



Guide to the Keith G. Calkins collection on Sigma systems

Creator: Keith G. Calkins

Dates: 1969-1987, bulk 1972-1984

Extent: 10.75 linear feet, 8 record cartons and 1 small box

Collection number: X4287.2008

Catalog number:

Collection processed by: Bo Doub and Kim Hayden, 2015

Finding aid prepared by: Bo Doub, Kim Hayden, and Sara Chabino Lott, 2015

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Abstract

The Keith G. Calkins collection on Sigma systems consists of material documenting the Sigma computers developed and released by Scientific Data Systems (SDS), Xerox, Honeywell, Inc., and Telefile Computer Products. The collection holds records from all of these companies as well as the user groups focused on Sigma machines and their operating systems and software. Included in the collection are program descriptions of software designed for Sigma systems, manuals, maintenance and testing reports, conference proceedings, and records relating to Telefile Computer Products and its user group TeleXchange. Sigma machines were released and operated primarily from 1966 through 1993 and the material in this collection spans 1969 through 1987.

Administrative Information

Access Restrictions

The collection is open for research.

Publication Rights

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Languages

The collection is entirely in English.

Preferred Citation

[Identification of Item], [Date], Keith G. Calkins collection on Sigma systems, Lot X4287.2008, Box [#], Folder [#], Catalog [#], Computer History Museum.

Immediate Source of Acquisition

Gift of Keith Calkins, 2007.

Repository

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Biographical/Historical Note

Keith G. Calkins was born in Cadillac, Michigan on February 1, 1958. Most of his education was spent at Andrews University in Berrien Springs, Michigan, where he received a BS in mathematics in 1981, an MS in computer information science in 1982, another BS in physics in 1988, a second MS in interdisciplinary studies (math and physics) in 1996, and a Master of Arts in Teaching (MAT) in 2002. Calkins also attended the University of Notre Dame, receiving an MS in physics in 1996 and a PhD in 2005, also in physics. Calkins' work experience includes consulting for Artware, Telefile, and NASA and working in various teaching roles including at Andrews University as an Associate Professor of Math & Science and at Ferris State University as an Adjunct Instructor in the Department of Physical Sciences.

Calkins first worked with Sigma computers during his early years at Andrews University as a Systems Programmer & Hardware Engineer. From 1978 through 1983, Calkins held this job and provided maintenance for Xerox Sigma 6, 7, and 9 computers and performed systems programming using one of the Sigma series' major operating systems, CP-V. From 1984 to 1989, Calkins worked as a software development consultant for Telefile, a company that made

computer systems that were compatible with Sigma systems. Since then, Calkins has been involved in documenting and preserving the history and legacy of the Sigma series.

The Sigma systems were a series of computers first introduced by Scientific Data Systems (SDS) in 1966. The first machines in the series were the Sigma 2 and Sigma 7, which, at the time of their release, were competitors to the IBM System/360 family of computers. When SDS was purchased by Xerox in 1969, the firm was re-named Xerox Data Systems (XDS). During the years of XDS, Xerox 500 computers were developed and released as compatible upgrades to the Sigma series. Then, in 1975, Xerox sold its computer business to Honeywell Information Systems, Inc. Honeywell continued support of the Sigma series for a short time, but then discontinued production of Sigma hardware. However, other companies, including Telefile, created clone systems. In 1979, Telefile released the Telefile T-85, an upgraded machine compatible with Sigma systems.

Throughout the Xerox, Honeywell, and Telefile years, users and enthusiasts developed groups around the Sigma series and related computing machines. When Sigma machines were released by Xerox and Honeywell, user groups under the names of EXCHANGE and the Honeywell Large Systems Users Association (HLSUA) operated, holding international meetings and running the Sigma Exchange Users' Group Library (also called XDS Users' Group Program Library). After Honeywell discontinued production of Sigma hardware and other companies started making compatible machines, TeleXchange was created as the Telefile computer user group. Calkins, as a Sigma user and collector, was involved in all of these groups. Since 2012, aside from his teaching and other work, Calkins has led the transportation, preservation, and operation of the Xerox Sigma 9 at the Living Computer Museum in Seattle, Washington.

