



## Guide to the Paul R. DesJardins collection

**Creator:** Paul R. DesJardins

**Dates:** 1947-2003, bulk 1956-1993

**Extent:** 12.5 linear feet, 10 record cartons

**Collection number:** X4578.2008

**Catalog number:** 102733966

**Collection processed by:** Bo Doub and Kim Hayden, 2017

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

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### **Abstract**

The Paul R. DesJardins collection documents DesJardins's career as a programmer, with material dating from 1947 to 2003, and the bulk from 1956 to 1993. A large portion of the collection is related to the development of the time-sharing system RUSH, and to PL/I, the programming language used for RUSH. DesJardins was the principal designer of RUSH when he worked at Allen-Babcock Computing. Also included is a smaller amount of material created and collected by DesJardins when he worked at North American Aviation and Nucleus International. Lastly, the collection contains various publications collected by DesJardins that include technical papers, newsletters, conference and seminar proceedings, manuals, reference guides, specifications, and promotional material.

### **Administrative Information**

#### **Access Restrictions**

The collection is open for research.

#### **Publication Rights**

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**Languages**

The collection is in English.

**Preferred Citation**

[Identification of Item], [Date], Paul R. DesJardins collection, Lot X4578.2008, Box [#], Folder [#], Catalog [#], Computer History Museum.

**Immediate Source of Acquisition**

Gift of Stephen des Jardins, via Al Kossow, 2007.

**Repository**

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**Biographical/Historical Note**

Paul R. DesJardins is notable for his work as a programmer, particularly in aerospace applications, operating systems, time-sharing systems, databases, and other industry applications and programs. He graduated from St. Louis University in 1948 with a bachelor's degree in aeronautical engineering, then studied numerical analysis at UCLA Extension. At the beginning of his career, DesJardins worked in the aerospace industry doing application programming, aircraft design, flight testing, and trajectory analysis for Chase Aircraft Company, Redstone Arsenal, the United States Army, and North American Aviation (NAA). DesJardins was with the army from 1950 to 1953, where he worked in missile trajectory analysis, aircraft flight safety, maintenance, and parts procurement. After the army, DesJardins was employed at NAA from 1954 to 1965 in the Missile Division, where he worked as the supervisor of flight test data analysis, and as the director of the Computer Services Division. He was involved in space flight analysis, celestial mechanics, lunar landing studies, and the NAA's Hardware Committee. After leaving the NAA, DesJardins worked for Allen-Babcock Computing (ABC) from 1965 to 1972 as the vice president of systems and programming. While at ABC, he was the principal designer of RUSH (Remote Use of Shared Hardware), a time-sharing system for the IBM System/360 Model 50 that used the PL/I language, and contributed to the development of other instructions and applications for a variety of industries. DesJardins worked as a database application consultant from 1973 to 1986, then worked for Nucleus International (formerly Marcus) into the 1990s. While at Nucleus, DesJardins co-designed a bit vector coding method that was patented as the Bit String Compressor with Boolean Operation Processing Capability in 1991. Outside of work, DesJardins was active in the IBM user group SHARE as a program chairman and board of directors member. He was also a national Association for Computing Machinery (ACM) lecturer on application-specific programming in 1969. DesJardins passed away in 2007.

**Scope and Content of the Collection**

The Paul R. DesJardins collection contains material collected by DesJardins primarily during his work at North American Aviation (NAA), Allen-Babcock Computing (ABC), and Nucleus

International. The records span 1947 through 2003 with the bulk of the collection being from 1956 to 1993. One main focus of the material in this collection is the development of the RUSH (Remote Use of Shared Hardware) time-sharing system, which DesJardins managed as principal designer at ABC. RUSH was built on IBM's PL/I programming language, and this collection holds a significant amount of material on PL/I's development--primarily by joint efforts between IBM and SHARE--as well. Forms of documentation in this collection for both RUSH and PL/I include technical reports, specifications, manuals, committee proceedings, and correspondence.

