

National Cryptologic Museum



Press Kit

America's Hidden Treasure



NATIONAL
CRYPTOLOGIC
MUSEUM

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Our Mission

Located at the edge of the National Security Agency (NSA) in Ft. Meade, Maryland, the National Cryptologic Museum provides visitors a unique opportunity to engage with cryptologic history in new and innovative ways — transporting visitors on a journey from the ancient world to present day exploring the dynamic role of cryptology in shaping our history.

As NSA's principal gateway to the public, the museum collects, preserves, and showcases unique cryptologic treasures and strives to serve as a valued cryptologic history resource for scholars, historians, and educators. The museum provides quality educational programming to share the stories of the people, technology, and methods that have defined cryptologic history, and serves as a dedicated research setting for scholars and the general public.



National Cryptologic Museum

Who We Are



Inside the museum, visitors can glimpse some of the most dramatic moments in the history of American cryptology, the people who devoted their lives to cryptology and national defense, the machines and devices they developed, the techniques they used, and the places where they worked. For visitors, the museum may provide a new understanding of events in American and world history. For cryptologic professionals, the museum is an opportunity to absorb the heritage of the cryptologic profession, examine artifacts firsthand, and access rare historical documents.

The museum is also an invaluable educational tool, benefiting thousands of students and teachers every year, by both in-person visits and virtual instruction. Staff and docents provide students of all ages the chance to learn about cryptology's impact on history and the possibility of exciting jobs in an area they may not have thought possible. The National Cryptologic Museum's Research Library maintains one of the most extensive collections in cryptology and serves as a vital resource for researchers and academia.

History

Established in 1993, The National Cryptologic Museum was the first public museum in the Intelligence Community (IC) and remains the only fully public museum in the IC. The staff has worked tirelessly over the years to develop a priceless collection of the nation's most rare cryptologic artifacts and documents. The collection contains thousands of artifacts that collectively serve to sustain and document the history of the cryptologic profession.



"As NSA historians, it's natural for us to want to tell our story. But not all of it, of course. You're not going to learn any current secrets here."

— Dr. Dave Hatch

Recent Background

Originally designed to preserve and house artifacts from NSA, the museum expanded over the years and recently underwent its first significant interior renovation since opening almost thirty years ago. Now in its final stages of restoration, the museum will open its doors to the public on Saturday, October 8, 2022. The new museum's design philosophy focuses on U.S. cryptologic history, allowing the visitor to not only view, but experience, the artifacts and displays. While the museum owns thousands of artifacts, it chose to highlight the very rare, or first of their kind. The goal is that visitors will leave with a new curiosity and desire to learn more about the history of U.S. cryptology.

A Long Journey

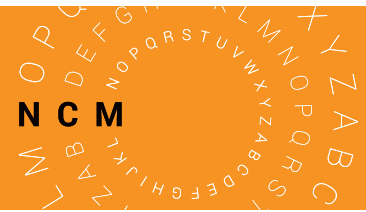
The museum's journey began more than 50 years ago during World War II. As combat intensified, so did the intelligence war. Captured Axis cryptographic equipment and material were examined and reverse engineered by the Army and Navy signal security services. After the war, the Army's holdings were designated as the Research and Development Museum Collection (RDM). The World War II artifacts were augmented by cryptographic devices from the 19th and early 20th centuries.

When the National Security Agency (NSA) was formed in November 1952, it inherited the RDM, which is still the core of the Cryptologic Museum's collection. In NSA's early years, legendary cryptologists William F. Friedman and Lambros Callimahos developed an abiding interest in cryptologic history and the RDM collection. Callimahos even set up a small "museum" next to his office at NSA, which he showed to privileged visitors. Thanks in part to the efforts of these two pioneers, the collection was kept intact well into the 1970s. In the late 1970s and throughout the 1980s, the curator of the collection, Earl J. "Jerry" Coates, designed and placed exhibits in the lobby of NSA's headquarters. These early displays covered such diverse subjects as the Enigma cipher machine, NSA's rare book collection, signals intelligence in the American Civil War, the Radio Intelligence Service of 1918-1919, cryptologic support for D-Day, and more. The success of the exhibits inspired Coates to begin to push for establishment of a true museum for NSA. With the support of NSA Director Vice Adm. Bobby Ray Inman, Coates loaned the Smithsonian's Museum of

