Guide to the
Automatic Data Processing Acquisition Planning Records, 1965-1997
AFS5107

NASA Ames History Office
NASA Ames Research Center

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Descriptive Summary

Title:
Automatic Data Processing Acquisition Planning Records, 1965-1997

Collection Number:
AFS5107

Creator:
B. Douglas Pearson Jr.
Phillips J. Tunnell

Dates:
Inclusive: 1965-1997

Extent:
Volume: 2 cubic feet

Repository:
NASA Ames History Office
Moffett Field, California 94035

Abstract:
This collection provides a glimpse into Automatic Data Processing procurement planning, which was conducted at NASA Ames Research Center from 1965 to 1996 in accordance with the Brooks Automatic Data Processing Act of 1965. Though the collection does not constitute a complete set of records of this work, it does offer insight into three decades of computing capabilities at Ames. The most extensively documented efforts include planning for mainframe computer procurement from 1965 to 1980, for acquiring the CRAY-2 Cyber 205, and for formulating the Numerical Aerodynamic Simulation Program.

Administrative Information

Access:
Collection is open for research.

Publication Rights:
Copyright does not apply to United States government records. For non-governmental material, researcher must contact the original creator.

Languages and Scripts:
All records are in English.

Preferred Citation:
Expanded:
NASA Ames History Office, NASA Ames Research Center. Moffett Field, California. AFS5107, Automatic Data Processing Acquisition Planning Records, 1965-1997, [Container number] : [Folder number]. [Identification of item]. [Date, if available].
Abbreviated:
NASA ARC. AFS5107, [Container number] : [Folder number]. [Identification of item]. [Date, if available].

Acquisition Information:
Donated by Paul E. Ceruzzi and B. Douglas Pearson Jr. on May 1, 2014 and May 29, 2014, respectively.

Custodial History

A portion of the material (Accession 2014-006) was transferred from Ames to the National Archives and Records Administration Federal Records Center (FRC) in 1985. When the material was slated for destruction at FRC in 1991, Douglas Pearson transferred it to Paul Ceruzzi, who was then a space history curator at the National Air and Space Museum. (Ceruzzi was later to cite the records in his book *A History of Modern Computing* in the section discussing the era of mainframe computing.) In 2014, Paul Ceruzzi transferred the material to the NASA Ames Research Center History Office.

Administrative History

The passage of the Brooks Automatic Data Processing Act of 1965 marked a transition toward establishing uniform Automatic Data Processing (ADP) guidelines for federal computer systems. In addition to promoting the development of standards and interconnectivity, the Brooks Act was meant to enhance efficiency and economy in the government's procurement of ADP systems. At the time, the Federal government was the world's largest user of ADP equipment and these costly, customized systems were consuming almost three percent of the Federal budget. The General Services Administration assumed responsibility for coordinating the procurement of computer systems according to the fiscal and policy direction of the Bureau of the Budget (now the Office of Management and Budget). As a Federal agency, NASA had to comply with new requirements, including the production of detailed plans for ADP acquisitions. By the end of the year Ames had developed its first annual acquisitions plan and, by 1967, an ADP Management Office was established in the Office of the Director within Thomas R. Dines's Computation Division (Code DK). Former Aeronautics Office chief Phillips J. "Jack" Tunnell was selected to head the new office and assume responsibility for managing procurement planning. Until his retirement in 1980, Tunnell handled the complex acquisition plans for building up computing capabilities at Ames, notably the procurement of many generations of mainframe computers. At the end of Tunnell's tenure, the ADP Management Office remained within the Computation Division (Code RK), but the division had been moved to the Office of the Director of Research.

