



Smithsonian

*National Museum of American History Kenneth E. Behring Center*

## Guide to the Institute for Advanced Study Electronic Computer Project Drawings Collection

NMAH.AC.0815

Don Darroch and Robert S. Harding

2002

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## Collection Overview

<b>Repository:</b>	Archives Center, National Museum of American History
<b>Title:</b>	Institute for Advanced Study Electronic Computer Project Drawings
<b>Date:</b>	1949-1961.
<b>Identifier:</b>	NMAH.AC.0815
<b>Creator:</b>	Bigelow, Elizabeth Merkelson Bigelow, Julian Princeton University. Institute for Advanced Study Computer Project
<b>Extent:</b>	2 Cubic feet (3 boxes, 1 folder)
<b>Language:</b>	English .
<b>Summary:</b>	Correspondence, personal notes, articles, drawings, photographs, and published reports documenting the IAS Electronic Computer Project.

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## Administrative Information

### Immediate Source of Acquisition

Collection donated by Elizabeth Merkelson Bigelow and Julian H Bigelow on June 20, 2002.

### Related Materials

Materials in the Archives Center

Computer Oral History Collection, 1969-1973, 1977 (NMAH.AC.0196)

Institute for Advanced Study Computer Project Records, 1950-1957 (NMAH.AC.0401)

### Processing Information

Collection processed by Don Darroch and Robert Harding, 2002.

### Preferred Citation

Institute for Advanced Study Electronic Computer Drawings, 1949-1961, Archives Center, National Museum of American History.

### Restrictions on Access

Unrestricted research access on site by appointment.

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## Historical

The Institute for Advanced Study (IAS) in Princeton, New Jersey is an independent, private institution dedicated to the encouragement, support, and patronage of learning through fundamental research and definitive scholarship across a wide range of fields. IAS was founded in 1930 by Louis Bamberger and Caroline Bamberger Fuld as a center for intellectual inquiry. During its existence, the institute has had in residence many of the most highly regarded thinkers of the twentieth century. Julian Bigelow joined the staff of IAS in April 1946 and worked on the Electronic Computer Project. The Electronic Computer Project was initiated in 1946 by John von Neumann, a mathematician who had been working on ballistics computations during World War II. Von Neumann used the first version of the Princeton computer to calculate the results of the thermonuclear reaction of the first H-bomb in 1950. The project was terminated following von Neumann's death in 1957.

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## Scope and Contents

Collection consists of correspondence, personal notes, articles, drawings, and published reports documenting the Institute for Advanced Study Electronic Computer Project, 1949-1956. The bulk of the documentation dates from 1949 to 1954. The Office of Naval Research contracted with IAS to study and document the operation and engineering improvements on the electronic computer at IAS from July 1, 1952 to June 30, 1953. An earlier report by IAS on a study contracted for by the U.S. Army Ordnance Corps is also included. This study ended July 1, 1952 and the published report is in two volumes. Many of the drawings are in pencil and have no date, but there is one near complete set of blueprints for the Electronic Computer (drawings #1298 to #1072). Drawings range in size from 17" x 22" to 27" x 36". There is one folder of undated, black and white photographs that appear to document certain aspects of the Electronic Computer. The collection is arranged into five series: Series 1: Correspondence, Series 2: Chapter Drafts, Series 3: Notes and Drawings, Series 4: Photographs; and Series 5: Articles and Reports.

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## Arrangement

Divided into 5 series: 1) Correspondence; 2) Chapter Drafts; 3) Notes and Drawings; 4) Photographs; 5) Articles and Reports.

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## Names and Subject Terms

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

### Subjects:

- Computer science
- Computers

### Types of Materials:

- Correspondence -- 1950-2000
- Drawings -- 20th century
- Photographs -- 20th century
- Reports

## Container Listing

Series 1: Correspondence, 1954-1961

*Box 1, Folder 1*

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## Series 2: Book Chapter Drafts, 1953, undated

Box 1, Folder 2	Chapter Index
Box 1, Folder 3	Chapter 3, Shifting Registers, Bus Drivers, Shift Chain
Box 1, Folder 4	Chapter 5, Williams Memory System; slave scope, shielding, amplifier, deflection plate driver system, defelection generator adder and gates, alternating switch and pulse chain, discriminator routine gates, and synchronization with arithmetic unit.
Box 1, Folder 5	Chapter 7, Main control order flow, non-work orders
Box 1, Folder 6	Orders, 1953

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## Series 3: Notes and Drawings, 1950-1953

Box 1, Folder 7	Notes and drawings,, 1950-1952
Box 1, Folder 8	Select list of machine circuit drawings,, 1953
Box 1, Folder 9	Notes and diagrams of computer functions,, undated
Box 1, Folder 10	Miscellaneous notes and drawings,, undated
Box 3, Folder 1	Numerical list and description of drawings 1072 to 1221,, undated
Box 3, Folder 2	Drawings (#1298 to #1260),, 1950
Box 3, Folder 3	Drawings (#1259 to #1220),, 1950
Box 3, Folder 4	Drawings (#1217 to #1163),, 1950
Box 3, Folder 5	Drawings (#1157 to #1131),, 1949-1950
Box 3, Folder 6	Drawings (#1129 to #1100),, 1949
Box 3, Folder 7	Drawings (#1099A to #1072),, 1949
Box 3, Folder 8	Drawings (#1367 to 1299),, 1950-1951
Box 3, Folder 9	Drawings (B-2013 to B-1481),, 1953-1954
Box 3, Folder 10	Drawings (miscellaneous and unidentified), undated
Map-folder 1	Drawings (miscellaneous and unidentified), 1945-1953

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## Photographs, undated

*Box 1, Folder 11*

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## Series 5: Articles and Reports, 1950-1953

Box 2, Folder 1	Crane, H. September, 1954
Box 2, Folder 2	Goetz, J.A. and Geisler, H.J., Electron Tube and Crystal Diode, December 1953
Box 2, Folder 3	Nash, John, Parallel Control, 1954-08
Box 2, Folder 4	Syono, Sigekata, Theory of the Frequency Distribution, undated
Box 2, Folder 5	Wong, Sy, September, 1954
Box 2, Folder 6	Revised drawings for report, 1950-1953
Box 2, Folder 7	Final Progress Report of the Physical Realization of an Electronic-Computing Instrument, Part 1, January 1954
Box 2, Folder 8	Final Report on Contract DA-36-034-ORD-1023, April 1954
Box 2, Folder 9	Final Report on Contract DA-36-034-ORD-1646, Part 2, July 1954 to December 1956

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