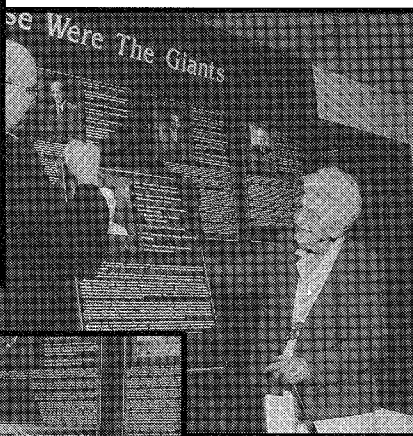# ANNUAL HALL OF HONOR CEREMONY

On 11 July 2001, four more names were added to the Hall of Honor in the National Cryptologic Museum, four more "Immortals" for America's cryptologic Pantheon. For the first time, living individuals were honored in person. In a ceremony presided over by NSA Director Michael V. Hayden, Lt. Gen., USAF, communications security engineer and senior executive Howard C. Barlow; cryptomathematician and communications security specialist Mahlon E. Doyle; the late Dr.

Sidney Jaffe, philologist and pioneer in crypto-linguistics; and the Foundation's own president and board chairman, John E. Morrison, Jr., Maj. Gen. USAF (Ret.), leader, innovator and principal architect of the Cold War SIGINT system, were inducted into the ranks of those most highly honored in American cryptology. Their predecessors were William F. Friedman, Elizebeth S. Friedman, Herbert O. Yardley, CAPT Laurance F. Safford, USN, Frank B. Rowlett, Abraham Sinkov, Solomon Kullback, and LTG Ralph J. Canine, USA (initial selectees, March 1999), Louis W. Tordella, CAPT Joseph J. Rochefort, USN, and Agnes Meyer Driscoll (second induction, April 2000).

Continued on page 6

"WE INTERRUPT THIS PROGRAM . . ."

Those words, from back in "radio days," always drew our attention, as they still do today on television monitors. They are appropriate for what has become a new, defining moment in history, the horrendous events of 11 September 2001. In the uncertainty that followed, as the nation and the free world sought new direction, some of the things planned for our summer issue seemed less important than they had before. I asked our editor to pull it back from the printer, even as we pondered the proper action to take and the proper tone to adopt. At that time – and, in fact, at this writing – the National Cryptologic Museum, which also houses the Foundations's office and staff area, was closed, as a part of the Agency's security "lock-down." Our plans for the fourth annual general Membership Meeting were totally disrupted, as was the anticipated biennial cryptologic history symposium. Our best way to convey this information to you in a timely fashion was via our Web site and that of the Agency. Now, in the spirit of the President's appeal to return to normal activities, we present a delayed and modified version of our summer issue, preserving much of what was intended originally, deleting or postponing other items no long relevant. Normality has been redefined in light of what the media are calling "America's New War." A new generation is learning how we experienced the shock of 7 December 1941, and gearing up, as we did then, to a new commitment to do what is necessary. There is a new patriotism and a new spirit throughout the land, as we have witnessed extraordinary heroism and mourned our losses. As in the dark days of World War II, when we forged an alliance with our British and Dominion counterparts, we have been heartened by the many voices of support from allies around the world. As those on active duty are writing new chapters of cryptologic history, we salute them, we support them, and we pray for them.

J.E.M.

OVERVIEW

It was a surprise, and certainly a humbling experience, to stand with DIRNSA on 11 July and see my name added to the Hall of Honor (along with what the late director LTG Marshall S. "Pat" Carter, USA, would have referred to as "my obituary," his usual comment after a lengthy introduction as speaker). In those few moments I won't say that "my past flashed before me," but it did give pause to reflect on the other names – all of whom I had known – and the honor of becoming associated with them again in this permanent recognition. I am deeply grateful to the National Security Agency for this singular honor.

Gen. Hayden's continuing announcements of the appointment of "outsiders" to key slots at NSA – all part of his program of re-orientation and re-organization – have drawn comments from a number of former employees and others, concerned about a break in continuity with the past. To me, this underscores a role for the Museum and the Agency's history program in seeking to capture the good (and bad) experiences of that storied past – to serve as a corporate or institutional memory, that can benefit the current generation and be imparted to new-comers as part of their education and indoctrination. They bring new talent and experience to a strange, difficult enterprise, one as much art as science, requiring genius as well as business acumen. Perhaps we can find ways to facilitate the marriage of old and new.

