Computer History Archives Projects

Mark Greenia, Researcher and Producer
former University of San Francisco Adjunct Professor

Introduction
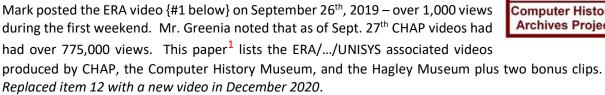
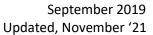Mark posted the ERA video {#1 below} on September 26th, 2019 – over 1,000 views during the first weekend. Mr. Greenia noted that as of Sept. 27th CHAP videos had had over 775,000 views.   This paper[1] lists the ERA/…/UNISYS associated videos produced by CHAP, the Computer History Museum, and the Hagley Museum plus two bonus clips. *Replaced item 12 with a new video in December 2020*.

Table of Contents[2]

This paper edited with Microsoft Word – Thanks to Paul Dickson for the original link listings.

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[1] Video source credits are at the end of the YouTube videos, a few but not all are copied herein.

[2] If viewing with a PDF reader, click on any section for a quick scroll thereto.

1. Computer History "Engineering Research Associates" - Atlas, ERA 1101, Univac Sperry Rand Minnesota

Published on September 25, 2019 – 18 minutes
https://www.youtube.com/watch?v=Tk9DGpwmiwA

This unique video presentation introduces the origin and history of ENGINEERING RESEARCH ASSOCIATES, Inc. ("ERA") a pioneering and influential computer company founded in Minnesota in 1946 – the start of the ERA/UNIVAC/Sperry/UNISYS 1100 computer series.

Formed and staffed by former members of the U.S. Navy's top-secret communications intelligence organization known as OP-20-G, it was instrumental in helping to advance the digital computer age.

In July 1946, the Navy communications intelligence authority formed a specialized organization called the Communications Supplementary Activity (CSA). Members of that group, formed ERA, which later joined Remington Rand Univac (Sperry, now UNISYS). Their groundbreaking engineering resulted in the rotating magnetic drum memory and other advancements, making it a forerunner of many of today's modern computers.

The history and legacy of ERA, continuing up to the present, is a fascinating story of technological innovations and contributions to the computer industry.
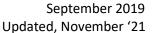
Uploaded by the Computer History Archives Project (CHAP). Editing/compilation: Mark Greenia; modern narration: James Izzo; Sperry narration: Mark Greenberg.

With Very Special Thanks to:

- Mr. Tony Buglione - Manager External Communications & Media Relations - UNISYS Corporation - http://www.unisys.com
- Lowell Benson - VIP Club P.O. Box ~~131748 Roseville, MN 55113-0020~~ – 21903, Eagan, MN 55121. http://www.vipclubmn.org
- Don Weidenbach - VIP Club (& former ERA engineer)
- Amanda Wick, Interim Archivist - Charles Babbage Institute Archives - University of Minnesota Libraries - Minneapolis, MN http://www.cbi.umn.edu
- Angela Schad, Reference Archivist, Digital Archives Specialist - Audiovisual Collections & Digital Initiatives - Hagley Museum and Library - Wilmington, Delaware - http://www.hagley.org
- Dag Spicer, Senior Curator - Computer History Museum - Mountain View, California - http://www.computerhistory.org

The **VIP Club** is designed for retirees and former employees of Unisys, Lockheed Martin, and their predecessor companies (e.g., ERA, Univac, Sperry, Remington Rand, Burroughs). You are invited to look at their Membership page and the Benefits of joining! http://vipclubmn.org/Membership.html

VIP CLUB
Established in 1980

Other References and Sources:

- Ed Thelen, Computer History site - http://ed-thelen.org/comp-hist/
- U.S. Library of Congress
- U.S. National Archives
- National Aeronautics and Space Administration
- Bitsavers.org -- ERA documentation

2. 1977 Sperry UNIVAC Drive Exerciser Diagnostic Unit:

Published on March 20, 2019   1,055 views – 4.5 minutes

https://www.youtube.com/watch?v=Ik2FfFU-PSY Sperry Univac Computer History, in this segment, we look at the "Drive Exerciser & Diagnostic Unit" – or - "D.E.D.U."   A unique, portable diagnostic unit for early magnetic disk storage drives. We have one of these DEDU machines in the Computer History Archives collection, and there is another at the Digital Heritage online museum in Germany. Over 40 years old, this impressive tech gadget definitely is built to last another 100 years. The DEDU is a great example of mid 1970's technology.   Hope you enjoy this brief look into the past.   (Yes, the woman in red is from an actual Sperry advertisement of 1975.)

Production/Editing: V.R. Kaminsky, for the Computer History Archives Project.

3. 1961 Remington Rand UNIVAC "What Do You Want?" Sperry UNISYS LARC Athena Solid-State Computers

Published on October 24, 2018   1,104 views – 21.5 minutes.

https://www.youtube.com/watch?v=gdZBNHgkc_E

A newly restored version of the Remington Rand UNIVAC film "What do you want?"   ~ Vintage material highlighting computer advances from 1946 through 1961. The original marketing film, courtesy of Hagley Museum and Library, --- digitally enhanced for easier viewing. Original 1961 narration has been maintained, including a fascinating talk by J.P. Eckert. Includes a Bonus Photo Gallery. Run time: 20 mins. Hope you enjoy! Comments and thoughts are welcome. ~ Uploaded by Mark Greenia, for the Computer History Archives Project.

Special Thanks to:

Kevin Martin, Mellon Curator of Audiovisual and Digital Collections
Angela Schad, Reference Archivist/Digital Archives Specialist
Hagley Museum and Library, Wilmington, DE

VIP CLUB
Established in 1980

4. 1949 BINAC: Binary Automatic Computer, History Mauchly Eckert EMCC UNIVAC First Stored Program, U.S

Published on September 16, 2018   1,908 views   12.5 minutes
https://www.youtube.com/watch?v=udJUWenPK4w

A very special presentation featuring rare films & photos (many previously unpublished) of the 1949 BINAC computer. BINAC was designed by Dr. John W. Mauchly and J. Presper Eckert, inventors of ENIAC & UNIVAC. BINAC was the first computer built by their fledgling computer company "Eckert-Mauchly Computer Corporation" (EMCC).   BINAC predated UNIVAC I and included groundbreaking technologies.

BINAC the first stored-program computer in the U.S., built for Northrop, used Mercury Delay Line Memory, over 1,400 tubes and employed two identical computers, each one checking the other.

In this 12-minute presentation, you will see footage of the BINAC in operation and a very rare 1948 "behind- the-scenes" film courtesy of John William Mauchly Jr. (son of inventor Dr. John Mauchly) showing EMCC engineers during the computer's construction.

Eckert-Mauchly Computer Corporation was purchased by Remington Rand in 1950, and the famous UNIVAC I was released in 1951. Many groundbreaking computers followed, including UNIVAC Solid-State, Univac File Computer, Univac Scientific, UNIVAC-LARC and others.

Now part of Unisys Corporation, the "Sperry-Remington-Rand Univac" family of computer experts, along with those of Engineering Research Associates (ERA), encompassed some of the world's leading computer visionaries during in the 1950's and early 60's. We hope you enjoy this great vintage material.

Thank you for watching. ~ Compilation/Editing, Mark Greenia, for the Computer History Archives Project.

5. 1996 Vintage UNISYS marketing film Computing in Society & Business – History

Published on August 19, 2018   817 views – 20.5 minutes.
https://www.youtube.com/watch?v=7paS2I2SR8E
Rescued and restored from an old VHS tape, this 1996 UNISYS marketing video has some interesting bits of history.   The film's creators used an odd way of slanting the still and video images, but it is presented here in its original format, unedited, for its historical and educational value. A fun trip back through history. Run time: 20 mins.

Hope you enjoy! [3]Comments are welcome!