Not long after Tunnell's departure, the ADP Management Office moved under the Advanced Computational and Management Office (Code RT) headed by Marceline C. Smith, and B. Douglas Pearson Jr. was tapped to run it. Pearson remained in charge of ADP acquisitions planning for Ames until he retired from the civil service nearly two decades later. With the Ames-Dryden consolidation in 1981, the ascendancy of microcomputers and supercomputers during that decade, and the establishment of a new supercomputing facility on the horizon, Pearson had his work cut out for him. The merger with Dryden added ADP planning for an additional research center to the office's list of responsibilities and, as if that weren't enough, both centers replaced and upgraded all of their computing facilities over the next couple of years. By the mid-1980s, the mainframe computer era gave way to supercomputing, with multimillion-dollar Cray systems coming on board from 1981 through 1986. In parallel, planning was underway for the Numerical Aerodynamic Simulation program, which came online in 1985, and for the program's new supercomputing facility, which opened in 1987. (Called NAS, it was later renamed NASA Advanced Supercomputing Division while retaining the same acronym.) Also during that decade, with requests for microcomputers and terminals flooding the ADP office, it became impractical to provide comprehensive acquisition plans for hundreds of small purchases. By 1986, Pearson found a way to streamline the process for procuring personal desktop systems and associated peripherals, and brought in assistants to handle the paperwork.

The 1980s also saw the reorganization of the Computation Division at Ames when long-time chief Thomas R. Dines died in 1983. For about a year, the ADP Management Office moved to a division-level placement within the Office of the Director of Engineering and Computer Systems (Code E). In 1985, the computing organization was moved again, this time over to the Office of the Director of Aerophysics (Code R), where it would remain for the next decade. Later, to reflect the growing emphasis on annual budget planning, the ADP office was renamed the ADP Planning and Analysis Office and placed back on the branch level, under the Computer Systems and Research Division (Code RC) headed by Marceline C. Smith.

When NASA administrator Daniel S. Goldin named Ames Research Center as NASA's Center of Excellence for Information Technology in 1995, the Computer Systems and Research Division moved from the Office of the Director of Aerophysics to a newly-formed Office of the Director of Information Systems (Code I) and was reorganized in order to separate supercomputing from the traditional Computation Division functions. Pearson headed the ADP Management Office within this directorate (Code IA) and handled dual ADP acquisition and budget planning roles.

Shortly before Pearson retired, the Clinger-Cohen Act of 1996 essentially abolished the acquisitions rules set forth in the Brooks Act and returned responsibility for ADP procurement back to Federal agencies. (Meanwhile, OMB retained and expanded its policy-setting and leadership role and became the Federal CIO; CIO functions were also mandated at specified agencies, including NASA.) The passage of the Clinger-Cohen Act marked the end of the ADP acquisition planning function at Ames with respect to compliance with the Brooks Act, and the office pivoted to focus more fully on budget planning. In 1998, Pearson stepped down from his post (then in the Applied Information Technology Division, Code II),

and retired from the civil service, although he stayed on (first as a volunteer, and then as a contractor) to assist the center with information technology budget planning.

Sources Consulted:

NASA Ames History Office, NASA Ames Research Center. Moffett Field, California. AFS5107, Automatic Data Processing Acquisition Planning Records, 4 : 8. Fiftieth Anniversary of Ames Research Center, Central Computer Facility. 1989.

Brooks Automatic Data Processing Act, Pub. L. No. 89-306, H.R. 4845 (Oct. 30, 1965).

Clinger-Cohen Act of 1996, Pub. L. No. 104-106 (Div. D and E), 110 Stat. 186, 642 (Feb. 10, 1996), *codified at* 40 U.S.C. §11101 *et seq.*

NASA Ames History Office, NASA Ames Research Center. Moffett Field, California. AFS1070.8A, Archives Reference Collection. Telephone Directories. 1965-1997.

Willis, Charles I., 1994. *The Brooks Act, Is It Relevant Today?* Thesis, Naval Postgraduate School. Monterey, California. (Accession Number AD-A283 561.)

Scope and Content

This collection provides a glimpse into Automatic Data Processing (ADP) procurement planning activities conducted by the two ADP management officers at NASA Ames Research Center, Phillips J. "Jack" Tunnell (1965-1980) and B. Douglas Pearson Jr. (1980-1997). The records reflect their research and evaluation of projected needs for various ADP capabilities, including mainframe computers, supercomputers, and increasingly sophisticated facilities, networks, and programs. The bulk is representative of planning efforts at Ames, though portions include mention of Dryden Flight Research Center (currently Armstrong Flight Research Center), which was managed by Ames from 1981 to 1994.