John E. Morrison, Jr.
President

GUARDING OUR COAST . . . WITH CRYPTOLOGY

Even our children can recite it: "Army, Navy, Marines, and Air Force." All too often a significant fifth component is overlooked – the United States Coast Guard. A uniformed maritime organization subordinate to the Department of Transportation in peacetime, the Coast Guard shifts to the Navy Department in wartime. Since 1790, it (and its predecessor Revenue Marine Service) has guarded the perimeter. But, unlike the other armed services, the USCG also has a unique law enforcement authority. In domestic matters, it can go where the other services cannot.

In an event attended by several members of the Agency's senior leadership team, the Agency work force, and guests, the National Cryptologic Museum unveiled a new exhibit on 31 July 2001, designed to tell the story of the United States Coast Guard in "the Rum War," a foreshadowing of drug interdiction today.

DIRNSA and RADM Cross

In welcoming remarks, Jack Ingram, Museum Curator, thanked LCDR Reese Madsen, USCG, and Coast Guard liaison to NSA, for leading the effort to make the exhibit and reality. He also thanked the NCM Foundation for providing refreshments and hosting a reception. Jack then introduced DIRNSA.

Gen. Hayden thanked Mr. Ingram and the Museum staff, as well as Dr. David Hatch and the Center for Cryptologic History for the continued success of the museum. "The National Cryptologic Museum," he said, "honors the cryptologic profession by unveiling the untold stories of our past and showcasing our Nation's cryptologic treasures. More often than not, the cryptologic success stories we are able to openly share with the public have come during time of war. Today, we have a unique opportunity to celebrate the contributions of cryptology during peacetime.

DIRNSA, D/DIR Black, RADM Cross, NCM Curator Ingram, Gen. Morrison

"The period from the early 1920's up to 1933, was, in many ways, a turbulent time for our Nation. Like many of the contentious issues that our nation deals with today, in the 1920's and 30's, there was great debate as to the merits of Prohibition and the many unintended consequences created by the policy. However, in 1924, when the decision was made to give the responsibility for preventing the importation of illegal liquor on the high seas to the United States Coast Guard, it was not that service's job to debate the many issues surrounding the policy, but to figure out how to accomplish the mission.

"This was not an easy task. They would have to police 12,000 miles of U.S. coastline with a total of 4,140 personnel and 75 vessels, the majority of which were not designed for law enforcement operations. To make matters worse, the 'Rumrunners,' as they came to be called, used sophisticated codes and ciphers to try to thwart the Coast Guard's interdiction efforts against them.

"In an effort to help meet this challenge, the Coast Guard enlisted the help of Mrs. Elizebeth Friedman, who, along with her husband, William, was one of the foremost cryptologists of the time. Both Elizebeth and William would come to play a key role in helping Admiral Frederick C. Billard and his forces have some level of success against a well-financed and determined adversary.

"Despite the odds, Mrs. Friedman was able to solve over 12,000 messages for the Coast Guard. Interdiction efforts against the Rumrunners were also greatly aided by additional cryptologic innovations such as the CG-210, a specially equipped 75 foot patrol boat with high frequency receivers, direction finders, and its very own shipboard cryptanalyst, William Friedman. The craft gave the smugglers fits, so much so that Lieutenant Commander Gordon, chief of the intelligence unit, noted that the results produced by the CG-210, which had never even gone near Rum Row, had far exceeded the interdiction efforts of

GUARDING OUR COAST . . .
WITH CRYPTOLOGY
Continued from page 3

the destroyer force and the other units combined.

"This prodigious partnership stands today as an outstanding example of teamwork and shows how, when the various elements of our Nation's government work together for a common goal, great things are possible.

"It is our hope that this new exhibit will help us to appreciate a unique time in our cryptologic past and to remember that the future benefits of cryptology, both in war and peace, are limited only by the boundaries of our imagination."

Gen. Hayden then introduced RADM Terry M. Cross, United States Coast Guard, Assistant Commandant for Operations and that service's Senior Military Intelligence Officer.

ADM Cross responded that, "It is an honor to be here today to officially unveil this unique exhibit within this unique museum." But he then added, with tongue in cheek, "I am not sure if I am more honored to unveil the exhibit or stand next to the cover boy of the *Washington Post Magazine* [referring to the NSA Director's appearance on the cover of the 29 July issue]." He continued,

"First, I would like to thank a few people: Jack Ingram, for leading the development of this exhibit; Art Green who designed and fabricated this wonderful exhibit; and Coast Guard Academy Curator Cindee Herrick for providing these historic artifacts to the museum. I also understand that the Museum's Foundation provided the refreshments – a thank you to them as well.

