Computer
History
Museum

Guide to the John R. Ehrman collection

Creator: John R. Ehrman
Dates: 1956-2005, bulk 1966-1995
Extent: 9.5 linear feet, 7 record cartons, 1 half manuscript box, and 1 microfiche box
Collection number: X5621.2010
Catalog number: 102733967
Collection processed by: Bo Doub and Kim Hayden, 2015
Finding aid prepared by: Bo Doub, Kim Hayden, and Sara Chabino Lott, 2017
Sponsor: Processing of this collection was made possible through generous funding from The Andrew W. Mellon Foundation, administered through the Council on Library and Information Resources' Cataloging Hidden Special Collections and Archives grant.

Abstract
The John R. Ehrman collection documents Ehrman's work in programming at IBM and Stanford University, and his membership with SHARE, an early user group for programmers of IBM mainframe computers. Material dates from 1956 to 2005, with the bulk from 1966 to 1995. Much of the collection's focus is on programming, with an emphasis on FORTRAN and its related languages, and consists mainly of manuals, reference guides, books, technical reports, specifications, and program listings. Nearly half of the material is published by IBM. The rest of the collection is published by Stanford University's Computer Science Department and SLAC, SHARE, and other universities, associations, and companies.

Administrative Information

Access Restrictions
The collection is open for research.

Publication Rights
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Languages
Collection material is primarily in English, with a small amount of material in French.

Preferred Citation
[Identification of Item], [Date], John R. Ehrman collection, Lot X5621.2010, Box [#], Folder [#], Catalog [#], Computer History Museum.

Immediate Source of Acquisition
Gift of John Ehrman, 2009.

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Biographical/Historical Note
John R. Ehrman was born in Richmond, Virginia on July 5, 1935. He received his bachelor's degree in physics from Oberlin College in 1956. Ehrman was first introduced to programming and computers during his time at the University of Illinois at Urbana-Champaign, where he managed the Academic Computer Center and taught introductory programming courses from 1963 to 1965. He also received his PhD from U of I in theoretical physics in 1963. After finishing at U of I, Ehrman moved on to Stanford University, where he provided computer support to physicists and engineers, worked in the Computation Center of the Stanford Linear Accelerator Center (SLAC), and taught students in IBM Assembler Language programming. Ehrman worked and taught at Stanford from 1966 to 1983. In March of 1983, Ehrman began a 33-year career at IBM, ending as senior programmer in 2016. During his time at IBM, Ehrman created and led development of IBM's High Level Assembler (HLASM), gave presentations at many user group conferences, and visited customer sites to provide advice and assistance. Throughout his career, Ehrman has been an active member of the user group, SHARE. Ehrman first became a member of SHARE in 1964, and his membership activities include designing an early instance of the group's logo, serving as project manager for various Assembler and FORTRAN-related

initiatives, chairing the Fortran Standards Committee, serving on the SHARE Board of Directors, and cofounding the annual SHARE Academy: Assembler Bootcamp with Michael Stack. Ehrman retired from IBM and SHARE in 2016.

Scope and Content of the Collection

The John R. Ehrman collection contains material collected or created by Ehrman that documents his work at IBM and Stanford University, and his membership with SHARE. Records date from 1956 to 2005, with the bulk from 1966 to 1995. Most of the collection consists of manuals, reference guides, books, technical reports, specifications, and program listings. Much of the records' focus is on programming, with an emphasis on FORTRAN and its related languages.

Nearly half of the collection is made up of material published by IBM, with some of it pre-dating Ehrman's employment there. A significant portion of the IBM material is related to the IBM System/360 and IBM System/370 and their operating systems, the Basic Assembly Language (BAL) and its successors, and other programming languages.

Though containing less material, the records related to Stanford and SHARE provide a background in the development of FORTRAN and other languages and programs. The Stanford records highlight the ACME (Advanced Computer for Medical Research) time-sharing system, typesetting and typography programming, and the programming languages MORTRAN and FORTRAN. The SHARE material contains a large amount of records specific to the group's involvement in the development of FORTRAN, in addition to records related to SHARE meetings and technical reports.