The collection's records relating to DesJardins' work at North American Aviation and Nucleus International are fewer in quantity compared to the Allen Babcock material, but they are useful for gaining a more comprehensive idea of DesJardins' career. Types of material from NAA and Nucleus International include internal correspondence, manuals, training and course material, technical papers, notebooks, and internal committee reports, such as reports from NAA's Hardware Committee.

Lastly, this collection holds various publications that DesJardins collected as a sort of reference library for different projects, interests, and work. Included are technical papers, newsletters, conference and seminar proceedings, manuals, reference guides, specifications, and promotional material. Much of these publications relate to software design and the use of programming languages, such as Fortran and BASIC. Many of the publications in this part of the collection were published by IBM. The collection's earliest publication, a paper titled "Planning and Coding of Problems for an Electronic Computing Instrument," was published in 1947 and written by Herman H. Goldstine and John von Neumann.

### **Arrangement**

The collection is arranged into 6 series:

- Series 1, Allen-Babcock Computing RUSH records, 1965-1974
- Series 2, PL/I development records, 1964-1976
- Series 3, North American Aviation records, 1954-1967
- Series 4, Nucleus International Corporation records, 1984-2003, bulk 1984-1993
- Series 5, Technical reports and newsletters, 1947-1995, bulk 1956-1977
- Series 6, Manuals, product descriptions, and specifications, 1957-2001, bulk 1961-1991

### **Indexing Terms**

Allen-Babcock Computing  
DesJardins, Paul  
International Business Machines Corporation  
North American Aviation  
Nucleus International Corporation  
Programming (Computers)  
PL/I (Computer program language)  
RUSH (Remote Users of Shared Hardware)

### **Separated Material**

Software was separated from the main collection: Lisa Interactive Assembler, DOS, Commodore Word Processing (WordPro), and Visualize from Norell Data Systems Corporation. Two photographs and a portion of periodicals and books were also separated and cataloged

on an item-level. To view catalog records for separated material, search the CHM catalog at <http://www.computerhistory.org/collections/search/>.

## Collection Contents

### **Series 1, Allen-Babcock Computing RUSH records, 1965-1974**

This series contains material related to the RUSH time-sharing system that DesJardins collected and created while he was the vice president of systems design and programming at Allen-Babcock Computing. Material dates from 1965 to 1974. In 1965, Allen-Babcock contracted with IBM to study several computer technologies, including time-sharing with IBM's PL/I programming language (for more information on PL/I, see "Series 2, PL/I development records"). From these studies, Allen-Babcock developed its RUSH (Remote Use of Shared Hardware) time-sharing system for the IBM System 360 Model 50 using the PL/I language. DesJardins was the principal designer of RUSH, in addition to many other instructions for the Model 50. This series is almost entirely made up of material related to the development and implementation of RUSH and its various applications. Material includes descriptions of RUSH and its applications, DesJardins' design notebooks and handwritten notes, reports, program listings and libraries, plans and proposals, newsletters, announcements, manuals, specifications, promotional material, and customer leasing information. There is also material related to the development of Conversational Programming System (CPS)—a subset and extension of PL/I that Allen-Babcock contracted with IBM to develop—including reports, specifications, project proposals, handwritten notes and charts, program listings, drafts of reports with handwritten edits, and the contents of a design notebook. This series is arranged alphabetically by folder title.

### **Series 2, PL/I development records, 1964-1976**

This series consists of material related to the development of the PL/I programming language. Material dates from 1964 to 1976. Development of PL/I was started in 1963 by a committee of IBM and SHARE personnel whose aim was to create one programming language that could be used across all computer applications, including commercial, scientific, and systems. It was first implemented as part of the development of the IBM System/360. DesJardins was a program chairman and member of the board of directors of SHARE, but it is unclear if he was involved with its development of PL/I or if he collected these items as reference material when he was working on PL/I-related programming design at Allen-Babcock Computing (See "Series 1, Allen-Babcock Computing records"). This series includes material from the early development of PL/I, including a 1964 report from the SHARE Advanced Language Development Committee that describes the then-unnamed language; 1969 technical reports from the IBM Vienna Laboratory, which was tasked with creating a complete specification; IBM specifications from 1965 and 1966; and reports from SHARE and ACM SIGPLAN PL/I working group meetings. Also included is SHARE correspondence from August to December 1965; most of this correspondence is related to general SHARE activities, but some is related to PL/I development. This series also contains material related to the standardization of PL/I, including several editions of reports that were created for ECMA TC10 and ANSI XJ31 to use as the basis for consideration of PL/I as a standard language. Lastly, this series contains manuals and guides for PL/I. This series is arranged alphabetically by folder title.