"This museum is unique in explaining the many secrets of war. This particular war is not well documented in military history – nor its secrets. This war, more aptly named the Rum War, was unique in America's history and fighting – it required unique weapons. Our current Commandant, ADM Jim Loy, has coined the phrase for the Coast Guard's service to the nation as 'a unique instrument of national security.' That same phrase could have been coined eight decades earlier during Prohibition by the commandant at the time, ADM Fredrick Billard.

"The Coast Guard has a unique role in the country's history as a military service, having fought in every war the nation has been involved with, and possessing unique federal law enforcement authorities. The national security problem at the time was rumrunners and it was the Coast Guard which was best suited to address this challenge. ADM Billard used the best and most advanced weapon system at the time. His unique weapons came in the form of William and Elizebeth Friedman. Both had a critical role in our success with a very well organized and resourced enemy. But it was Elizebeth Friedman who not only deciphered thousands of messages, trained Coast Guardsmen to break code, helped develop arguably the first intelligence collection vessel, but she also brought cryptology to the national forefront by describing the cryptologic process in the newspapers during her court appearance in many famous cases – some are discussed within this museum.

"This Saturday, 4 August, the United States Coast Guard will celebrate its 211 years of service to the nation. This exhibit depicts just a small chapter of our history during a unique time in America. One common denominator of the many exhibits we see here is the vision and dedication of individuals focused on one goal – national security. ADM Billard had the vision to initiate the Coast Guard's Intelligence program and brought to bear the talents of the Friedmans on the country's nationals security problem at the time. We were honored to have had the Friedmans work for us before they focused their incredible talents on what would become the National Security Agency. Today the Coast Guard is again honored to unveil this exhibit honoring those with vision and dedication for the Coast Guard in support of national security."

As with other exhibits in the National Cryptologic Museum, the Coast Guard display is unclassified. But it, too, hints at a classified message. No one seeing or hearing about the role of the Coast Guard during the 1920-1933 era will fail to reflect on the modern parallel to Prohibition, the "War on Drugs," and suppose that the Coast Guard – "Semper Paratus – remembers
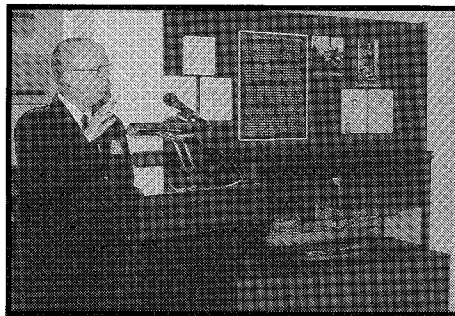
RED-LETTER DAY

July 27 was a red-letter day for the Foundation. That was the date senior Dell personalities and officials from an affiliated company, Intelligence Decisions Incorporated, assembled in the Foundation Headquarters office in the museum. There they received a formal expression of our gratitude for their gift of a total replacement and upgrade of our Information Processing System. Almost five years ago Dell had come to our assistance by providing gratis our first, and now considered primitive, information system. We are most especially indebted to Bill Defusco, Dell National Account Manager who handled the gift arrangements and his supervisor, Bob McFarland, Dell Vice President and General Management Government. Others attending the affair were Randy Jewell, Dell System Engineer, Mr. Harry Martin, President and CEO, Intelligence Decisions, joined by Mr. Harold Goode, his Executive Vice President, Mr. Patrick McGowan, Director, Intelligence Sales and Mr. Jeffrey A. Marshall, WIN/PC Program Support Manager.

For their generosity the Foundation is extremely grateful.
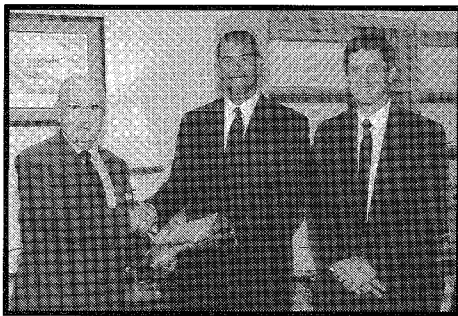
Gen. John E. Morrison, Mr. Harry Martin, President and CEO Intelligent Decisions, Inc. and Mr. Harold Goode, Executive Vice President, Intelligence Decision, Inc.

Gen. John E. Morrison, William DeFusco, National Account Manger, Dell Marketing L.P. and Mr. Robert McFarland, Dell Vice President and General Management Government.

BEALE TREASURE A HOAX?