The final series in the collection contains manuals, specifications, technical reports, books, program listings, conference proceedings, catalogs, and newsletters from a variety of companies, associations, and universities not represented in the first three series. Topics vary, but much of the material is about FORTRAN and related languages, computer design, and programming.

Arrangement

The collection is arranged into 4 series:
> Series 1, IBM records, 1965-1997
> Series 2, Stanford University technical reports and manuals, 1966-1983
> Series 3, SHARE records, 1964-2005
> Series 4, Other organizations records, 1956-1991

Indexing Terms

Assembly languages (Electronic computers)
Computer programming
Ehrman, John R.
FORTRAN
International Business Machines Corporation
SHARE (Association)

Separated Material

Books, software, and physical objects were separated from the main collection, including packaged Apple Computer software, floppy disks, and a KoalaPad tablet.

Issues of the periodical *SHARE Secretary's Distribution* (*SSD*) were also separated from the collection. To view catalog records for separated material search the CHM catalog at http://www.computerhistory.org/collections/search/.

Related Collections at CHM
John Ehrman papers, Lot X3468.2006.

John Ehrman manual collection, Lot X4155.2008.

Gift of John Ehrman, Lot X7492.2015.

Collection Contents
Series 1, IBM records, 1965-1997
This series consists of material published by IBM and collected by Ehrman. Many of the records in this series pre-date Ehrman's career at IBM, which began in 1983. Types of material in this series include manuals, reference guides, books, technical reports, and course material and student workbooks from training and education internal to IBM. The IBM System/360 and IBM System/370 are well-documented in this series -- especially material relating to their operating systems and the Basic Assembly Language (BAL), which was used in programming the S/360 and S/370. Successors of BAL, commonly referred to as "Assembler" languages, are also prevalent in this material. Other technologies that frequently appear in this series include IBM's RISC System/6000 (RS/6000), PL/I, High-Accuracy Arithmetic (ACRITH), FORTRAN, and FORMAC (FORmula MAnipulation Compiler). Also included is a 1995 analyst report created by D.H. Andrews Group for IBM titled "IBM's Software Strategy." This series is arranged chronologically.

Series 2, Stanford University technical reports and manuals, 1966-1982
This series comprises technical reports and manuals published by Stanford University while Ehrman worked there. Material dates from 1966 to 1982 and is from the Computation Center, Computer Science Department, Electrical Engineering Department, Artificial Intelligence Laboratory, Computer Systems Laboratory, Stanford Linear Accelerator Center (SLAC), and Stanford Research Institute (SRI). Half of the material is related to three subjects: ACME (Advanced Computer for Medical Research), a time-sharing system developed by the Stanford Computation Center for the Stanford School of Medicine; typesetting and typography programming; and the programming language MORTRAN. Other topics include FORTRAN, algebraic algorithms, floating point systems, and programming. There are also two reports that present the questions and solutions from Stanford University's Computer Science Department comprehensive examinations from 1972 to 1978 and qualifying examinations from 1965 to 1978. Donald E. Knuth, Gio Wiederhold, Christopher J. Van Wyk, and Charles T. Zahn are the authors of many of the reports. This series is arranged alphabetically by folder title.

Series 3, SHARE records, 1964-2005
This series contains material collected or created by Ehrman from 1964 to 2005 while he was a member of SHARE. A quarter of the material is related to SHARE's involvement in the development of FORTRAN, including a presentation on the 25th anniversary of FORTRAN by IBM's Elliott Nohr, issues of the *SHARE Fortran Project Newsletter*, and FORTRAN program libraries. Another large part of this series is made up of material collected for use during SHARE's 20th, 30th, and 50th anniversaries, including proceedings from the first three SHARE meetings in 1955, a brief history of SHARE and its meetings, reminiscences of past SHARE meetings, and a transcript from the 1972 SHARE Meeting of Pioneers. Also included are reports

and papers published by SHARE, and SHARE songbooks, which were used at the Esprit de Corps session, known as the SHARE or HASP sing-along, at annual SHARE meetings and include familiar songs with the lyrics rewritten so they are related to SHARE and HASP. This series is arranged alphabetically by folder title.

