

Guide to the Gene M. Amdahl Papers

Dates: 1952-2001
Extent: 1.88 linear feet in 3 boxes
Collection number: X3242.2006
Accession number: 102658196
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Abstract

Gene M. Amdahl's papers include design drawings, correspondence, and research related to early Amdahl inventions, including the WISC (Wisconsin Integrally Synchronized Computer). The Amdahl papers primarily consist of clippings that feature Amdahl or the Amdahl Corporation. The collection covers the period 1952 through 2001 and contains correspondence, newsletters, oral history transcripts, programs, and a small number of photographs.

Administrative Information

Access Restrictions

The collection is open for research.

Publication Rights

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Preferred Citation

[Identification of Item], [Date], Gene M. Amdahl papers, Lot X3242.2006, Box [#], Folder [#], Computer History Museum

Provenance

The Gene M. Amdahl papers were donated by Gene M. Amdahl to the Computer History Museum in 2006.

Repository

Computer History Museum
1401 N. Shoreline Blvd.
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Biographical Note

Computer designer, author, inventor and corporate executive, Gene M. Amdahl was born on November 16, 1922 in Flaudreau, South Dakota. Amdahl married Marion D. Quissell, also from Flaudreau, in 1946 and the two eventually had three children. Amdahl served two years in the U.S. Navy during World War II. Amdahl received his B.S. in Engineering Physics from South Dakota State University in 1948, and earned his Ph.D. in Theoretical Physics from the University of Wisconsin in 1952.

While beginning work on his doctorate, Amdahl designed the first overlapped, electronic floating-point computer. In his doctoral thesis, he described how to build the computer he had designed. The construction of that computer took place over a period of four years by students at the University of Wisconsin and is called the WISC (Wisconsin Integrally Synchronized Computer).

In June of 1952 Amdahl joined International Business Machines Corporation (IBM) in Poughkeepsie, New York. Amdahl initially worked on character recognition and intelligence simulation. In 1953 he was made chief planner and project engineer for the IBM 704 development program. Following that he did the initial planning of the IBM 709 and the IBM 7030. Amdahl left IBM at the end of 1955.

In 1956 Amdahl joined Ramo Woolridge in Los Angeles, California where he prepared several military and internal proposals in the data processing field. In addition, he did the system planning for what became the RW440 process control computer. In late 1956 Amdahl joined Aeronutronic Systems Inc., a subsidiary of the Ford Motor Company. There he headed the commercial data processing department, which was responsible for electronic data entry and computer equipment.

Amdahl rejoined IBM in 1960; he was director of experimental machines, manager of systems design for advanced data processing systems, manager of technology for high speed systems, director of IBM's Advanced Computing Systems Laboratory in Menlo Park, California, and principle architect of IBM's System 360 series of mainframe computers. Amdahl was named an IBM Fellow in 1965.

Amdahl left IBM again in 1970 to form and operate his own company, Amdahl Corporation in Sunnyvale, California, for the purpose of developing, manufacturing and marketing large-scale computer systems. His plan was to compete head-to-head with IBM in the mainframe market with what became the Amdahl 470 family of computers. In 1975, Amdahl Corporation shipped its first computer, the Amdahl 470 V/6. On September 1, 1979 Amdahl resigned as Chairman of the Board of Amdahl Corporation and served as Chairman Emeritus and a consultant to the company, until he retired in August 1980.

In the fall of 1980 Amdahl started another venture, Trilogy Systems Corporation, which acquired Elxsi in 1985 for its principal computer system entry. In 1989, Amdahl stepped down as chairman of Elxsi to devote more time to other ventures. In 1986, Amdahl participated in the founding of three companies of which he was Chairman, Modular

Power, American Industrial Group and Andor Systems International. However, by the mid-1990s all three companies were defunct.

In 1996, at the age of 74, Amdahl founded Commercial Data Servers (CDS) in his continuing quest to merge mainframe technologies with the more popular PC technology. CDS changed its name to Xbridge Systems and narrowed its focus, by early 2005 Amdahl was no longer a member of their management team.

In November 2004 Amdahl was appointed to the Board of Advisors of Massively Parallel Technologies.