Few of us can resist the lure of buried treasure. Only slightly less attractive to cryptanalysts, both professional and amateur, than the famous Voynich manuscript has been the legendary Beale treasure and the encrypted instructions for recovering those fabled riches, buried, supposedly, in Bedford County, Virginia. (As in other such cases, the descriptive portion has been recovered, its numerical cipher keyed to the initial letters of consecutive words in the Declaration of independence. The real secret – where it was buried – was, of course, contained in a separate paper that has resisted analysis.) David Kahn, in *The Codebreakers*, devotes a few pages to Thomas Jefferson Beale's story, and cites a Washington, D.C., man's "elaborate statistical tests" in 1964 that confirmed, to his satisfaction, that the same general general system was used to encipher the other part. Yet it continued to resist all attempts. Now comes word that a 75 year old retiree working for Wal-Mart has solved the puzzle . . . and declared the whole thing a hoax.

According to the *Richmond Times-Dispatch* for 13 August 2001, A.B. Chandler of Goochland County, west of Richmond, claims to have broken the cipher and concluded that "It's a hoax. No two ways about it." On the other hand, he has refused to disclose how he broke the cipher, figuring that he'll hold on to that information against the prospect of someone making a movie. So there might be some "gold" after all. For $8.00 you can order a standard packet of Beale treasure information form the Roanoke Public Libraries, 706 S. Jefferson Street, Roanoke, Virginia 24016.

MEMORIAL BOOK PROGRESSING

Response to the Memorial Book or register project (*The Link*, Spring 2000) has been gratifying to date, and it serves as one example of the sort of projects that the Foundation can continue "behind the scenes," as we await word of the re-opening of the National Cryptologic Museum, where the book is to be prominently displayed.

But, one snag has come up: please, if you can, supply the full name, especially a middle name – or at least an initial – for the names you submit. It completes the tribute, and certainly pleases family members (and future historians and genealogists) . . . and you can only imagine how difficult it can be, decades after the fact, to recover such information on-site.
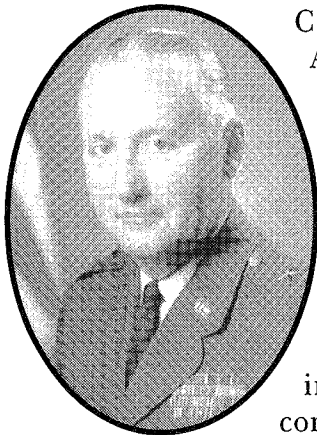
Commissioned 2nd Lt., US Army Signal Corps in February 1942, with an LLB/JD degree from the University of Baltimore, John E. Morrison, Jr. embarked upon a distinguished career spanning 60 years, including 32 years in the military, during which he became instrumental in shaping the signals intelligence community. Between 1946 and 1973, he served as Assistant to the Air Force member of the United States Communications Intelligence Board; member of the faculty of the Air Command and Staff School; Commander, 3rd Radio Squadron Mobile in Alaska; Assistant Deputy Chief of Staff, Operations, USAFSS; Commander, Air Force Special Communications Center; Air Force Coordinator for the Military Communications Electronics Board (JCS); Chief, Policy and Objectives Division of the Directorate of Telecommunications, USAF; Assistant Director of the Defense Communications Agency (DCA) for Plans and Programs; Chief, NSA, Pacific; and, at NSA Headquarters, Deputy Assistant Director for Production (DADP) and Assistant Director for Production (ADP).

While serving on the Air Staff in the Directorate of Telecommunications, he played a key role as one of the founding architects of the Air Force Security Service. Later, he became the principal staff officer to develop the plan to establish the Air Force Communications Service. While Assistant Director of the DCA for Plans and Program, he directed the implementation of the Defense AUTOVON and AUTODIN systems.

Among Morrison's important contributions to U.S. SIGINT Operations was the creation of the National SIGINT Operations Center (NSOC). After the Arab-Israeli War in 1967, the capture of the *USS Pueblo* in 1968, and the shoot down of a Navy EC-121 reconnaissance aircraft in 1969, Morrison, as ADP, found that it was almost impossible to coordinate an NSA rapid response. This was due principally to the physical separation of the analytical elements involved. In July 1969, Morrison proposed to the Director of NSA (DIRNSA) that a single National SIGINT watch center be established. DIRNSA concurred and charged Morrison with establishing the center. Identifying space and solving staffing and communications issues took longer than anticipated. Despite the obstacles, the center was activated with a formal charter in late 1972. Concurrently, he established the U.S. SIGINT Directives System.