Series 4, Other organizations records, 1956-1991
This series contains material collected by Ehrman that was published by companies, associations, and institutions other than those represented in the first three series of the collection. Material dates from 1956 to 1991. The majority of material is made up of manuals, specifications, and technical reports, but there are also books, program listings, conference proceedings, catalogs, and newsletters. Topics vary, but most of the material is about FORTRAN and related languages, computer design, and programming. Much of the material was published by universities, including an IBM 7090 program library from the University of Illinois; University of Michigan Terminal System program descriptions and manuals; and FORTRAN-related specifications and manuals from Pennsylvania State University, Purdue University, and University of British Columbia. There are a large number of technical reports from Bell Laboratories, and a smaller number from Argonne and Los Alamos National Laboratories, University of Illinois, University of California at Santa Cruz, and other organizations. The Association for Computing Machinery has a large number of newsletters in this series from it SIGSAM and FORTRAN groups. Xerox PARC, Raytheon, Terrapin, and Microsoft all have material in this series, as well. This series is arranged alphabetically by folder title.

	Catalog Number	**Title**	**Date**

<div align="center"><u>Folder List</u></div>

		IBM records	
Box 1	102773955	FORMAC technical reports	1965
Box 1	102773956	1054 paper tape reader and 1055 paper tape punch manuals	1965-1966
Box 1	102773958	Systems reference library - IBM System/360 Operating System	1966-1969
Box 1	102773957	IBM System/360 Operating System manuals	1966-1972
Box 1	102773961	IBM System/360 principles of operation	1967; 1970
Box 1	102773959	PL/I reports, technical papers, and course material	1967-1969; 1981; 1983
Box 1	102773960	IBM System/360 student workbooks and course material	1967-1970
Box 1	102773962	Number systems and introduction to IBM data processing systems student workbooks	1968
Box 1	102773963	Total Operations Processing System (TOPS) for the Southern Pacific Company	1968
Box 1	102773964	IBM 29 card punch reference manual	1968-08
Box 1; 2	102773965	Assembler languages programmer's guides and technical reports	1968-1982
Box 2	102773966	Basic Programmer Training (BPT) course material	1969
Box 8	102773968	Reference summary booklets and reference cards	1970-1994
Box 2	102773967	More about computers	1971
Box 2	102773969	Brief survey of languages used for systems implementation	1971-10

	Catalog Number	**Title**	**Date**
		IBM records	
Box 2	102773970	Training notebook for Information Management System (IMS)	1972
Box 9	102773972	ASCII art from impact printer	1972-1974
Box 2	102773973	IBM System/370 principles of operation	1973; 1981-1987
Box 2	102773974	Introduction to the IBM 3850 Mass Storage System (MSS)	1975-1977
Box 2	102773975	IBM internal course on processor architecture	1978
Box 2	102773971	Compiler design course material	ca. 1978
Box 9	102773976	System/370 Fortran H extended	1980-1981
Box 3	102773977	Vocabulary for data processing, telecommunications, and office systems	1981-07
Box 3	102773978	A personal history of APL	1982-10
Box 3	102773979	Extended exponent range for FORTRAN users	1984
Box 3	102773980	GUIDE/SHARE Language Futures Task Force final report	1984-11
Box 3	102773981	IBM high-accuracy arithmetic (ACRITH) guides and descriptions	1984-1990
Box 3	102773982	Vectorization and vector migration techniques	1986-06
Box 3	102773983	Programming process architecture workflow chart	1986-10
Box 3	102773984	Engineering and scientific subroutine library	1988-11
Box 3	102773985	IBM's software strategy	1995-12
Box 3	102773986	RISC System/6000 (RS/6000) guides	1995-1997
Box 3	102773987	National language design guide : designing internationalized products	1996-10

