



CRYPTOLOGIC HISTORY SYMPOSIUM

ICONS & INNOVATION

Co-sponsored by the Center for Cryptologic History and the National Cryptologic Foundation

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Wednesday, May 11, 2022

SKETCHNOTED!	SESSION 1	8:30 A.M. – 9:15 A.M. EDT
Welcome	Mr. John A. Tokar, Chief, Center for Cryptologic History	
Keynote Address	Admiral Bobby Ray Inman, USN (ret.), former DIRNSA ● Recorded	

SKETCHNOTED!	SESSION 2	9:30 A.M. – 11:00 A.M. EDT
SESSION 2A		
Cyber Conflict & Competition		Moderator: Evan Rea
<i>What we have learned about networks and data as strategic risk and reward</i>		
Dr. Aaron Brantly	The State+: The Condoning of Substate Activities for National Gain	
Dr. Eric Novotny	The Ayatollah’s Kill Switch: Monitoring and Measuring Internet Shutdowns and Political Turmoil	
Dr. Thomas Rid	On Digital Counterintelligence	
Mr. JD Work	Cryptanalytic Enabling Operations against Cyber Targets by Nonstate Actors	
<i>Chair and Discussant: Dr. Emily Goldman</i>		

SESSION 2B		
Topics in UK Cryptology		Moderator: John A. Tokar
Dr. Chris Christensen	Bletchley Park’s Work on JN-25	
Dr. David Abrutat	Secret Messengers: How Bletchley Park’s Product was Disseminated during the Second World War	
Dr. David Kenyon	“A Divine Union Between Us and the People of Other Nations?” Exploring Racial Diversity in British SIGINT in South Asia, 1935-1945	

SESSION 3 11:15 A.M. – 12:00 P.M. EDT

Dr. David Hatch & Mr. Wade Forbes **The Making of “CryptoComics”** Moderator: John A. Tokar
● Recorded

 SKETCHNOTED!

SESSION 4 12:15 P.M. – 12:45 P.M. EDT

Ms. Erica Richards **The Making of “The Last Elephant Cage”** Moderator: Jessica Garrett-Harsch
● Recorded

SESSION 5 1:00 P.M. – 2:30 P.M. EDT

Cryptology in France: Strengths & Weaknesses ● Recorded Moderator: Jessica Garrett-Harsch
 Mr. Philippe Guillot
 Ms. Agathe Couderc
 General Jean-Louis Desvignes
 Professor Jean-Jacques Quisquater
 Chair: General Jean-Louis Desvignes

SESSION 6 2:45 P.M. – 4:15 P.M. EDT

SESSION 6A  SKETCHNOTED!

Long-standing Ciphers, New Cryptanalysis Moderator: Evan Rea

Dr. Richard Bean & Dr. George Lasry Breaking Historical Ciphers from the Biafran War
 Mr. Bob Bogart Charles Hafer’s Enciphered Diaries
 Dr. George Lasry Deciphering Papal Ciphers from the 16th, 17th, and 18th Centuries

SESSION 6B ● Recorded

World War II Tactical Signals Intelligence (SIGINT) Moderator: John A. Tokar

Major Spencer French Not Just LUCKY: How Patton’s Third Army Adapted to Generate Operational Level Information Advantage from March-August 1944
 Dr. David Hatch Tactical Naval SIGINT in the Battle for Iwo Jima
 Dr. Samuele F. S. Pardini Reading Literature, Deciphering History: How a Jewish-American Literary Critic Made Sense of WWII and Helped Win It

SESSION 6C

Collecting Signals Intelligence (SIGINT) ● Recorded Moderator: Jessica Garrett-Harsch

Mr. Gabe Marshall Early Remote SIGINT Collection: A Foretaste of Today’s Mission Operations
 Mr. Mark Borgerson USS SPHINX: The Last Special Projects Ship
 Mr. Darnell Washington The Sub Detection System you Probably Didn’t Hear About

2022

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Thursday, May 12, 2022

SESSION 7

8:00 A.M. – 9:30 A.M. EDT

SESSION 7A

Looking Back at the Secure Data Network System (SDNS) ● Recorded Moderator: Evan Rea

- Mr. Roger Callahan Framing the Context for the SDNS Program
 - Dr. Stephen Kent NSA’s SDNS Program: Its Impact on Internet Security Standards (and vice versa)
 - Mr. Russ Housley SDNS Influence on Email Security Standards
 - Mr. Alex Sharpe The SDNS - The Value is Still Being Experienced today, including the Cloud.
- Chair: Mr. Tony Rutkowski*

SESSION 7B

Cryptology and Prisoners of War ● Recorded Moderator: Jessica Garrett-Harsch

- Mr. Peter Bedini The MIS-X Code Section: Supporting Escape and Evasion in WW2
- Mr. Gregory Nedved Chinese POWs in Korea and Understanding Chinese Cryptology

SESSION 7C ✍ SKETCHNOTED!