Amdahl is holder and co-holder of many patents on such developments as recognition of recorded intelligence, analog-to-digital conversion device, message display and transmission system, stored logic computer, large-scale shifter, memory protection system, storage protection and the IBM System/360.

Scope and Content Note

Gene M. Amdahl's papers consist primarily of clippings that mention or feature either Amdahl or the Amdahl Corporation. There is also correspondence, research papers, numerous oral history transcripts, programs, brochures, and a small number of photographs and design drawings. This collection is organized in 6 series:

Series 1. Biographical Sketches

Series 2. Inventions

Series 3. Correspondence

Series 4. Printed Material

Series 5. Ephemera

Series 6. Photographs

Unless otherwise noted dates are inclusive.

Series 1, Biographical Sketches 1991-1995, consists primarily of transcripts of oral histories conducted by Linda Runyan as part of her contract with Amdahl to write an authorized biography of his life. Most of the interviews are with Amdahl or his wife Marion, but other associates and relatives are included. There is also a transcript of a lengthy oral history conducted by the Center for the History of Information Processing at the University of Minnesota and a copy of an unpublished biography of Amdahl. One item of note is a list of all United States patents listing Amdahl as inventor between 1964 and 1991 in box 1, folder "102680807." This series has been maintained in its original order.

Series 2, Inventions 1952-1986, is possibly the richest series in the collection. The bulk of the material is related to Amdahl's patent application process for the Wisconsin Integrally Synchronized Computer (WISC) (1952-1954). There is correspondence with the Wisconsin Alumni Research Foundation that reveals Amdahl's feeling that the greatest potential for a computer involving his logic lay in the field of business computation as well as his ideas for changes in the WISC that would make it more useful for business purposes. There are also copies of amendments to the patent

application and photostat drawings of WISC parts with hand annotated corrections. Also in this series are Amdahl's doctoral thesis from the Dept. of Physics, University of Wisconsin, research papers circa 1956, and original preliminary designs for the Amdahl 580 (1975). This series is arranged chronologically.

Series 3, Correspondence 1978-1992, primarily contains thank you letters from students attending South Dakota State University who received Amdahl endowed scholarships. Interfiled with the thank you correspondence are copies of press releases issued by SDSU announcing the recipients of Amdahl scholarships. There is a small amount of philanthropic correspondence between Amdahl and organizations he donated money to in South Dakota and California, as well as Lutheran institutions. There is a small amount of minor professional correspondence. One item of interest is a request from the Heinz Awards to Amdahl to evaluate the merits of Frederick P. Brooks in regards to his nomination for a 1998 Heinz Award. Attached to the letter is a handwritten draft of Amdahl's favorable response. This series is arranged alphabetically by folder title.

Series 4, Printed Material 1952-2001, contains clippings and monographs related to Amdahl or the Amdahl Corporation. This series is organized in 2 subseries:

The first subseries, clippings, contains articles which appeared in newspapers, journals, magazines, and newsletters. They are from popular and scholarly publications and include English, French, and German language works. Amdahl kept entire issues of serials, however, during processing complete issues were kept only if they were computer related non-duplicates or especially unique, otherwise the single article was clipped. Included in this series are three Amdahl Corporation newsletters, *Amdahl Update* (1978, 1990, and 1999). This subseries is arranged chronologically.

The second subseries, monographs, contains books which feature or mention Amdahl or the Amdahl Corporation. This subseries is arranged alphabetically by title.

Series 5, Ephemera 1964-1995, primarily contains programs from ceremonies and award dinners that Amdahl either attended or was an honoree at. In addition, there is a significant amount of material related to Amdahl's centennial alumnus award from South Dakota State University as well as material related to Amdahl's professional visits to China as a guest lecturer. This series is arranged alphabetically by folder title.

Series 6, Photographs circa 1970-1990, includes 5 photographs that were found in the original box of monographs. There are two color photographs of unidentified computer chips and three snapshots of Amdahl. This series is arranged alphabetically by folder title.