### **Series 3, North American Aviation records, 1954-1967**

This series contains material that DesJardins collected and created during his employment with North American Aviation. Types of material include engineering manuals, course material, technical papers, notes, and committee reports. The earliest records in this series comprise a notebook compiling promotional material and manuals from various computers and companies. Some of the material in this notebook relates to DesJardins' work as a Flight Test Engineer,

supervising flight test data analysis. During his last years at North American Aviation, DesJardins participated in the company's Hardware Committee, formed to make computer hardware recommendations. This series contains reports from the Hardware Committee, which reflect efforts in "digging out facts, plans, and opinions about the various suppliers and their wares by studying published manuals, contacting suppliers' representatives, visiting twelve computer installations in the aerospace industry and evaluating the significance of what had been learned." This series is arranged alphabetically by folder title.

**Series 4, Nucleus International Corporation records, 1984-2003, bulk 1984-1993**

This series is made up of correspondence, manuals, reports, patents, and presentation and course material collected and created by DesJardins during his work at Nucleus International Corporation. The largest parts of this series comprise manuals and learning guides, some written for internal use and others for an end-user audience. One early instructional reference guide from 1985, titled "Marcus Software Notebook," contains a collection of memoranda and guidelines created at an organization called Marcus, which later became Nucleus International. Edward L. Glaser, who cofounded Nucleus, appears frequently in this series. One folder contains a short history of Nucleus written by Glaser, along with correspondence to DesJardins concerning a memorial tribute for Glaser. This series is arranged chronologically.

**Series 5, Technical reports and newsletters, 1947-1995, bulk 1956-1977**

This series contains DesJardins' collected technical papers, newsletters, conference and seminar proceedings, and technical reports. Many of these publications relate to software design, operating systems, microprogramming, systems analysis, and programming languages—especially Fortran. Publishers that appear frequently in this series include IBM and Bell Telephone Laboratories. Conference, seminar, and workshop proceedings cover presentations facilitated by SHARE, ACM, IBM, and University of Newcastle upon Tyne. One paper, titled "SHARE - A Eulogy to Cooperative Effort," documents a presentation at the 1956 Electronic Business Systems Conference. The earliest paper in this series, "Planning and Coding of Problems for an Electronic Computing Instrument," was published in 1947 and written by Herman H. Goldstine and John von Neumann. The newsletters with the highest numbers of editions in this series are the IBM Technical Newsletter, SIGMICRO newsletter of ACM's Special Interest Group on Microprogramming, and the Bulletin of the ACM Special Interest Committee on Symbolic and Algebraic Manipulation (SICSAM). This series is arranged alphabetically by folder title.

**Series 6, Manuals, product descriptions, and specifications, 1957-2001, bulk 1961-1991**

This series consists of manuals, reference guides, product descriptions, specifications, and small amounts of catalogs and promotional material collected by DesJardins throughout his career. A significant amount of the manuals in this series relate to programming languages, software design, and commercial software products. Much of the programming manuals focus on Fortran and BASIC. One software product, an operating system, that is heavily documented in this series is Reality, developed by Microdata Corporation. DesJardins helped develop Reality while working as a consultant. Manuals and promotional material documenting hardware also makes up a large portion of this series. The Apple II is a product that is referenced frequently, both the Apple II equipment and software designed for or adapted to the computer. The company with the most material in this series is IBM, with manuals, specifications, promotional material, and catalogs for both hardware and software products. The IBM System/360, OS/360, and IBM 700/7000 series are especially prevalent in these records. Other companies that are well-documented in this series include Microtec Research, Borland International, Control Data Corporation, and Honeywell Information Systems. This series is arranged alphabetically by folder title.