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[3] YouTube videos provide the means for viewers to post comments.

6. 1951 UNIVAC I Computer Basic System Components First Mass Produced Computer in U.S.

Published on Jul 3, 2018   7,315 views – 25 minutes.
https://www.youtube.com/watch?v=ZU-IVshCAss&t=352s

An educational overview of UNIVAC I basic components. Intro segment includes higher quality images than are contained in the original film. Original 1953 film begins at index 5:52, followed by brief photo gallery. Original 16mm seems to have been lost over time. UNIVAC was the first U.S. business computer; mass produced and opened the door to a long line of commercial computing products. The historical data in the film is well worth preserving and the introductory images may help add some clarity.

* A large number of dedicated individuals have done a great deal to preserve the history of these early machines and those that followed.
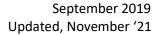
For more information, please visit some of the following excellent resources. Sincere thanks to the following individuals and organizations.

- Tony Buglione, Manager Ext. Communications, Media Relations, UNISYS
- David Melvin, Professional Narration "Large Scale Scientific Computing at Lawrence Livermore National Laboratory,"
- (George Michael & others); Sam Coleman & others http://www.computer-history.info/
- Alan Reiter's UNIVAC history http://univac1.0catch.com/
- Al Kossow's Online Software Archive http://www.Bitsavers.org
- VIPClubMN.org, (former employees of Unisys & predecessor companies), Lowell A. Benson, director/editor; Harvey Taipale, President; Ronald Smith, Historian, http://www.VIPClubMN.org and UNIVAC articles at http://vipclubmn.org/BlueBell.html
- Ed Thelen, Computer Historian http://ed-thelen.org/comp-hist/
- The Computer Museum http://www.computerhistory.org
- Southwest Museum of Engineering, Communications & Computation (SMECC), Ed Sharpe Archivist , http://www.smecc.org/
- National Aeronautics and Space Administration ("NASA") archives Lawrence Livermore National Laboratory ("LLNL")

YouTube film Index: 0:06 Dedication 0:10 Prologue, Introduction 01:32 Introduction - Remington-Rand 02:15 Narration & Images – Supervisory Control Unit, Oscilloscope, Central Processing Unit, Uniservo, Unityper, Uniprinter, Mercury Delay Line Memory, Vacuum tube circuits, Card-to-Tape Unit, High Speed Printer 05:47 Acknowledgments & Resources 05:52 Original Remington Rand Film 1953 23:25 Photo Gallery & Resources 24:26 Copyright Notice 24:29 Acknowledgements 24:41 Deleted Scene

Compilation editing by Mark Greenia, for the Computer History Archives Project; Professional Narration, David Melvin. (C) 2018 – CHAP

7. Early Tape Drives:

Published on June 4, 2018   9,911 views – 28 minutes
https://www.youtube.com/watch?v=IEYyZSlQEdg

An educational, hopefully enjoyable, brief look back at Early Computer Magnetic Tape Units (1951 to 1968). Vintage photos & film show a variety of early hardware, including IBM 726-729 Tape Units, IBM NORC, early AMPEX drives used by GE for ERMA, NCR and other systems. Also mentioned in the Gallery are Honeywell 800, Philco Transac, CDC 6600 and others. A Computer History Archives Project (CHAP) video production, production/editing, Mark Greenia.

8. Fastrand Drums:

Published on March 23, 2018   7,070 views – 14 minutes
https://www.youtube.com/watch?v=luPM6XaKZuU

A Brief Tribute to the Sperry Rand FASTRAND mass storage device of 1963-1970's. One of Sperry Rand's (Univac) unique contribution to magnetic storage devices. Compiled & Edited by Mark Greenia; Narrated by Joel North.