American History several early-20th century and World War II cipher machines used by the Allied and Axis powers and helped install the museum's exhibit in 1981. This marked the first time that NSA had ventured into the public arena. Coates later loaned what is thought to be the last surviving U.S. Navy cryptanalytic Bombe—a precursor to the computer used to recover Enigma keys in World War II—to the Smithsonian. The Bombe, which had been on exhibit at NSA since 1985, became the centerpiece of the Museum of American History's new exhibit on The Information Age. At the end of the decade, NSA Director Vice Adm. William O. Studeman established the Center for Cryptologic History (CCH) and appointed David W. Gaddy as Director. Gaddy shared Coates's desire to open a museum within the Agency that would combine classified and unclassified exhibits for the education and enjoyment of NSA employees and distinguished visitors. But no suitable space could be spared within the NSA complex.

Excerpt from Studies in Intelligence Vol. 47 No. 3 (2003), Jack E. Ingram

Artifact Highlights



Cipher Reel, Army of the Confederacy, Ca. 1865

After the Confederates' surrender, the Union took possession of this rare cipher reel. It is one of only two known to have survived the war. The Vigenère Square, the 26x26 alphabet matrix wrapped around the spindle, provides excellent encryption when used properly.

The Confederates did not use it properly. Rather than encrypting entire messages, they would only encrypt important words, leaving the bulk of the message in plain English. They also tended to use the same three keywords throughout the war. Once Union telegraphers learned the keywords, they could decrypt intercepted messages by trying each one until they broke the message.



*These artifacts
are located in the
Early Years Section of
Gallery 1!*

Hebern Electric Code Machine, 1918

Hebern invented the Electric Code Machine in 1918. It was the first wired rotor cipher device in the U.S. The Code Machine worked in conjunction with an electric typewriter with the wired rotor acting as a scrambling device to change the signal from each letter key typed to a different letter. This created an enciphered message.

This is the very first Electric Code Machine that Hebern built at his machine shop in Oakland, CA. This brass-made machine features a single wired rotor for enciphering.

Artifact Highlights

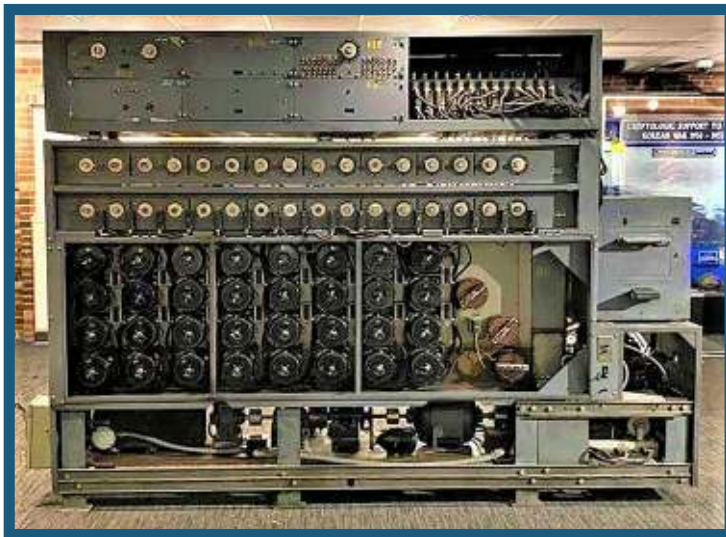


Four-Rotor Cryptanalytic Bombe, U.S. Navy, 1943

These U.S. Navy cryptanalytic machines had only one purpose: determine the settings of the four-rotor Enigmas used by German U-boats. Designed specifically to solve three-rotor Enigmas, British Bombes were unable to retrieve the correct settings for the four-rotor machines, so the U.S. Navy inaugurated its own Bombe project. Designed by Joseph Desch of the National Cash

Register Company in Dayton, Ohio, the U.S. Navy Bombes took only 20 minutes to test each of the 456,976 possible four-rotor settings. The first two prototypes were named Adam and Eve.

By the end of the war, 121 U.S. Navy Bombes ran 24 hours a day solving four-rotor Enigmas.



M209, U.S. Army, Ca. 1940s

The enemy could break messages from the M209 in a couple of days, but that was plenty of time for this portable encryption machine to keep vital tactical secrets. It uses a configuration of six cipher wheels, pins, and lugs to generate code one letter at a time, which is then printed on a narrow piece of paper. The M209 saw action during World War II and later in the Korean War, and no less than 140,000 were built during World War II.