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
<b>Folder List</b>			
<b>Allen-Babcock Computing RUSH records</b>			
<b>Box 1</b>	102773388	Construction Cost Control application development	1971
<b>Box 1</b>	102773382	Conversational Programming System (CPS) development	1965-1966
<b>Box 1</b>	102773381	International Timesharing purchase	1973
<b>Box 1</b>	102773391	Project proposals	1971-1972
<b>Box 1</b>	102773389	RUSH applications	1968-1972
<b>Box 1</b>	102773390	RUSH compilers	1968-1969
<b>Box 1</b>	102773383	RUSH customer leasing information	1967-1969
<b>Box 1</b>	102773384	RUSH development and descriptions	1966-1971
<b>Box 1; 2</b>	102773385	RUSH manuals and program libraries	1967-1974
<b>Box 2</b>	102773386	RUSH newsletter and announcements	1967-1971
<b>Box 2</b>	102773387	RUSH promotional material	ca. 1970
<b>PL/I development records</b>			
<b>Box 2</b>	102773376	Correspondence and memoranda	1965-1970
<b>Box 2</b>	102773379	ECMA and ANSI standardization	1968-1975
<b>Box 2</b>	102773378	IBM specifications	1965-1966
<b>Box 2</b>	102773377	Manuals	1967-1976
<b>Box 2; 3</b>	102773380	Technical papers and reports	1964-1969

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
<b>North American Aviation records</b>			
<b>Box 3</b>	102772908	Engineer's computing manuals	1957-1964
<b>Box 3</b>	102764683	Fortran course material and program descriptions	ca. 1963
<b>Box 3</b>	102772909	Hardware Committee reports	1964-1965
<b>Box 3</b>	102773910	Notebook with promotional material and manuals for various computers	1954-1956
<b>Box 3</b>	102773911	Technical papers from conference presentations	1963; 1967
<b>Nucleus International Corporation records</b>			
<b>Box 3</b>	102773912	Correspondence, patents, and a history of Nucleus	1984-1986; 1990-1993
<b>Box 3</b>	102773915	Marcus software notebook	1985
<b>Box 3</b>	102773913	Database presentation and course material	1989
<b>Box 3</b>	102773918	Nucleus promotional material and product overview	1989; 1991
<b>Box 4</b>	102773914	Folded Bit Array (FBA)-based database performance analysis and tree algorithms	1990; 2003
<b>Box 3</b>	102773917	Nucleus manuals and learning guides	1990-1992
<b>Box 4</b>	102773916	Microprogramming report	ca. 1990

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
<b>Technical reports and newsletters</b>			
<b>Box 4</b>	102773919	ALTRAN and Interpreter technical papers and seminar	1967-1969
<b>Box 4</b>	102773920	Association for Computing Machinery (ACM) publications and workshop proceedings	1966-1971
<b>Box 10</b>	102774025	Circuit cellar INK : the computer applications journal	1990
<b>Box 4</b>	102773928	High-speed-text-search design contract reports and specifications	1977
<b>Box 4</b>	102773921	IBM and SHARE conference proceedings	1956; 1977
<b>Box 4</b>	102773922	IBM technical newsletter	1964-1973
<b>Box 10</b>	102774027	IEEE transactions on software engineering	1986
<b>Box 4</b>	102773923	Microprogramming technical papers	1969-1974; 1978
<b>Box 10</b>	102774026	PC techniques	1995
<b>Box 10</b>	102774024	SIGMICRO newsletter	1975-1977
<b>Box 4</b>	102773924	System Development Corporation (SDC) SP series reports	1960-1961
<b>Box 4</b>	102773925	Technical papers and articles on programming, systems design, and operating systems	1947; 1959; 1961-1968; 1979
<b>Box 4</b>	102773926	Technical reports, application report, and application notes on systems analysis and design	1968-1978
<b>Box 4</b>	102773927	The Programmer's Letter, Data Processing Systems Bulletin, and other newsletters	1956-1959; 1977-1985