After retiring from active military duty in 1973, Morrison was appointed Chairman of the U.S. Intelligence Board's (later National Foreign Intelligence Board, then DCI) SIGINT Committee and Director, SIGINT Tasking Office of the Intelligence Community Staff, serving directly under four DCIs and, concurrently, as the Chief, Intelligence Community Affairs, NSA, under three NSA Directors. Under his chairmanship, the U.S. SIGINT Requirements System was implemented in 1975 to consolidate DCI and community tasking of DIRNSA. He retired from government service in 1979 and subsequently served on the Military Operations Panel, National Security Agency Advisory Board (NSAAB), then as a member of the Space System Panel, NSAAB. Since 1996 he has provided support to the National Cryptologic Museum as president and chairman of the board of the non-profit National Cryptologic Museum Foundation (NCMF).
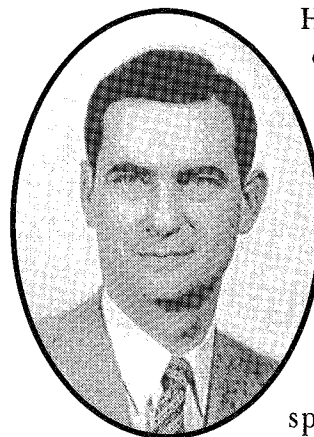
Howard C. Barlow, a graduate of Carnegie Institute of Technology with a B.S. in Electrical Engineering, served in the European Theater in World War II. One of his major assignments was as Communications Planning Officer for the Normandy invasion. While he was overseas, he designed various types of specialized communications equipment.

After the war, Barlow stayed in the cryptologic profession and joined, as a civilian, what later became the National Security Agency (NSA). He worked in the Research and Development division as one its first COMSEC engineers. By 1954, he had risen to the level of Division Chief.

From 1955-1956, Barlow attended the Harvard Middle Management Program, graduating with a Master's degree in Business Administration.

Returning to NSA, he took a tour in Operations before being named the Deputy Director for Research and Development in 1958. He held this position until 1962, when he was made Assistant Director for COMSEC (ADC), a position that he held until 1973. His insights and management skills created a world-class analytic and engineering organization that was able to meet the communications needs of the Vietnam era and the Cold War. His political skills enabled NSA to forge significant COMSEC relationships with U.S. Allies and become the leader for COMSEC in NATO.

Over a long and illustrious career, Howard Barlow received many awards, including the NSA Exceptional Civilian Service Award in 1967 and in 1973, the Department of Defense Distinguished Civilian Service Award, the highest DOD award granted to a civilian. This award recognized "his outstanding contributions to the national cryptologic and communications security efforts . . . . [He] applied vigor, imagination, and a high level of managerial skill to a vital and demanding field during a period of unparalleled expansion and rapid technological change. He [was] also a creative design engineer, and in this capacity [was] directly responsible for a number of highly significant technical advances in cryptographic equipment. His dynamic leadership and outstanding professional competence . . .produced contributions to national security which warrant the highest recognition which can be given an employee of the Department of Defense."
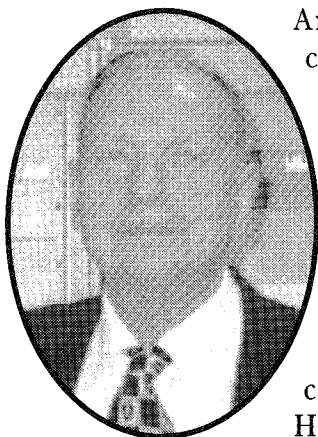
An extraordinarily creative cyptomathematician whose accomplishments spanned a 31-year career at National Security Agency (NSA) and its predecessor agencies, Mahlon E. Doyle was an inventor, innovator, and author, who profoundly affected the design of modern cryptographic devices.

His COMSEC career began in 1949 as cryptanalyst studying the new field of electronic key generators. Doyle was one of the pioneers in using mathematical notation to describe the motion of key generators and applying mathematical techniques to analyze them. He quickly established himself as the leading COMSEC cryptanalyst against electronic key generators when he discovered two general attack techniques that helped to lay the ground work for significant SIGINT exploitation.

In 1956, Doyle joined the COMSEC Research and Development (R&D) organization as a cryptomathematician. By 1961, he had risen to Chief of the Cryptomathematics Division, a position he held until 1977, when he was named Senior Cryptographer in the COMSEC R&D Office. The division was responsible for designing the cryptographic algorithms used by the U.S. and its Allies to protect classified information and the U.S. Nuclear Command and Control System.