The records in this collection, which are largely textual, comprise reports, plans, program formulation documentation, presentations, correspondence, memoranda, briefings, meeting minutes, and procurement documentation such as system descriptions, power requirements, equipment configurations, model and cost comparisons, budget projections, usage projections, purchase recommendations, and justifications. Also included are a few historical articles about computing at Ames.

Considering that the bulk of the ADP office's files were not scheduled for permanent retention, this collection does not form a complete record of its activities. Rather, it represents a sampling of material Pearson retained due to its possible historical value. The records offer insight into three decades of computing capabilities at Ames. The most extensively documented efforts include planning for mainframe computer procurement from 1965 to 1980, for acquiring the CRAY-2 Cyber 205, and for formulating the Numerical Aerodynamic Simulation Program. Desktop systems acquisition planning efforts are sparsely represented.

System of Arrangement

This collection is arranged chronologically by subject.

Indexing Terms

The following terms may be used to index this collection.

Corporate Name
Ames Research Center
NASA Dryden Flight Research Center
Numerical Aerodynamic Simulation Program (U.S.)
Research Institute for Advanced Computer Science (U.S.)

Personal Name
Pearson, B. Douglas, Jr.
Tunnell, Phillips J.

Subjects
CDC 7600 (Computer)
Cray computers
Cyber 205 (Computer)
Electronic data processing
Government purchasing -- United States
Honeywell 800 (Computer)
Honeywell 200 (Computer)
IBM 360/50 (Computers)
IBM 360/67 (Computers)
IBM 370/168 (Computers)
IBM 7040-7094 (Computers)
IBM 1401 (Computer)
Information technology
Mainframe computers (Computer Systems)
Center of excellence for information technology (U.S.)
SEL 840 MP (Computer)
Supercomputers
VAX/VMS (Computer)

Separated Material

The following items were removed from the collection and incorporated into the Archives Reference Collection (AFS1070.8A):

Ames Telephone Directories (October 1987, May 1992, January 1994, June 1996)
Clippings, Miscellaneous
Fluid Mechanics Laboratory Construction Contract Award Announcement (1985)

Numerical Aerodynamic Simulation Program Newsletters (October 1986-July 1990)

The following was removed from the collection and transferred to the Ames Technical Library:

Ames Research Center. NAS technical summaries: Numerical Aerodynamic Simulation Program, March 1991 - February 1992. Moffett Field, CA: NASA-TM-109335, 1992.

National Aeronautics and Space Administration, Scientific and Technical Information Branch. Supercomputing in aerospace, proceedings of a symposium held at the NASA Ames Research Center, Moffett Field, California, March 10-12, 1987. Washington, DC: NASA-CP-2454, 1987.

Related Material

AFS1070.8A: Archives Reference Collection
255.4.1: NACA Ames Aeronautical Laboratory and NASA Ames Research Center Records at NARA San Francisco, 1939-1971
PP07.13-RS: Robert E. Slye Papers, 1961-2001, General/Reference Publications Series

Note: Acronyms List

ADP	Automatic Data Processing
ADPE	Automatic Data Processing Equipment
ARPA	Advanced Research Projects Agency
CDC	Control Data Corporation
DCS	Direct-Couple System
DEC	Digital Equipment Corporation
FY	Fiscal Year
IBM	International Business Machines
ILLIAC	Illinois Automatic Computer
NAS	NASA Advanced Supercomputing
NAS	Numerical Aerodynamic Simulation
RIACS	Research Institute for Advanced Computer Science
SEL	Systems Engineering Laboratories
SEL 840 MP	Systems Engineering Laboratories 840 Multiprocessor Computer System
VAX	Virtual Address Extension

Container List

Box	Folder	Folder Title	Date Range
1	1	System AF, SEL 840 MP System (Wind Tunnel)	1965-1971
	2	System AF, SEL 840 System (Wind Tunnel)	1968-1976
	3	System A2, Honeywell 800/200. Subfile 1: System A2, Honeywell 200 System	1965-1976
	4	System A2, Honeywell 800/200. Subfile 2: System A2, Honeywell 800 System	1967-1973