	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
<b>Manuals, product descriptions, and specifications</b>			
<b>Box 4</b>	102773411	Advanced Micro Devices	1984; 1987
<b>Box 4</b>	102773408	Apple	1978-1983
<b>Box 4; 5</b>	102773414	Borland SQL Link, Turbo Debugger 3.0, and ObjectVision	1991-1993
<b>Box 5</b>	102773410	Burroughs B5000, B6500, and Algol 60	1961; 1969
<b>Box 5</b>	102773402	CalComp	1968-1969
<b>Box 5</b>	102773398	Control Data Corporation	1961-1965
<b>Box 5</b>	102773415	Data General	1974-1975
<b>Box 5</b>	102773407	Digital Research DR DOS	1991
<b>Box 5</b>	102773930	Fortran IV, CAL, QED, and BASIC	1966-1968
<b>Box 5</b>	102773406	General Electric GE-635, GE-625, and time-sharing programs	1964-1968
<b>Box 5; 6</b>	102773430	Hardware manuals	1961-1982; 1993
<b>Box 6</b>	102773429	Hardware promotional material and specifications	1975-1981
<b>Box 6</b>	102773395	Hewlett-Packard	1976-1982
<b>Box 6</b>	102773403	Honeywell Level 62, Series 16, and Level 6	1970-1977
<b>Box 6</b>	102773420	IBM 3704, 3705, 3735, and 3767	1971; 1974
<b>Box 6</b>	102773426	IBM 407 and 1401	1957; 1965
<b>Box 6</b>	102773418	IBM 700/7000 series	1957-1964
<b>Box 6</b>	102773424	IBM applications and programs	1967-1993
<b>Box 6</b>	102773422	IBM data processing applications	1966-1970
<b>Box 7</b>	102773423	IBM data processing techniques	1961-1966
<b>Box 7</b>	102773425	IBM general information manuals	1961-1983

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
<b>Manuals, product descriptions, and specifications</b>			
<b>Box 7</b>	102773421	IBM System/360 and OS/360	1966-1972
<b>Box 7</b>	102773419	IBM System/370 models 145 and 155	1970; 1974
<b>Box 7</b>	102773412	Intel i960, memory components, 80386, and 8008	ca. 1973-1986
<b>Box 7</b>	102773393	Interdata	1970-1971
<b>Box 7</b>	102773396	Lear Sieger 7700A	1972-1973
<b>Box 8</b>	102773932	Marketing management simulation	1960
<b>Box 8</b>	102773392	Microdata Reality	1972-1984
<b>Box 8</b>	102773404	Microtec ASM960, XRAY960, and MCC960	1990-1991
<b>Box 8</b>	102773417	Mitre Interactive Microprogram Development System (IMDS)	1971-09
<b>Box 8</b>	102773409	Nanos Systems reference cards	1981-1983
<b>Box 8</b>	102773413	Norell Data Systems	1982; 1984
<b>Box 8</b>	102773394	Pansophic Easytrieve	1975-1976
<b>Box 8</b>	102773929	PDP-6 and microcomputers	1964; 1976
<b>Box 8</b>	102773416	Philco 2000, ALTAC, and Philco 212.	1962
<b>Box 9</b>	102773933	Product catalogs	1971; 1979; 1993
<b>Box 9</b>	102773935	Programming and program design manuals	1961-1988
<b>Box 9</b>	102773401	RCA Spectra 70 and COSMAC	1964-1967; 1979
<b>Box 9</b>	102773405	SBC CALL/360	1969
<b>Box 9</b>	102773399	Signetics 2650	1975
<b>Box 9; 10</b>	102773427	Software manuals	1961-2001

	<u>Catalog Number</u>	<u>Title</u>	<u>Date</u>
	<b>Manuals, product descriptions, and specifications</b>		
<b>Box 10</b>	102773934	Software promotional material and program descriptions	1967-1973
<b>Box 10</b>	102773397	Texas Instruments 960A and integrated circuits	1969; 1972
<b>Box 10</b>	102773400	Tymeshare	1968
<b>Box 10</b>	102773931	VisiTrend, VisiPlot, and VisiCalc	1979-1981
<b>Box 10</b>	102773428	Word processing systems manuals and promotional material	1980-1983