Doyle designed the cryptologics for major COMSEC systems that were used by the government for four decades. From the 1960s on, most U.S. government COMSEC equipment used cryptologics that were either designed by Doyle or designed by others based on his research.

Significant contributions to the design of COMSEC system architectures are also attributed to Doyle. He designed key management schemes that greatly enhanced the physical security of COMSEC devices and effected a dramatic decrease in the amount and cost of physically distributing key material.

Doyle was a prolific writer, publishing over 60 papers during his extended career. Most of the papers documented valuable advances to the cryptologic state of the art.

In recognition of his achievements, he received the NSA Exceptional Civilian Service Award in 1980. The citation praised his "invaluable contributions in advancing the state of the art of communications security of NSA.

HALL OF HONOR
Continued from page 7

For 31 years, Dr. Sydney Jaffe played a seminal role in building the institutional and intellectual foundation that have guided language work at NSA. His own career, both as a philologist-linguist and as a linguist-manager, served to inspire other linguists.

With an M.A. and Ph.D. in French (Harvard), he entered the Army cryptologic services in 1941, made the transition to civilian status at the end of World War II, and served with the Armed Forces Security Agency and NSA.

One of Jaffe's lasting legacies was his central role in advocating and establishing the NSA Professionalization Program. Recognized as the Agency's foremost linguist-manager, in 1965 he was appointed first Chairman of the Language Career Panel. The program established concepts, principles, processes, and standards for linguists that continue to guide today's intelligence environment. This program led to the development of the current government and national standards and calibrated metrics for language proficiency. These standards now underlie every language curriculum and testing program in the United States.

Jaffe's second legacy to the Agency language community was the founding of the Crypto-Linguistic Association (CLA) in the same year. This organization helped end the relative isolation of many groups of linguists, gave them a sense of profession, and provided a forum in which they could share problems and accomplishments. In recognition of his many contributions to the profession, in 1972 the CLA established the Sydney Jaffe Award, presented each year to an Agency civilian linguist whose accomplishments have contributed to the mission of the cryptologic community in the tradition of scholarship, leadership, and achievement exemplified by Jaffe's career.

To further meet the Agency's mission, he was asked to develop the first instructional modules on the uses of language and present them in senior management courses. His achievements were recognized in his selection as Deputy Director of Training. In his final Agency assignment, Jaffe became Chief of the Language and Linguistics Division.

In 1972, Jaffe received the NSA Exceptional Civilian Service Award. He died in May of the same year.

ALAN TURING, BRITISH CRYPTOLOGIST AND COMPUTER PIONEER, REMEMBERED

Born in London, England, 23 June 1912, Alan Turing was a mathematical genius and computer pioneer. He applied the concept of the algorithm to digital computing, and his research into the relationships between machines and nature established the foundation for the field of artificial intelligence. As a cryptologist, his vital contribution to breaking the German U-boat ENIGMA cryptosystem through development of the "bombs" – machines that recovered cipher key settings – helped ensure the survival of Great Britain and Allied victory over Nazi Germany. Turing's contribution are recalled by a plaque recently placed in the National Cryptologic Museum alongside the sole remaining American Navy version of a bomb.

"THE PASSING OF A FRIEND" PART 2
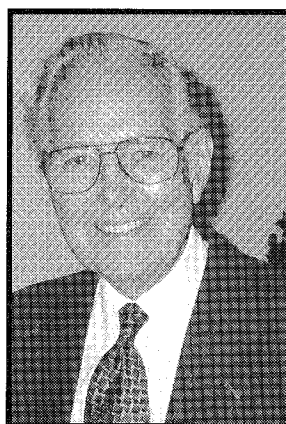
The spring 2001 issue noted the passing of a most generous, yet modest, friend and member of our Foundation, John Larkin, 86, on 1 June. Memorial gifts to the NCMF in his name have since been received from former colleagues, Mr. and Mrs. Charles Girhard of Severna Park and Mr. & Mrs. Selmer Norland of Silver Spring. His demeanor, as we will remember him, is well recalled in the accompanying snapshot. R.I.P.

MESSAGE CENTER

Mike Levin writes

"The many well deserved kudos appearing in newspapers, magazines, and on radio and television following the [July 2001] death of Katherine Graham, owner and publisher of the *Washington Post* for many years, all emphasize her strong commitment to freedom of the press and her winning fight to publish the so-called Pentagon Papers despite government claims of secrecy. There is a rarely quoted story, however, showing her understanding of the need for secrecy in certain sensitive intelligence matters, and of the damage that can accrue if that secrecy is violated by careless publication.

