departed colleagues, admired and beloved supervisors, and others, whose “silent service” deserved special recognition. The Memorial Book records the name of the individual so honored and the sponsor(s). Entry of that information is based upon receipt of a donation of \$100 or more to the NCMF. Multiple sponsorships are also listed, in the order received or alphabetically. (Of the 29 names listed in the first report in The Link, Winter 2002, the first 24 are in alphabetical order.) Donations of lesser amounts than \$100 are gratefully accepted, and acknowledged in a letter of recognition and appreciation to the donor.

In addition to the book, a memorial tablet or plaque records the names of individuals in whose memory a donation of \$10,000 (or more) is received. Both the book and the tablet are displayed at the entrance to the Museum. Donor-sponsors are reminded that their donations contribute directly to the work of the Foundation in support of the Museum, and that the amounts are entirely tax-deductible under the provisions of the Internal Revenue Service, which recognizes the NCMF as a not-for-profit 501 c (3) organization.

The following name has been added to the Memorial Book:

#63 Honoree: David Phillip Mowry
Sponsor: Center for Cryptologic History/NSA and other Agency colleagues.

#64 Honoree: Joseph S. Gorman
Sponsor: Nancy and David Rogers



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