9. Early Vacuum Tube Computers Overview:

Published on February 3, 2018   23,859 views – 14 minutes
https://www.youtube.com/watch?v=WnNm_uJYWhA

Computer history Educational photos & films provide a brief, non-technical overview of several early vacuum tube computers. Computers mentioned include Colossus, ENIAC, UNIVAC I, UNIVAC 120, Harwell Dekatron, LEO I, SAGE, and Whirlwind. Intended as a very basic introduction to the topic, it also mentions specific tube types found in UNIVAC 1 and Whirlwind 1 computers. Production/editing: Mark Greenia; Narration: Baz Jones. Uploaded by the Computer History Archives Project. Run Time: approx. 13 mins.

10. 1960's Sperry Rand Univac NASA Apollo Computer History 1230, 494, NASCOM, NASA,

Published on November 19, 2017   6,894 views – 18 nubyrwa
https://www.youtube.com/watch?v=nsy2QAboRzE

Special Thanks go to:

Tony Buglione, Corporate Media, Unisys Archives; NASA Archives; US Air Force Archives; US Navy Archives; Lynsey Sczechowicz, A/V Archivist Hagley Museum and Library, Wilmington, DE 19807 ;Colin Mackellar, http://www.HoneysuckleCreek.net (Australia tracking site); Bob Burns, http://www.HoneysuckleCreek.net; VIP Club Information Technology Pioneers - http://www.VIPclubmn.org; Ed Thelen's computer site - http://www.ed-thelen.org/;

David Melvin, Professional Narration; Jeff Quitney, vintage videos restoration

11.   Sperry Univac System 80:

Published on June 8, 2017   13,380 views – 40.5 minutes
https://www.youtube.com/watch?v=6-aKrCUIjfo

Previously unpublished, this rescued vintage film has been edited, expanded and preserved for historical value. Some audio problems remain, but many have been fixed. Circa 1979-1980, it features the release of Sperry Univac's System 80 mid-range computer. Original film rescue Computer History Archives Project. Just under 40 minutes long, the film features Sperry Univac personnel talking up the latest new computer -- The Sperry Univac System 80. (for 1980). Parts of the original film had sound issues, and these have been largely corrected, with a bit of new narration added and some photos. Lots of talking here, but great flavor of a late 1970's computer -promo-"pep-talk."   Hope you enjoy

Speakers include: J. Presper Eckert (speaks in two different parts of the film), Bob Vernon, VP of Marketing and Planning, John B. Wise, Dir of Marketing, (former RCA product manager) Bill Simon, Director of Engineering, Paul Aspen, Director of System Development, Bill Grand, Manager Maintainability, Ferd Buttschardt, Group Manager, Software Development

* * Provided Under License from Unisys Corporation * * for Educational, Non-Commercial Use - Sperry Univac is a registered trademark of Unisys Corporation.

Special Thanks for continued support and guidance to:

Tony Buglione, UNISYS Corporation; Robert Marley, UNISYS Corporation; Dag Spicer, Senior Curator, Computer History Museum; Dan Berman, Rhode Island Computer Museum; David Charles, Colorado Computer Museum; The Hagley Museum and Library; Ed Thelen, Computer Historian; Jordan, of Video Labs (transfer);
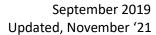
12.   Computer History: Origin of the UNIVAC 1103A Scientific Computer (1953, 1956) ERA, Sperry Rand, Sperry, Unisys

This presentation explores the history of the UNIVAC 1103A SCIENTIFIC COMPUTER, the most powerful scientific computer of its time. Used by the U.S. Navy, Air Force, National Security Agency, NASA, and many others. Rare films and high-quality photos show the development of the machine from its early predecessors in 1950, to its first release in 1953. Designed to meet government cryptologic specifications, the 1103A was modified for commercial use as well as continued military use. The 1103 was a product of Engineering Research Associates (ERA), Division of Remington Rand UNIVAC.   Run time about 15 mins. Presented by the Computer History Archives Project (CHAP), **https://youtu.be/WbfCJZXxvw4**

Originally published on March 1, 2016   4963 views – 7 minutes - title was: *1956 UNIVAC Scientific Computer 1103A Engineering Research Assoc. ERA, Sperry Remington Rand Unisys*
UNIVAC Scientific Computer: Brief but rare film footage of the UNIVAC 1103A Scientific Computer in action. A successor to the early ERA computers, the UNIVAC 1103A was used by many U.S. Government agencies during the 1950's.   Vintage film footage shows the operations console, tape units and some of the peripherals. Presented for educational purposes by Computer History Research Project. Compiled and edited by Mark Greenia. Narrated by David Melvin.