"Speaking to the English Speaking Union at the Guildhall in London in 1985, (and repeated as an op-ed in the *Washington Post* on April 20, 1986), while trying to emphasize the extent to which the press is willing to withhold potentially damaging information, she added:

"Tragically, however, we in the media have made mistakes. You may recall that in April 1983, some sixty people were killed in a bomb attack on the U.S. Embassy in Beirut. At the time here was coded radio traffic between Syria, where the operation was run, and Iran, which was support in it. Alas, one television network and a newspaper columnist reported that the U.S. government had intercepted the traffic. Shortly thereafter the traffic ceased. This undermined efforts to capture the terrorist leaders and eliminated a source of information about future attacks. Five months later, apparently the same terrorist struck again at the Marine Barracks in Beirut; 241 servicemen were killed."

From ICAF

Dr. Richard E. Shroeder, faculty member at the Industrial College of the Armed Forces, National Defense University, wrote to express appreciation for their visit to the Museum (highlighted in our Spring issue) and the presentations by Foundation members Tom Johnson and Jim Boone. He stressed the value of such input to providing students with a balanced appreciation of the contributions os all components of the Community . . . and expressed a bit of envy that his parent agency didn't have "a spare motel lying around . . . that we could take over as our museum!"

FOR THE BOOKSHELF

Two publications complement the NCM Coast Guard exhibit and will be of interest to those wanting more information from authoritative sources. David P. Mowry's *Listening to the Rumrunners* (NSA, Center for Cryptologic History) is available gratis at the Museum or from the CCH. Prepared originally to fulfill the requirement for a Master's degree from the Joint Military Intelligence College (formerly the Defense Intelligence College) in 1997-98, Eric S. Ensign's *Intelligence in the Rum War at Sea, 1920-1933*, edited by Dr. Russell G. Swenson of the JMIC appeared in January 2001 as an attractive, illustrated monograph. The author, a Coast Guard officer, did extensive research in public archives, interviewed NSA historian David Mowbray (above) and produced a product that is a credit to all concerned. It is a model of a historical study done from a modern perspective, alert to the parallels (and differences) in "then and now." Copies are available to the public through the National Technical Information Service (www.ntis.gov) or the Government Printing Office (www.gpo.gov).

ADJUSTING TO A STRANGE "NEW WAR"

In the introduction to his 1940 account of a Confederate chaplain in the Army of Northern Virginia, *Lone Star Preacher*, then Lieutenant Colonel John. W. Thomason, Jr., USMC, wrote of that generation.

In normal times – that is, when the nations move in their regular orbits as responsible planets march, and the children of men sit tranquil in those stations to which it pleased God to call them – times such as a whole generation alive today has never seen, and the rest of us will never see again in our lives – soldiers are of little account, and soldiering lowly regarded. But when war breaks on the world, you look around for men who understand the violent business of war – and you are genuinely concerned not to find them.

It would be a very comforting thing if we could, in this urgent year of 1940, call up from the ground those long-boned, hairy fellows whose armies traversed this country a lifetime ago. It would be a hopeful thing if they might be mustered

A WORLD OF LANGUAGES
Julie Wetzel, Program Chairman

Ms. Renee Meyer, NSA's Senior Language Authority, presented the second in a series of quarterly programs for about 80 Foundation members and guests on 11 June in the R&E Symposium Center at NSA.

Using "Night Flight to Venus," a song unfamiliar to most in the audience, Ms. Meyer demonstrated just how hard it is to determine the who, what, when, where and how of a communication for which we were the *intended* recipients. Since many in the audience were language analysts in their professional days, they didn't do too badly. Of course, there were many listening and answering together – a different scenario than what a professional language analyst would normally encounter – and critical national security questions were not dependent on their understanding the song's lyrics.

A dynamic, entertaining speaker, Ms. Meyer reminded us that, according to recent global Internet statistics, English is only spoken by 47.5% of the world's population and that number is declining as cultural pride re-emerges in states of the former USSR and elsewhere, and countries readopt their "own" language. In addition there are all kinds of speakers – terrorists, narcotics traffickers and other "bad" actors – using their own colloquial language.

All this presents a more complex foreign language challenge for everyone – not just the national security community and its customers. It takes time to learn another language – 3-8 years, depending on the complexity of the language and the ability of the student, according to Ms. Meyer. And the minimum professional capability is now level 3 or higher in listening, writing, speaking and reading. What this means is that today's language analysts must know all the essentials of standard speech, including the technical aspects of a professional field and have near complete comprehension of a variety of authentic prose on unfamiliar subjects. The multifunctional language analyst must then be able to effectively convey information to a national security policymaker.