Cryptology’s Intersection with Diplomacy Moderator: John A. Tokar

- Mr. Frode Weierud & Dr. Sandy Zabell Cryptology in the German Foreign Office, 1919-1954
- Ms. Jennifer Rigdon Teter British Imperial Censorship at Bermuda and the Interception of American Transatlantic Mail during World War II
- Mr. John F. Dooley Benjamin Brigman and Telegram 48

SESSION 8

9:45 A.M. – 11:15 A.M. EDT

SESSION 8A

Pre-Modern Cryptology

Moderator: Jessica Garrett-Harsch

Dr. Gerhard Strasser

Diametrically Opposed Innovations: “Mute communication” for Closed and Open Interaction in the 16th and 17th Centuries

Mr. Geoff Lee

Caesar’s Hidden Writing is Not a Cipher

SESSION 8B

Icons of Technology

Moderator: John A. Tokar

Dr. Olga Topol &
Sir Dermot Turing

Poland’s WW2 Cipher Machine: Icons and Legends

Dr. Nicolas T. Courtois

On the Peculiar Choice of Rotors in Enigma and other Historical Cipher Machines

SESSION 8C  SKETCHNOTED!

Explorations of Cryptologic Theories

Moderator: Evan Rea

Dr. Roger Stritmatter

Witty Numbers: Counting the Feet in Ben Jonson’s First Folio Cryptogram

Ms. Elonka Dunin
& Mr. Klaus Schmeh

Robert Thouless’s Paranormal Crypto Experiments

Mr. Austin Lubetkin

Rediscovering Coded Cyphers as Effective Methods for Digitally Interpreting Brainwaves

SESSION 9

11:45 A.M. – 12:15 P.M. EDT

Dr. Vince Houghton &
Mr. Robert Simpson

**Update on the
National Cryptologic Museum and Library**

Moderator: John A. Tokar

● Recorded

SESSION 10

12:30 P.M. – 1:05 P.M. EDT

Dr. Paul Nahay

The Parkway Chorale

Moderator: Jessica Garrett-Harsch

SESSION 11

1:15 P.M. – 2:45 P.M. EDT

SESSION 11A

A Trio of Technical Challenges and Innovative Solutions

Moderator: Evan Rea

Mr. Steven Loleski

Hard Targets: Revisiting Technology, Cryptography, and Cold War” Rules of the Game”

Dr. Ivo Juurvee

The Largest British SIGINT Liaison of the Interwar Years: Estonian Radio Intelligence against the Soviet Union

Mr. Klaus Schmeh

The Codes and Ciphers of the Red Army Faction

SESSION 11B

Going Online with KEPLER ● Recorded

Moderator: John A. Tokar

Operational tests of Kepler Lab's advanced workstation design, transcription and analysis aids, and human-computer interface innovations set benchmarks for future intelligence systems progress and acquisitions.

Mr. Glenn Nordin
Mr. Howard Thorpe
Dr. Steven H. Barry

SESSION 11C ✍️ SKETCHNOTED!

Women in Intelligence: British, Canadian, and American Perspectives

Moderator: Jessica Garrett-Harsch

Dr. John Ferris	Marie-Rose Egan, British Royal SIGINT from 1935-1948
Dr. Isabel Campbell	WRCNS to the Rescue: How the Women's Royal Canadian Naval Service Contributed to Canadian and Allied Intelligence Functions during the Early Cold War
Dr. David Sherman	Spies in the Family: A Father, A Daughter, and Two American Wars

✍️ SKETCHNOTED!

SESSION 12

3:15 P.M. – 5:00 P.M. EDT

Concluding Remarks Mr. John A. Tokar, Chief, CCH

Cryptologic Icons: Some Old, Some New ● Recorded

Moderator: John A. Tokar

Ms. Brenda McIntire	"Give to Ferner"
Ms. Amy Butler Greenfield	Elizebeth Smith Friedman, Abwehr Enigma, and Allied Codebreaking Cooperation, 1942-1944
Mr. Anthony Denzer	Personal Recollections of Brigadier John H. Tiltman
Dr. Nicholas E. Reynolds	Wall Street to the Rescue: Alfred T. McCormack, Amateur – and Expert – MAGICian
Mrs. Betsy Rohaly Smoot	The Case for Parker Hitt as the Father of American Military Cryptology

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