Indexing Terms

Amdahl, Gene M. (Gene Myron), 1922-

Amdahl Corporation

Computer Industry—California—Santa Clara County--History

Computer Science—Biography

Separated Material

Serials that were separated from the collection because of duplication are:

Computer World Vol. XXVI No. 25, June 22, 1992

IBM Systems Journal Vol. 3, No. 2-3, 1964

Monographs that were separated from the collection because of duplication are:

Portraits of Success: Impressions of Silicon Valley Pioneers by Carolyn Caddes, 1986

Wizards and their Wonders: Portraits in Computing by Christopher Morgan, 1997

Portraits in Silicon by Robert Slater, 1987

The Legend of Amdahl by Jeffrey L. Rodengen, 2000

Physical objects were separated from the collection. There are 32 catalog records of various plaques, certificates, drawings, and a small number of computer hardware pieces. To view catalog records for the physical objects go to the CHM website at <http://archive.computerhistory.org/search>.

Folder List**Biographical Sketches*****Box 1***

102680807	Linda Runyon's background material for an Amdahl biography	1991
102680808	Gene Amdahl, Lars Brendsel, Wilbur Johnson, Arlene Amdahl Zeigler, Ollie Amdahl, Lowell Amdahl, Marion Amdahl, Evelyn Amdahl Olsen, Alton Amdahl	1992
102680809	Gene Amdahl, Marion Amdahl, Lowell Amdahl	1991-1992
102680810	Gene Amdahl	1992-17-03
102680811	Gene Amdahl	1992-03
102680812	Gene Amdahl, Marion Amdahl, Arlene Amdahl Ziegler, Harold Hall	1991-1992
102680813	AA possibly Arlene Amadhal Zeigler	1992-05-08
102680814	Lavon Hall, Harold Hall, Lowell Amdahl, Marion Amdahl	1992
102680815	Marion Amdahl	1992-03-03
102680816	Evelyn Olson, Lowell Amdahl, Marion Amdahl	1992
102680819	Gene Amdahl, Harold Hall	1991
102680820	Interview with Gene M. Amdahl	1986-04-16-1989-04-05
102680818	Prairie Daydreamer: Gene M. Amdahl	1997-12-01
102680817	Remarks of George Bragg delivered at the Computer & Communications Industry Association's award dinner honoring Amdahl	1989 ca.
102680821	History of Orin Amdahl	1995-05-08

Inventions***Box 2***

102680823	Doctoral thesis. Logical design of an intermediate speed digital computer	1952
102680824	Wisconsin Integrally Synchronized Computer (WISC) patent application Process	1952-1954
102680825	While working for Aeronutronic Systems, Inc.	1956
102680826	Various computers	1959 ca.
102680827	System/360 and the high performance model 92	1964 ca.
102680828	Design beginning for Amdahl 580 OSLO	1975
102680829	Patent - module construction for semiconductor chip	1986-07-29

Correspondence***Box 1***

102680822	Philanthropic	1978-1988
102680831	Professional associates	1964-1999
102680832	Requests for personal papers	1986-1989
102680830	Thank yous	1992-1998

Printed Clippings

Box 1

102680833	1952 ca.-1967	1952 ca.-1964
102680835	IBM Systems Journal	1965-04
102680834	1967	1967
102680636	1970, 1973	1970, 1973
102680637	1974-1975	1974-1975
102680638	1976-1977	1976-1977
102680853	1978	1978
102680639	1979	1979
102680640	1980	1980
102680641	1981	1981
102680642	1982	1982
102680643	1983	1980
102680644	1984-1985	1984-1985
102680645	1987	1987
102680646	1988	1988
102680647	1989	1989
102680648	1990	1990
102680649	1991	1991
102680651	1997	1997
102680652	1998	1998
102680854	2000	2000
102680855	2001	2001

Printed Monographs

Box 3

102680858	A century of honors: the first one-hundred years of award winners, honorary members, past presidents, and fellows of the institute	1984
102680856	Amdahl 470/6 system machine reference manual	1973
102680859	Fortune favors the brave: Fujitsu thirty years in computers	1986
102680862	Silicon Valley fever: growth of high-technology culture	1984
102680864	Thesis and essays commemorative of Dr. Toshio Ikeda	1975 ca.

Ephemera

Box 1

102680867	Ceremony programs	1964-1995
102680865	China seminars	1989-1991
102680868	Quadrato Della Radio membership	1980 ca.
102680866	South Dakota State University Centennial Alumnus Award	1987

Photographs

Box 1

102680869	Computer chips	1970 ca.-1990 ca.
102680870	Gene M. Amdahl	1970 ca.-1990 ca.