Scope and Content of the Collection

The Keith G. Calkins collection on Sigma systems is made up of materials Calkins collected related to the Sigma system of computers and its iterations by SDS, Xerox, Honeywell Inc., and Telefile Computer Products. Materials include program descriptions, manuals, reports, periodicals, TeleXchange administrative records, and EXCHANGE, TeleXchange, and Honeywell Large Systems Users Association (HLSUA) conference proceedings dating from 1969 to 1987, with the bulk of materials from 1972 to 1984.

Arrangement

The collection is arranged into 5 series:

- Series 1, Program descriptions, 1969-1978
- Series 2, Manuals, 1969-1979
- Series 3, Reports and periodicals, 1971-1981
- Series 4, Conference proceedings, 1973-1984
- Series 5, Telefile, 1976-1987

Indexing Terms

Calkins, Keith G. (Keith Gordon), 1958-
Computer software--Development
EXCHANGE
Honeywell Inc.
Scientific Data Systems
Sigma series
Telefile Computer Products
TeleXchange

Xerox Corporation

Collection Contents

Series 1, Program descriptions, 1969-1978

This series, the largest in the collection, contains program descriptions of software developed for various combinations of Sigma and Xerox computers. Each program description has its own software submittal forms from when the programs were initially submitted within the corporate structures of SDS, Xerox Data Systems (XDS), or Honeywell. Most of the program descriptions in this series also include summaries formatted to the standards of the Sigma Exchange Users' Group Library – also called XDS Users' Group Program Library or EXCHANGE. The submission forms and program library summaries describe each program's date of submittal, catalog number, applicable CPUs (the records are organized by this element), program title, author, source language, and abstracts. These programs were created for a wide variety of functions and contexts, including: payroll systems, file converters, debuggers, compilers, timesharing simulators, ledger systems, games, mathematical functions, and creating automated medical histories. Programming languages used to create these programs include FORTRAN IV, SYMBOL, META-SYMBOL, COBOL, LISP 1.5, BASIC, and APL. The computers these programs were designed for span the whole Sigma series from the earlier Sigma 2 to the later Sigma 9 models and also the compatible Xerox 500 series computers. Lastly, this series includes correspondence and manuals about the Sigma Exchange Users' Group Program Library, including manuals on how to describe programs and submit program descriptions to the library. This series is arranged alphabetically by folder title.

Series 2, Manuals, 1969-1979

This series contains Sigma manuals, the majority of which were produced by Xerox, with a few published by Honeywell or universities, from 1969 to 1979. The Honeywell manuals are noted as being reprints of Xerox manuals. Most of the manuals in this series are related to programming languages, such as FORTAN, SL-1, Xerox TEXT, BASIC, COBOL, C, Pascal, APL, and Meta-Symbol. Also included are a large number of manuals specific to the CP-V operating system, which followed the Universal Timesharing System (UTS) operating system and supported the Sigma 6, 7, and 9, and the Xerox 560. There are also a small number of manuals related to various functions of Sigma systems and the engineering support and service of machines. This series is arranged alphabetically by folder title.

Series 3, Reports and periodicals, 1971-1981

This series consists of a large number of reports, the majority of which are Xerox and Honeywell monthly software maintenance reports from 1973 to 1981. Through 1975, these reports are in paper form; from 1976 and on, the reports are on microfiche. There are also a large number of test reports, some from various releases of the CP-V operating system. These tests are labeled RAD, ASR/KSR, PREP, SUPERSWAP, CARD, and 9INT. Also included is a Xerox and Honeywell program availability binder that has been separated into folders and includes both paper reports and microfiche. There are also several issues of Xerox's marketing magazine *Interface* from 1973 to 1975. This series is arranged alphabetically by folder title.

Series 4, Conference proceedings, 1973-1984

This series consists of conference proceedings and related materials from 1973 to 1984. All but one folder contains material related to the International Meeting of EXCHANGE, the Xerox Computer Users' Group, with proceedings from 1973 to 1982. Some sessions include programs and post-conference summaries along with the proceedings. One folder consists of proceedings from the Honeywell Large Systems Users Association (HLSUA) Forum 39 Exchange Sessions

from 1984. Also in this folder is a Honeywell exchange library catalog from circa 1982. This series is arranged alphabetically by folder title.