*These artifacts are
located in the World War II
Section of Gallery 1!*

Our Staff

Dr. Vince Houghton, *DIRECTOR*

Dr. Vince Houghton is the Director, National Cryptologic Museum. He is the former Historian and Curator of the International Spy Museum, and has a PhD in Diplomatic and Military History from the University of Maryland, where his research centered on U.S. scientific and technological intelligence (nuclear intelligence) in World War II and early Cold War.



Dr. Houghton has extensive teaching experience at the middle school, high school, and university levels. During his most recent teaching tenure at the University of Maryland, he taught courses on the history of U.S. Intelligence, U.S. Diplomatic History, the Cold War, and the History of Science.

Dr. Houghton is a veteran of the U.S. Army, and served in the Balkans, where he worked closely with both civilian and military intelligence agencies in several capacities.

Dr. Houghton has made numerous media appearances, on a variety of media platforms that include: CNN, The New York Times, NBC News, Fox News, The Washington Post, The Wall Street Journal, The Atlantic, The Travel Channel, The History Channel, The American Heroes Channel, Vanity Fair, Maxim, and ESPN (online). Dr. Houghton has spoken publicly on many occasions to audiences ranging from middle and high school students, to the general public, and practitioners and experts in the intelligence field. He is the author of two books.



Sally Lockley, *CHIEF OF STAFF*

Sally Lockley is the Chief of Staff for the National Cryptologic Museum. She supervises the Museum staff and manages the day-to-day requirements for staffing, budgeting, facilities, and administrative requirements for the museum. Ms. Lockley joined the NSA in 2010. Before taking her position at the museum, Ms. Lockley held various management positions within the agency. She and her husband are retired from the U.S. Air Force and reside in Annapolis, Maryland.

Robert Simpson, *LIBRARIAN*

Robert Simpson is currently the National Cryptologic Museum Librarian, responsible for preserving, growing, and improving access to our unique, historical collection. Prior to that, he was the Deputy Chief of NSA's Office of Information Management and also served as the Technical Director of NSA's Office of Records Management Policy and Archives.

Previously, Mr. Simpson was the Team Chief in NSA's Declassification Office, where he led the team that performed the declassification review of the online versions of the William F. Friedman Papers. Mr. Simpson began his career in the U.S. Air Force, serving fifteen years in a variety of roles related to Signals Intelligence. He became an NSA civilian in 2002 and since then has been stationed at Fort Meade and NSA Texas and taken deployments to Afghanistan and other field sites.

Mr. Simpson holds a B.A. in History from the University of Maryland, University College. He served as the Editor-in-Chief of the University of Maryland's graduate student produced journal, *The Maryland Historian*, and spent three months as an intern for the late Senator Ted Stevens (R-AK), developing an archiving system for the senator's official photos.

Jennifer Wilcox, *DIRECTOR OF EDUCATION*

Jennifer Wilcox has been the Director of Education for the National Cryptologic Museum since 1999. For more than 20 years, a primary function of Ms. Wilcox's work has been researching, creating, and presenting a variety of educational programs, both in-person and virtual, for students and adults covering a wide range of cryptologic history topics.

Scott Bean, *EVENTS MANAGER*

Scott Bean is new to the museum, but has worked at the Agency for over 30 years in various capacities. His varied background enables him to bring a unique perspective to the museum, and share his extensive breadth of experience from his jobs across the Agency.

Spencer Allenbaugh, *COLLECTIONS MANAGER*

Spencer Allenbaugh is the Collections Manager for the National Cryptologic Museum. As such, he researches, preserves, and inventories the museum collection artifacts. Spencer has been with the Agency for five years, three of which have been working at the museum.

Deana Bowles, *CURATOR*

Deana Bowles is the museum Curator. Having navigated a bit of an unconventional career path, Deana did two tours overseas, then went back to school to earn her Master's degree in Museum Studies. This career change has enabled Deana to utilize her creativity and love of art for her work at the museum.

Connect with us!

