

# **Nathaniel Rochester Papers**

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**Manuscript Division, Library of Congress  
Washington, D.C.  
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<http://hdl.loc.gov/loc.mss/eadmss.ms009241>

LC Online Catalog record:

<http://lcn.loc.gov/mm2002084839>

Prepared by Connie L. Cartledge

## Collection Summary

**Title:** Nathaniel Rochester Papers

**Span Dates:** 1935-1999

**Bulk Dates:** (bulk 1943-1977)

**ID No.:** MSS84839

**Creator:** Rochester, Nathaniel

**Extent:** 350 items ; 3 containers ; 1.2 linear feet

**Language:** Collection material in English

**Location:** Manuscript Division, Library of Congress, Washington, D.C.

**Summary:** Electrical engineer and computer designer. Correspondence, biographical material, data processing manuals, reports, oral history interviews, writings, photographs, certificates, and printed matter primarily documenting Rochester's work with military radar at Sylvania Electric Products and his endeavors to design computers and computer programs while employed with the International Business Machines Corp.

## Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

### People

Rochester, Nathaniel.

### Organizations

International Business Machines Corporation.

Massachusetts Institute of Technology.

Sylvania Electric Products, Inc.

### Subjects

Air traffic control.

APL (Computer program language)

COBOL (Computer program language)

Computer engineering.

Computer software--Development.

Computers.

Programming languages (Electronic computers)

Radar--Military applications.

Radar.

### Occupations

Engineers.

## Administrative Information

### Provenance

The papers of Nathaniel Rochester, engineer and computer designer, were given to the Library of Congress in 2001 by his son, Nicholas Rochester.

### Copyright Status

The status of copyright in the unpublished writings of the Nathaniel Rochester papers is governed by the Copyright Law of the United States (Title 17, U.S.C.).

## Access and Restrictions

The papers of Nathaniel Rochester are open to research. Researchers are advised to contact the Manuscript Reading Room prior to visiting. Many collections are stored off-site and advance notice is needed to retrieve these items for research use.

## Preferred Citation

Researchers wishing to cite this collection should include the following information: Container number, Nathaniel Rochester papers, Manuscript Division, Library of Congress, Washington, D.C.

## Biographical Note

<i>Date</i>	<i>Event</i>
1919, Jan. 14	Born, Buffalo, N.Y.
1941	B.A. in electrical engineering, Massachusetts Institute of Technology, Cambridge, Mass.
1941-1943	Member, Massachusetts Institute of Technology Radiation Laboratory, Cambridge, Mass.
1943	Married Ruth Bartlett (divorced 1973)
1943-1948	Department manager, Sylvania Electric Products, Boston, Mass.
1948-1955	Manager of computer engineering, International Business Machines Corp., Poughkeepsie, N.Y.
1954-1955	Member of Project Lamplight, a study of continental air defense for the armed services run by the Massachusetts Institute of Technology
1955-1958	Department manager in the research division, International Business Machines Corp., Poughkeepsie, N.Y.
1958-1959	Visiting professor of communications science, Massachusetts Institute of Technology Radiation Laboratory, Cambridge, Mass. Member of Project Atlantis, a Massachusetts Institute of Technology project for the United States Navy
1959-1965	Director of experimental machine research in the research division, International Business Machines Corp., White Plains, N.Y.
1961	Member of Project Beacon which planned the nation's air traffic control system for the Federal Aviation Authority
1967-1983	Fellow, International Business Machines Corp., Cambridge Scientific Center, Cambridge, Mass.
1974	Married Louise Kelley
1983-1985	Fellow, International Business Machines Corp., entry systems division, Boca Raton, Fla.
1985-1986	Fellow, International Business Machines Corp., Cambridge Scientific Center, Cambridge, Mass.
1986-circa 1992	Supplemental fellow, International Business Machines Corp., Cambridge Scientific Center, Cambridge, Mass.

2001, June 8

Died, Newport, Vt.

## Scope and Content Note

The papers of Nathaniel Rochester (1919-2001) span the years 1935-1999 and include correspondence, biographical material, data processing manuals, reports, oral history interviews, writings, photographs, certificates, and printed matter. The bulk of the collection, 1943-1977, relates to Rochester's work with radar while an engineer at Sylvania Electric Products and his work designing computers and computer programs while employed with the International Business Machines Corporation (IBM). The Sylvania material consists of tube technical data and Rochester's circuit theory notebook relating to his radar work for the United States military. Rochester was the architect of IBM's first general purpose electronic computer, the type 701, and devised and wrote the first symbolic assembly program for computers. The majority of the IBM papers consists of manuals about the 705 and 709 computers and COBOL and APL computer languages.

Also included among the papers is material documenting part of Rochester's career with the Massachusetts Institute of Technology where he began his work on radar. The final report of the task force for Project Beacon, on which Rochester served in 1961, documents the development of the first air traffic control system for the Federal Aviation Authority. Photographs include pictures of early computers designed at IBM. Filed throughout the collection are notes of Rochester's son, Nicholas, explaining uses for the technical data recorded in the papers and his father's role in various projects.

## Arrangement of the Papers

This collection is arranged alphabetically by type of material.

# Container List

<i>Container</i>	<i>Contents</i>
BOX 1	Analog design guide, 1990
BOX 1	Awards and honors, 1957, 1984, 1998
BOX 1	Biographical file, 1935, 1948-1980, 1989-1992 (6 folders)
BOX 1	Correspondence, 1940-1941, 1955-1960, 1980, 1990 (4 folders)
BOX 1	Federal Aviation Authority, Project Beacon, 1961
BOX 1	International Business Machines Corp. <i>For additional material see Container 3, Photograph album</i>
BOX 1	Data processing manuals, 1954-1960, 1976 (4 folders)
BOX 1	Fellow program, 1967-1971, 1977
BOX 2	Miscellany, 1953, 1971, 1981-1986, undated
BOX 2	UNIX agreement, 1977-1982
BOX 2	Massachusetts Institute of Technology, Cambridge, Mass., 1937-1941, 1966, 1991 (2 folders)
BOX 2	Massachusetts Institute of Technology Radiation Laboratory, Cambridge, Mass., 1944-1946, 1990-1991 (4 folders)
BOX 2	Oral history interviews, 1991
BOX 2	Organization memberships, 1942-1959, 1979
BOX 3	Photograph album, 1952
BOX 3	Photographs, 1937-1953, 1962-1967, 1980, 1999, undated <i>For additional material see same container, Sylvania Electric Products, circuit theory notebooks</i> (2 folders)
BOX 3	Ping pong ball flotation, undated
BOX 3	Sylvania Electric Products, Boston, Mass.
BOX 3	Circuit theory notebook, circa 1943-circa 1948 (3 folders)
BOX 3	Radar report, 1945
BOX 3	Tube technical data, 1945-1950 (4 folders)
BOX 3	Writings
BOX 3	About Rochester, 1990-1999, undated
BOX 3	By Rochester, 1949-1958, 1966, 1981, 1989-1993