The UNIVAC 1103A of 1956 was an improved version of the 1103 of 1953.

13. Punch Card History Overview:

Published on January 5, 2016   10,753 views – 10.5 minutes
https://www.youtube.com/watch?v=kKJxzay85Vk

(Revised *)   A 10-minute educational look back at punch cards from the early 1900's up to the 1960's. Vintage films and photos of early IBM, Remington Rand and other keypunch, tabulating, calculating and computing machines. - Special thanks to IBM Archives, UNISYS Archives, US Government Archives and others, for vintage material. Compiled and edited by Mark Greenia, Computer History Archives Project. Narrated by David Melvin.

(Revised to improve audio and remove excess background music.)

14. Univac Uniservo Tape Drives:

Published on September 22, 2015   10,756 views – 7 minutes
https://www.youtube.com/watch?v=-KuoZ6cades

An overview of the 1951 UNIVAC UNISERVO Tape Drive, the first use of digital magnetic tape reel devices on computers. Tapes were made of a Nickel-Bronze alloy called "Vicalloy." This clip describes the tape drives in detail with close-up footage of the UNISERVO machines in operation. An educational presentation compiled and edited by Mark Greenia, for the Computer History Archives Project. Narrated by David Melvin.

15. Sperry Univac 1050:

Published on September 13, 2015   13,505 views – 5.5 minutes
https://www.youtube.com/watch?v=hkobjQKx19A&t=100s

Brief educational video featuring UNIVAC Model 1050-II used by the US Air Force beginning in 1963 and lasting many years. UNIVAC 1050 was part of Air Force Standard Base-level Supply System (SBSS) automation strategy for material and logistics.   Film shows operator's console, card reader, card punch, high speed printer and tape unit.   Includes photos and rare film clips from 1963-1966, including US Base in Da Nang, Viet Nam.   Editor: Mark Greenia; Narrator: David Melvin.

16. Univac History Slide Show:

Published on Jan 11, 2015   7417 views.
https://www.youtube.com/watch?v=Ikj2fJY-5Dg&t=113s

Slide show featuring selected vintage photos of UNIVAC computers from 1951 to 1971. A "Computer History Archives Project" presentation for educational use and historical comment. Run time about 8 mins. BW & Color. If you used or worked on any early UNIVAC computers, please feel free to comment and share your experiences. We hope you enjoy this brief look back at these early machines.

17. Remington Rand Univac presents Then and Now:

Published on October 11, 2011 4,382 views – 14.5 minutes.
https://www.youtube.com/watch?v=BaQrtzaSFqI&t=51s - This is a re-post of the next video.

18.   UNIVAC - Information Age: Then and Now

Published August 15, 2008 by the Computer History Museum`- 13 Minutes
https://www.youtube.com/watch?v=h4wQJfdhOlU [Recorded 1960]

This humorous promotional film for the Remington Rand UNIVAC computer features J. Presper Eckert and John Mauchly in leading roles. Produced in 1960, the film outlines the earlier history of computing leading to the development and application of the UNIVAC computer.

J. Presper Eckert and John Mauchly, the major figures in the creation of the ENIAC computer, left the University of Pennsylvania's Moore School of Engineering at the end of WWII to start their own firm. They had hoped to be the first to exploit the new concept of the electronic stored program computer, but were hampered by a lack of funds and, to some extent, by the bureaucracy surrounding their only major customer, the Census Bureau. They sought other investors but never had enough to properly complete their projects.