Series 5, Telefile, 1976-1987

This series contains conference materials, manuals, marketing materials, memos, newsletters, member directories, and program library catalogs related to Telefile Computer Products and TeleXchange, a Telefile computer user group. About half of this series is made up of materials from International TeleXchange Meetings from 1982 through 1987, including papers presented at the conferences, programs and agendas, lists of attendees, registration forms, meeting minutes, and correspondence. Another large portion of this series is made up of Telefile manuals, specifications, and product overviews published by Telefile, Xerox, and Honeywell from 1976 to 1987. A smaller number of items include Telefile marketing materials, memos, newsletters, and software support reports. There are also a small number of TeleXchange Program Library catalogs from 1983 to 1986, TeleXchange member directories and bylaws from 1983 to 1986, and materials related to the TeleXchange TCP-V general interest group, including meeting minutes and membership listings. This series is arranged alphabetically by folder title.

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
Folder List			
Program descriptions			
Box 1	102734290	SDS Sigma series and Xerox computer programs	1974-1978
Box 1	102734273	Sigma 2	1969-1973
Box 1	102734269	Sigma 2/3	1970-1976
Box 1	102734274	Sigma 3	1973-1976
Box 1	102734285	Sigma 5/6/7	1970-1977
Box 1; 2	102734282	Sigma 5/7	1969-1976
Box 2	102734281	Sigma 5/7/9	1973-1975
Box 2; 3	102734295	Sigma 5/9	1971-1977
Box 3	102734275	Sigma 6	1976
Box 3	102734288	Sigma 6/7/9	1973-1975
Box 3	102734278	Sigma 6/9	1974-1976
Box 3	102734277	Sigma 7	1971-1975
Box 3	102734292	Sigma Exchange Users' Group Program Library	ca. 1976
Manuals			
Box 3	102734284	CP-V operating system manuals	1973-1978
Box 4	102734286	Maintenance manuals	1974-1976
Box 4	102734283	Programming manuals	1973-1979
Box 4	102734287	Systems manuals	1969-1976
Reports and periodicals			
Box 5; 9	102734294	Monthly software maintenance reports	1973-1981
Box 4	102734291	Interface magazine	1973-1975

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
Box 4	102734289	Program availability list	1975-1978
Box 6	102734293	Test reports	1971-1980
Conference proceedings			
Box 6	102734296	20th International Meeting of EXCHANGE	1973
Box 6	102734297	21st International Meeting of EXCHANGE	1973
Box 6	102734298	28th International Meeting of EXCHANGE	1977
Box 6	102734299	29th International Meeting of EXCHANGE	1978
Box 6	102734300	30th and 31st International Meeting of EXCHANGE	1979
Box 6	102734301	32nd International Meeting of EXCHANGE	1980
Box 6	102734302	33rd International Meeting of EXCHANGE	1981
Box 6	102734303	34th International Meeting of EXCHANGE	1981
Box 7	102734304	35th and 37th International Meeting of EXCHANGE	1982-1983
Box 7	102734270	Honeywell Large Systems Users Association (HLSUA) Forum 39 Exchange Sessions	ca. 1982-1984
Telefile			
Box 7	102734260	1st and 2nd International TeleXchange Meeting papers and records	1982
Box 7	102734259	3rd International TeleXchange Meeting papers and records	1983
Box 7	102734261	4th International TeleXchange Meeting papers and records	1984
Box 7	102734262	5th International TeleXchange Meeting papers and records	1984

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
Box 7	102734263	6th International TeleXchange Meeting papers and records	1984
Box 7	102734265	7th International TeleXchange Meeting papers and records	1985
Box 7	102734267	8th International TeleXchange Meeting papers and records	1986
Box 7	102734266	9th International TeleXchange Meeting papers and records	1986
Box 7	102672674	10th International TeleXchange Meeting papers and records	1986
Box 7; 8	102734272	Manuals, product descriptions, and specifications	1976-1987
Box 8	102672840	Marketing materials	1981-1985
Box 8	102734271	Memoranda	1983-1985
Box 8	102734279	Newsletters	1975-1984
Box 8	102734276	Software support reports	1984-1986
Box 8	102734257	TeleXchange member directories and bylaws	1983-1986
Box 8	102734258	TeleXchange Program Library catalogs	1983-1986
Box 8	102734268	TeleXchange TCP-V general interest group (GIG)	1986-1987