	Catalog Number	**Title**	**Date**
		Stanford University technical reports and manuals	
Box 4	102773530	ACME technical notes and manuals	1966-1975
Box 4	102773539	Brief survey of computer languages for symbolic algebraic manipulation, A	1968
Box 4	102773531	Comprehensive and qualifying examinations in computer science	1978-1979
Box 4	102773532	Floating-point technical reports	1967-04
Box 4	102773533	MORTRAN technical papers and manuals	1973-1982
Box 4	102773528	Other Stanford University Computer Science Department technical reports	1971; 1979; 1981
Box 4	102773535	Programming and problem-solving seminar proceedings	1977-04; 1979-12
Box 4	102773536	Stanford Artificial Intelligence Laboratory technical reports	1970; 1976-11
Box 4	102773537	Stanford Computer Systems Laboratory technical reports	1978-1980
Box 4	102773529	Stanford Linear Accelerator Center (SLAC) technical reports	1972; 1974
Box 4	102773538	Typesetting and typography technical reports	1978-1980

Catalog Number	Title	Date
SHARE records		

	Catalog Number	Title	Date
Box 4	102773520	Bumper sticker	undated
Box 4	102773523	Program library	1964-1968
Box 4	102773527	Reports and papers	1969-1980
Box 4	102773519	SHARE background information	1972-2005
Box 4	102773518	SHARE Europe (SEAS) booklets	1989; 1992
Box 4	102773526	SHARE Fortran 25th anniversary presentation	1982
Box 4	102773525	SHARE Fortran project newsletter	1971; 1985-1996
Box 5	102773521	SHARE songbooks	1989-1992
Box 5	102773522	Strategic concerns of the members of SHARE booklets	1990-1992

	Catalog Number	Title	Date
		Other organizations records	
Box 5	102773545	Argonne National Laboratory technical reports	1966-1967
Box 5	102773543	Association for Computing Machinery (ACM) newsletters	1966-1991
Box 5	102773548	Augment precompiler technical summary reports	1976; 1979
Box 5	102773568	Basic machine principles	1972
Box 5; 6	102773566	Bell Laboratories computing science technical reports	1972-1981
Box 6	102773552	CFORMAC : Conversational FORMAC main program	1983-08
Box 6	102773550	Computer design evaluation using programming language primitives	1973-12
Box 6	102773561	Computer power and human reason : from judgment to calculation	1976
Box 6	102773556	FORTH dimensions newsletter	1980-03
Box 6	102773567	FORTH Inc. promotional package	1973
Box 6	102773557	FORTUNE manual	1972
Box 6	102773558	Guide to LSI implementation, A	1980-01
Box 6	102773544	IF interactive FORTRAN compiler	1973-1979
Box 6	102773549	Industrial Real-Time FORTRAN (IRTF) standard draft	1981
Box 6	102773546	Los Alamos National Laboratory technical reports	1970; 1972
Box 6	102773562	Merrill's expanded guide to computer performance evaluation using the SAS system	1990
Box 6	102773554	Microsoft Applesoft compiler system for Apple II	1983

	Catalog Number	**Title**	**Date**
Other organizations records			
Box 6	102773542	MIT Artificial Intelligence Laboratory memos	1970-1971
Box 6	102773541	NATO Science Committee software engineering conference reports	1969-1970
Box 6	102773540	R:BASE 3.1 : relational database concepts in practice	1991
Box 6	102773565	REDUCE 2 manual	1973-03
Box 7	102773555	Research in machine-independent software programming	1968-12-21
Box 7	102773547	System Development Corporation product descriptions	1970; 1974
Box 7	102773559	Terrapin Logo language for the Apple II : tutorial	1983
Box 7	102773553	Tube, transistor, and diode descriptions	1956
Box 7	102773564	University of Illinois Digital Computer Laboratory IBM 7090 program library	1962
Box 7	102773563	University of Illinois manuals and technical reports	1962-02-12; 1969-12-01
Box 7	102773534	University of Michigan Terminal System (MTS)	1976-1977
Box 7	102773551	Using the CMS System Product Interpreter	1986
Box 7	102773560	West of Eden : the end of innocence at Apple Computer	1989