PLAN YOUR VISIT

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Phone: (301) 688-5849

Email: crypto_museum@nsa.gov

Web: www.nsa.gov/museum

OPEN HOURS

Monday Closed

Tuesday 10AM to 4PM

Wednesday 10AM to 7PM

Thursday 10AM to 4PM

Friday 10AM to 4PM

Saturday 10AM to 4PM

Sunday Closed

PRESS INQUIRIES

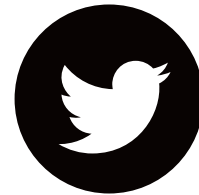
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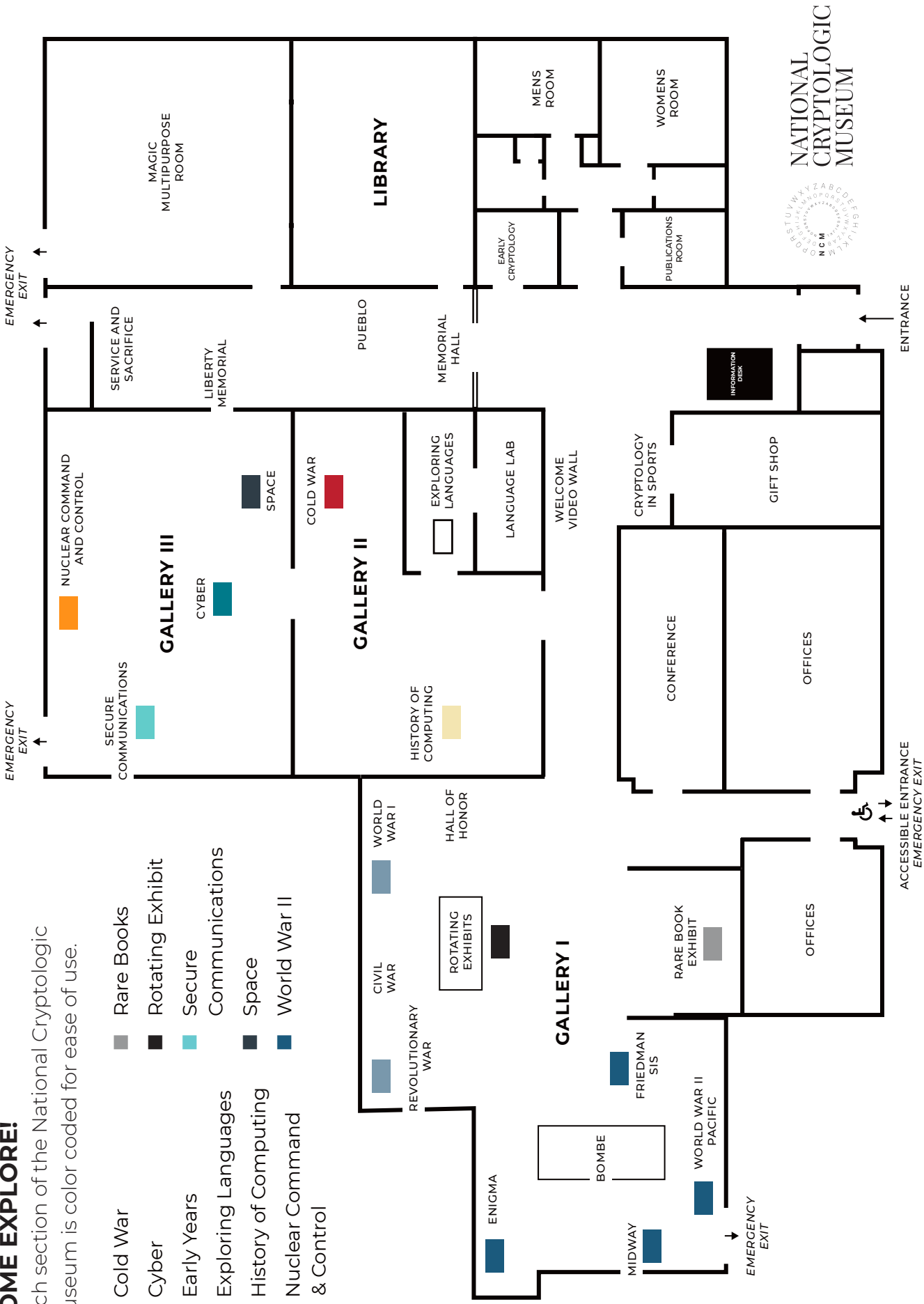


[virmuze.com/m/
crypto-museum/](http://virmuze.com/m/crypto-museum/)

COME EXPLORE!

Each section of the National Cryptologic Museum is color coded for ease of use.

- Cold War
- Cyber
- Early Years
- Exploring Languages
- History of Computing
- Nuclear Command & Control
- Rare Books
- Rotating Exhibit
- Secure
- Communications
- Space
- World War II





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