Given this challenge, Ms. Meyer described a seven point strategy for meeting the language goals of NSA/CSS: military and civilian language analysts with the
- right skills at the
  - right places at the
    - right times with the
      - right tools doing the
        - right jobs.

How will NSA accomplish this? Here's the plan:
1. Account for all cryptologic language analysts by skill level: military, civilian, active and reserve service.
2. Apply language readiness indices to strategic planning by identifying language missions and skill levels required and comparing those to the tested skill level of language analysts.
3. Align personnel assignments and mission management to mission needs, remembering that a recently completed study showed that most language missions require level 3 or higher skills.
4. Manage, nurture and reward the language analyst cadre.
5. Develop a defined language career path that nurtures the multidimensional high end cryptologic language analyst.
6. Provide continuous learning through the National Cryptologic School, the Defense Language Institute, distributed learning, and the Internet.
7. Establish the formal study of cryptolinguistics by sponsoring a National Center of Excellence for Language.

Goals and strategies are fine, but what has actually been accomplished is what counts. Ms. Meyer concluded her talk with a progress report:
- Significantly more dollars have been invested in distributed learning endeavors.
- A five-step Hire-to-Retire Development Path is completed.
- More language hirees are on board as relations with top colleges and universities are reinvigorated and reinforced after years of a dearth of recruiting this skill.
- Incentives were raised for civilians.
- Language analysts at NSA are now managed as a corporate unit.
- A new global language test development effort is underway.
- A language database is up and running, identifying language analysts by skill.
- A daily language readiness index will be ready by Fall 2001 showing deficiencies that need

A WORLD OF LANGUAGES

attention and progress toward remedying them.
- The NSA/CSS Senior Language Authority position, answerable to DIRNSA, was established.

One measure of a successful talk is the quality and quantity of questions. In this case, there were many – all of which were addressed by Ms. Meyer. Refreshments were served afterwards, giving the audience an opportunity to meet Ms. Meyer and other expert language analysts who attended the session.

ADJUSTING TO A STRANGE "NEW WAR"

again, in their simplicity, their earnestness, and their antique courage. It would be an easy detail to instruct men of their proved and savage aptitude for war in the tactics and techniques introduced by the modern practitioners of that most ancient art. And our enemies would presently be confounded by us in all their knavish tricks.

For those men believed in something. They counted life a light thing to lay down in the faith they bore. They were terrible in battle. They were generous in victory. They rose up from defeat to fight again, and while they lived they were formidable.

As General Morrison noted at the outset, we are all adjusting to this strange new quasi-war of a strange new sort, and attempting to continue to provide you with some of the programs and projects designed for the Foundation membership. Try to keep posted on our Internet web site http://nationalcryptologicmuseumfoundation.com for timely information as we adjust. At present, we still hope to present a 7 December program on the Navy bandsmen of Pearl Harbor, who, having lost their ships, became cryptologists. Nearing his birthday in February, we hope to present a planned program about George Washington and the role of cryptology in the American Revolution. We may yet slip in a Fourth General Membership Meeting in the March-April period. And we anticipate sharing NSA's Golden Anniversary celebration in November 2002. Check the Web site for confirmation of time and place of such events.

GUARDING OUR COAST . . . WITH CRYPTOLOGY

its history . . . and continues to write it. It is fitting to quote here from the introduction to *Intelligence in the Rum War at Sea, 1920-1933.*

The lessons learned from the use of intelligence in the Rum War at Sea are totally applicable to today's War on
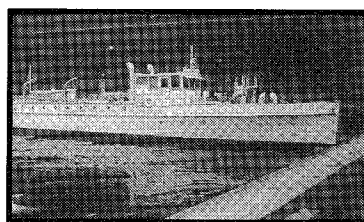
Drugs. Over ninety-five percent of the drugs that reach our border originate from source countries that rely on maritime smuggling routes. The value of intelligence as a force multiplier in the Drug War cannot be overestimated. Still, these lessons had to be learned anew in the Drug War. In 1988 intelligence was a factor in approximately fifteen percent of all interdictions. By 1998, it was the essential factor responsible for over eighty-give percent of all interdictions. It is disappointing to know that it took over a decade to convince the Intelligence Community, as well as other responsible agencies, that all-source, fused intelligence was the most important element of our maritime strategy, both for illegal drugs as well as illegal migration.

ADM Robert E. Kramer, Ret'd
United States Coast Guard
Commandant
1994-1998

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