Guide to the Gene M. Amdahl Papers

Collection number: X3242.2006

Computer History Museum

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Descriptive Summary

Title: Guide to the Gene M. Amdahl Papers

Dates: 1952-2001

Collection number: X3242.2006

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

Collection Size: 1.88 linear feet3 boxes

Location: For current information on the location of these materials, please consult the Museum's online catalog.

Repository: Computer History Museum
Mountain View, CA 94043

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.

Languages: Languages represented in the collection: English

Access
Collection is open for research.

Publication Rights
The Computer History Museum can only claim physical ownership of the collection. Users are responsible for satisfying any claims of the copyright holder. Permission to copy or publish any portion of the Computer History Museum's collection must be given by the Computer History Museum.

Preferred Citation
[Identification of Item], [Date], Gene M. Amdahl Papers, Lot X3242.2006, Computer History Museum, Mountain View, California.

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

Biography / Administrative History
Computer designer, author, inventor and corporate executive, Gene M. Amdahl was born on November 16, 1922 in Flandreau, South Dakota. Amdahl married Marion D. Quissell, also from Flandreau, 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, and during the period 1960-1970 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, CA, 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, CA, 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 Dr. 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. These companies were 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 and 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 of Collection
Gene M. Amdahl's papers consist primarily of clippings that mention or feature either Amdahl or the Amdahl Corporation. There is also material related to early inventions, correspondence, research papers, numerous oral history transcripts, programs and a small number of photographs and design drawings.

Series 2. Inventions (1952-1986)
Series 3. Correspondence (1978-1992)

Indexing Terms
The following terms have been used to index the description of this collection in the library's online public access catalog.
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.

box 1

Biographical sketches 1991-1995
Creator: Amdahl, Gene M. (Gene Myron), 1922-
Physical Description: .416 linear feet
Series Scope and Content Summary
Biographical Sketches 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, University of Minnesota, Minneapolis and a copy of an unpublished biography of Amdahl. One item of note is a list of all U.S. patents listing Amdahl as inventor between 1964 and 1991 in box 1, folder 1 026 8080 7. This series has been maintained in its original order.

102680807 Linda Runyon's background material for an Amdahl biography 1991
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
102680817 Remarks of George Bragg delivered at the Computer & Communications Industry Association's award dinner honoring Amdahl circa 1989
102680818 Prairie Daydreamer: Gene M. Amdahl 1997-12-01
102680819 Gene Amdahl, Harold Hall 1991
102680820 Interview with Gene M. Amdahl 1986-04-16-1989-04-05
102680821 History of Orin Amdahl 1995-05-08

box 2

Inventions 1952-1986
Creator: Amdahl, Gene M. (Gene Myron), 1922-
Physical Description: .209 linear feet
Series Scope and Content Summary
Inventions 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.

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Inventions 1952-1986

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

box 1

Correspondence 1978-1992
Creator: Amdahl, Gene M. (Gene Myron), 1922-
Physical Description: .106 linear feet
Series Scope and Content Summary
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.

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

box 1, 3

Printed material 1952-2001
Creator: Amdahl, Gene M. (Gene Myron), 1922-
Physical Description: .957 linear feet
Series Scope and Content Summary
Printed material contains clippings and monographs related to Amdahl or the Amdahl Corporation. This series is organized in 2 subseries:

box 1

Printed: Clippings circa 1952-2001
Creator: Amdahl, Gene M. (Gene Myron), 1922-
Physical Description: .54 linear feet
Subseries Scope and Content Summary
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 3 Amdahl Corporation newsletters, Amdahl Update (1978, 1990, and 1999). This subseries is arranged chronologically.

102680835 IBM Systems Journal 1965-04
102680834 1967 1967
102680637 1974-1975 1974-1975
102680853 1978 1978
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**Printed material 1952-2001**

Printed: Clippings circa 1952-2001

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
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<tbody>
<tr>
<td>Printed: Monographs 1973-1986</td>
<td></td>
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<tr>
<td>Creator: Amdahl, Gene M. (Gene Myron), 1922-</td>
<td></td>
</tr>
<tr>
<td>Physical Description: .417 linear feet</td>
<td></td>
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<tr>
<td>Subseries Scope and Content Summary</td>
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<tr>
<td>Monographs contains books which feature or mention Amdahl or the Amdahl Corporation. This subseries is arranged alphabetically by title.</td>
<td></td>
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<tr>
<td>102680858 <em>A century of honors: the first one-hundred years of award winners, honorary members, past presidents, and fellows of the institute</em> 1984</td>
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<td>102680856 <em>Amdahl 470/6 system machine reference manual</em> 1973</td>
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<tr>
<td>102680859 <em>Fortune favors the brave: Fujitsu thirty years in computers</em> 1986</td>
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<tr>
<td>102680862 <em>Silicon Valley fever: growth of high-technology culture</em> 1984</td>
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<tr>
<td>102680864 <em>Thesis and essays commemorative of Dr. Toshio Ikeda</em> circa 1975</td>
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<tr>
<td>Ephemera 1964-1995</td>
<td></td>
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<tr>
<td>Creator: Amdahl, Gene M. (Gene Myron), 1922-</td>
<td></td>
</tr>
<tr>
<td>Physical Description: .145 linear feet</td>
<td></td>
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<tr>
<td>Series Scope and Content Summary</td>
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<tr>
<td>Ephemera 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.</td>
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<tr>
<td>102680867 <em>Ceremony programs</em> 1964-1995</td>
<td></td>
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<td>102680865 <em>China seminars</em> 1989-1991</td>
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<tr>
<td>102680868 <em>Quadrato Della Radio membership</em> circa 1980</td>
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<tr>
<td>102680866 <em>South Dakota State University Centennial Alumnus Award</em> 1987</td>
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<tr>
<td>Photographs circa 1970-circa 1990</td>
<td></td>
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<tr>
<td>Creator: Amdahl, Gene M. (Gene Myron), 1922-</td>
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<tr>
<td>Physical Description: .023 linear feet</td>
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<td>Series Scope and Content Summary</td>
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<tr>
<td>Photographs 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.</td>
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<tr>
<td>102680869 <em>Computer chips</em> circa 1970-circa 1990</td>
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<tr>
<td>102680870 <em>Gene M. Amdahl</em> circa 1970-circa 1990</td>
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