



Smithsonian Institution Archives

Development of the Electrical
Numerical Integrator and Computer
(ENIAC) Videohistory Collection, 1988

Finding aid prepared by Smithsonian Institution Archives

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Collection Overview

Repository:	Smithsonian Institution Archives, Washington, D.C., osiaref@si.edu
Title:	Development of the Electrical Numerical Integrator and Computer (ENIAC) Videohistory Collection
Identifier:	Record Unit 9537
Date:	1988
Extent:	2 videotapes (Reference copies). 7 digital .wmv files and .rm files (Reference copies).
Creator::	
Language:	English

Administrative Information

Preferred Citation

Smithsonian Institution Archives, Record Unit 9537, Development of the Electrical Numerical Integrator and Computer (ENIAC) Videohistory Collection

Historical Note

The ENIAC (Electrical Numerical Integrator and Computer), the largest and most powerful early computer, was designed to compute the paths of artillery shells, and to solve computational problems in fields such as nuclear physics, aerodynamics, and weather prediction. The U.S. Army Ordnance Department funded The Moore School for Electrical Engineering at the University of Pennsylvania to build the computer between 1943 and 1945. J. Presper Eckert and John W. Mauchly were the principal designers. The ENIAC computed a thousand times faster than any existing device.

J. Presper Eckert (1919-1995) attended the University of Pennsylvania, where he received a B.S. and M.S. in electrical engineering, in 1941 and 1943 respectively. He received an honorary D.Sc. from the same university in 1964. He became chief engineer at The Moore School of the University of Pennsylvania for the ENIAC in 1944 through 1946. In 1946 he became vice president for the Eckert-Mauchly Computer Corporation. He was appointed vice president for the Remington Rand Division of the Sperry Rand Corporation, 1955-1962, and remained in that position when the company became UNIVAC and later UNISYS.

Introduction

The Smithsonian Videohistory Program, funded by the Alfred P. Sloan Foundation from 1986 until 1992, used video in historical research. Additional collections have been added since the grant project ended. Videohistory uses the video camera as a historical research tool to record moving visual information.

Video works best in historical research when recording people at work in environments, explaining artifacts, demonstrating process, or in group discussion. The experimental program recorded projects that reflected the Institution's concern with the conduct of contemporary science and technology.

Smithsonian historians participated in the program to document visual aspects of their on-going historical research. Projects covered topics in the physical and biological sciences as well as in technological design and manufacture. To capture site, process, and interaction most effectively, projects were taped in offices, factories, quarries, laboratories, observatories, and museums. Resulting footage was duplicated, transcribed, and deposited in the Smithsonian Institution Archives for scholarship, education, and exhibition. The collection is open to qualified researchers.

Descriptive Entry

In the *Computing Gallery, Computers Before 1946*, of the National Museum of American History (NMAH) on February 2, 1988, David K. Allison, Curator at NMAH, interviewed J. Presper Eckert about significant aspects of the design, development, and operation of the ENIAC. Specifically, the session documented both technical and non-technical aspects of the design of the ENIAC, including Eckert's engineering background, early uses of calculators to perform ballistics calculations, materials testing, and the assembly of components. Eckert demonstrated the operation of the accumulators, plug-in units, wiring conduits, and function tables with the original artifacts displayed in the gallery.

Much of the session was recorded for inclusion in the *Information Age* exhibit which opened at NMAH in May 1990. The video producer, Peter Vogt, frequently interrupted or stopped the interview to meet script and exhibit requirements. Therefore, this session has a number of rough cuts for a professional production.

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Computers
- ENIAC (Computer)
- History of science and technology
- Interviews
- Oral history
- World War, 1939-1945

Types of Materials:

- Transcripts
- Videotapes

Names:

- Allison, David K., 1950- , interviewer
- Eckert, J. Presper (John Presper), 1919-1995
- Mauchly, John W. (John William), 1907-1980
- United States. Army. Ordnance Department
- University of Pennsylvania

Container Listing

Interviews

Interviews

Session 1: February 2, 1988

Interviews

In the *Computing Gallery* of NMAH documented J. Presper Eckert's involvement with the design of the ENIAC, c. 1940-1988, including: Eckert's engineering background; early uses of calculators to perform ballistic calculations; materials testing; design and assembly of components; visual demonstration of the operations of the accumulators, plug-in units, wiring conduits, and function tables; discussion of differences between ENIAC and later technologies; additional visuals of the accumulators' rear panels and of calculators used prior to ENIAC development.

Interviews

Transcript, 1-55 pages of videotape recording, 2 hours, 20 minutes.

Interviews

Recording of Interview: Total Recording Time: 2 hours, 20 minutes

Note:

- Original Masters: 7 Beta videotapes
- Preservation Masters: 7 Motion jpeg 2000 and 7 mpeg digital files
- Dubbing Masters: 3 U-Matic videotapes
- Reference Copies: 2 VHS videotapes, 7 Windows Media Video and 7 Real Media digital files