	5	System A2, Honeywell 800/200. Subfile 3: System A2, IBM 1401 System	1974-1975
	6	#9 IBM 1401 Administration (12K) Category A	1966-1969
	7	#24 IBM 360/50 Computer, Category A	1967-1969
	8	Computer Systems Comparison Chart (IBM 360/50 included)	circa 1967-1969
2	1	NASA Ames Research Center. A Justification of the Need to Replace the IBM 7040/7094 Direct Couple System	1967
	2	System A1, IBM 7040/7094 Direct Couple System	1967-1975
	3	Document Fragment, Survey (about replacing the satellite 1401 and teleprocessing network used for the IBM 7040/7094)	circa 1967
	4	System AA, IBM 360/67 System. Subfile 1: Fiscal Year 1969-1970	1967-1970
	5	System AA, IBM 360/67 System. Subfile 2: ARPA Network	1967-1970
	6	ADPE Acquisition Plan, Proposed Central Computer Facility, Category A, Copy 16 (expansion of IBM 360/67)	1969
	7	ADPE Acquisition Plan for an IBM Duplex 360/67	1969
	8	System AA, IBM 360/67, Fiscal Year 1971	1970-1971
3	1	System AA, IBM 360/67, Disk Storage Expansion	1971-1974
	2	System AA, IBM 360/67, Fiscal Year 1972-1974	1971-1974
	3	System AA, IBM 360/67, Fiscal Year 1975	1973-1979
	4	System AA. Subfile 1: ADP Acquisition Plan for an Interactive Computer System to Replace the Central Computer Facility IBM 360/67	1978-1981
	5	System AA. Subfile 2: Replacement System Acquisition Plan, IBM 360/67	1978-1981
	6	System AA. Subfile 3: Replacement System Acquisition Plan Drafts, IBM 360/67	1978-1981
	7	System AA. Subfile 4: Replacement System Acquisition Plan Drafts, IBM 360/67	1978-1981
	8	System A3-CDC 7600 (1 of 4)	1974-1975
4	1	System A3, CDC 7600 (2 of 4)	1976-1980
	2	System A3, CDC 7600 (3 of 4)	1976-1980
	3	System A3, CDC 7600 (4 of 4)	1976-1980
	4	System AN, Shared VAXs	1979-1980
	5	Advanced Computation and Management Office Establishment, Correspondence	1981-1982
	6	CRAY-2, Cyber 205 Procurement	1983
	7	CRAY-2, Cyber 205 Government Accountability Office Audit	1984

	8	Numerical Aerodynamic Simulation Program Overviews	1980s
	9	Numerical Aerodynamic Simulation Program Formulation (1 of 2)	1982-1985
	10	Numerical Aerodynamic Simulation Program Formulation (2 of 2)	1982-1985
	11	Numerical Aerodynamic Simulation Project Management Report	March 15, 1982
	12	Numerical Aerodynamic Simulation Program Management Reports	May 1984-September 1985
5	1	Numerical Aerodynamic Simulation Monthly Status Reports	October 1984, July 1985
	2	Numerical Aerodynamic Simulation User Interface Group Meeting	January 10, 1986
	3	Numerical Aerodynamic System Capability Dedication	March 9, 1987
	4	Research Institute for Advanced Computer Science, Reports and Plans	1983-1986
	5	Appropriation Integrity Study, Moffett Briefing	October 19, 1987
	6	Center Budget Projections for Automatic Data Processing	1987
	7	Computer Systems and Research Division Presentation	November 21, 1989
	8	Fiftieth Anniversary of Ames Research Center, Central Computer Facility	1989
	9	Records Disposition Correspondence	1989-1991
	10	Automatic Data Processing Equipment Acquisition Plan for Computational Capability Resources Contract	1990-1992
	11	NASA Information Resources Management, Proposed Strategic Plan	1991
	12	Ames Long-Range Imaging Plan	1992
	13	Desktop Technology Cost/Benefit Analysis	1993
	14	Ames Reorganization, Computer Systems and Research Division	1994
	15	Ames Named NASA Center of Excellence for Information Technology	1995
6	1	NASA Internet Protocol Networks Architecture Consolidation Analysis Draft	1996
	2	Applied Information Technology Briefing	March 6, 1996
	3	Center of Excellence and Lead Center Briefing	1997
	4	History, Automatic Data Processing, and Center-wide: Ames, Langley, Lewis	1980s-1990s