They eventually sold their business to Remington Rand (later Sperry Rand) who incorporated it as the UNIVAC division of the company. Eckert remained with UNIVAC all his life but Mauchly left after a few years to become a private consultant.

Remington Rand's Univac Division produced some of the earliest commercially available machines ahead of more famous firms such as IBM. The large management structure of the company often frustrated their engineers, many of whom left to found other very influential computer firms (e.g. Control Data Corporation). This bureaucracy is thought by many (including their Vice President, J. Presper Eckert) to have eventually limited their ability to take advantage of rapidly changing technology and to lose the lead to other firms such as IBM.

In 1955 the Sperry Corporation and Remington Rand merged forming Sperry Rand. Sperry Rand then eventually merged with Burroughs to from Unisys and which is still in business.

You can learn more about computing history at the Computer History Museum website: www.computerhistory.org - Catalog number: 102639862 They too have a listing of videos, http://tcm.computerhistory.org/videos.html

EPILOGUE

Thanks to Paul Dickson for providing an initial list of previous Univac, Sperry, and Unisys postings. Thanks to Mark Greenia for providing the CHM non-YouTube video links.

The first video (#1) could be tagged as the "first of the story." All the others are part of "the rest of the story" as are the other IT Legacy papers posted at http://vipclubmn.org/OurStories.html and in the Club's Legacy Anthology, http://vipclubmn.org/Legacy.html.

As a side note, the CHAP logo has a symbol that looks like a miniature UNIVAC magnetic tape reel with the word 'INIVA' – The illustrator left off half of the beginning U and dropped the ending C. Part of the UNIVAC history of magnetic tape recording is http://vipclubmn.org/Articles/EMCC-4.pdf.

PS: Bonus videos

Remington Rand UNIVAC 120 (1953 Computer found in 2015, in Tokyo)

https://www.youtube.com/watch?v=yBL9HRqHhkk, Posted March 14, 2015 – 1915 views – 1.3 min., by ANTHROBOTICvideos. Quick video shot during a visit to Tokyo University of Science's archive of calculator and computer technology. Related Post: TERMINAL ANANCHRONISM: Decomposing UNIVAC 120 Computer - - http://bit.ly/1bmrDgD.

Viewer comment: Great video! This computer was originally called the Remington Rand 409 control panel programmed punched card calculator. It was designed in 1949 and sold in two models: the UNIVAC 60 (1952) and the UNIVAC 120 (1953). Look closely and you will see the vacuum tube pluggable units on the front of the display. The machine was originally designed in "The Barn", in Rowayton, CT, a building that currently houses the Rowayton Public Library and Community Center.

1972 Univac 8008 8-Bit Micro Computer (Vintage Computer Collection)

https://www.youtube.com/watch?v=9KojS1ezQIY, Posted Jan11, 2015 by Craig Solomonson, 16 min.

This very early micro-computer was built by the Univac Research & Development Division in St. Paul, Minnesota in 1972. It was built around the Intel SIM8-01 development system which is also called the MCS-8 computer. It features a very early SIM8-01 board which was ordered in April of 1972. Construction of the computer took place in the summer of 1972 and by the fall, the computer was being programmed and demonstrated to internal Univac groups and the military. This makes this computer the earliest known 8-bit system to be completed and operational. The computer interface was designed by Univac and the system includes the main computer, a PROM Programming unit, and a Teletype for Input/Output functions. I bought it at an electronics swap meet in Minneapolis in 1980 from a Univac engineer who was also an active member of the Univac Computer Club. The case is thick, red translucent plastic and very well designed and fabricated. This is one of the earliest operational 8-bit microcomputers and a great example of the initial wave of micros inspired by the Intel SIM8-01 board. {Steve Newcomer was the Sperry designer and researcher.}

Who am I? A person passionate about the ERA to UNIVAC to Unisys history and a bit player in this, our Minnesota computer and systems legacy, - http://vipclubmn.org/PeopleDocImg/Vol01Book1.pdf.

Please enjoy every one of the videos/films linked from this paper, I have! 😊