
Guide prepared by April Gage
NASA Ames History Office
NASA Ames Research Center
Mail Stop 207-1
Moffett Field, California 94035
Phone: (650) 604-1032
Email: ARC-DL-history@mail.nasa.gov
URL: http://history.arc.nasa.gov

NASA Ames History Office
NASA Ames Research Center

Contact Information:
NASA Ames History Office
NASA Ames Research Center
Mail Stop 207-1
Moffett Field, CA 94035
Phone: (650) 604-1032
Email: ARC-DL-history@mail.nasa.gov
URL: http://history.arc.nasa.gov

Collection processed by:
April Gage

Date Completed:
May 2015

Descriptive Summary
Title: Automatic Data Processing Acquisition Planning Records
Date (inclusive): 1965-1997
Collection Number: AFS5107
Creator: Pearson, B. Douglas, Jr.; Tunnell, Phillips J.
Extent: Number of containers: 6
Volume: 2 cubic feet
Repository: Ames Research Center, 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.

Language: English

Access
Collection is open for research.

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

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

Abbreviated Citation
NASA ARC. AFS5107, [Container number]: [Folder number]. [Identification of item]. [Date, if available].

Separated Material
The following items were removed from the collection and incorporated into the Archives Reference Collection (AFS1070.8A):
Clippings, Miscellaneous
Fluid Mechanics Laboratory Construction Contract Award Announcement (1985)
Numerical Aerodynamic Simulation Program Newsletters (October 1986-July 1990)
The following publications were removed from the collection and transferred to the Ames Technical Library:

Related Collections
AFS1070.8A: Archives Reference Collection
255.4.1: NACA Ames Aeronautical Laboratory and NASA Ames Research Center Records at NARA San Francisco, 1939-1971

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.

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

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 ascendency 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:
§11101 et seq.
NASA Ames History Office, NASA Ames Research Center. Moffett Field, California. AFS1070.8A, Archives Reference
(Accession Number AD-A283 561.)

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
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)

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.

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
Computer System
VAX
Virtual Address Extension

Arrangement of the Automatic Data Processing Acquisition Planning Records
This collection is arranged chronologically by subject.

| Box 1, Folder 1 | System AF, SEL 840 MP System (Wind Tunnel) 1965-1971 |
| Box 1, Folder 2 | System AF, SEL 840 System (Wind Tunnel) 1968-1976 |
| Box 1, Folder 3 | System A2, Honeywell 800/200. Subfile 1: System A2, Honeywell 200 System 1965-1976 |
| Box 1, Folder 4 | System A2, Honeywell 800/200. Subfile 2: System A2, Honeywell 800 System 1967-1973 |
| Box 1, Folder 5 | System A2, Honeywell 800/200. Subfile 3: System A2, IBM 1401 System 1974-1975 |
| Box 1, Folder 6 | No. 9 IBM 1401 Administration (12K) Category A 1966-1969 |
| Box 1, Folder 7 | No. 24 IBM 360/50 Computer, Category A 1967-1969 |
| Box 1, Folder 8 | Computer Systems Comparison Chart (IBM 360/50 included) circa 1967-1969 |
| Box 2, Folder 1 | NASA Ames Research Center. A Justification of the Need to Replace the IBM 7040/7094 Direct Couple System 1967 |
| Box 2, Folder 2 | System A1, IBM 7040/7094 Direct Couple System 1967-1975 |
| Box 2, Folder 3 | Document Fragment, Survey (about replacing the satellite 1401 and teleprocessing network used for the IBM 7040/7094) circa 1967 |
| Box 2, Folder 6 | ADPE Acquisition Plan, Proposed Central Computer Facility, Category A, Copy 16 (expansion of IBM 360/67) 1969 |
| Box 2, Folder 7 | ADPE Acquisition Plan for an IBM Duplex 360/67 1969 |
| Box 2, Folder 8 | System AA, IBM 360/67, Fiscal Year 1971 1970-1971 |
| Box 3, Folder 1 | System AA, IBM 360/67, Disk Storage Expansion 1971-1974 |
| Box 3, Folder 3 | System AA, IBM 360/67, Fiscal Year 1975 1973-1979 |
| Box 3, Folder 4 | System AA. Subfile 1: ADP Acquisition Plan for an Interactive Computer System to Replace the Central Computer Facility IBM 360/67 1978-1981 |
| Box 3, Folder 8 | System A3-CDC 7600 (1 of 4) 1974-1975 |
| Box 4, Folder 1 | System A3, CDC 7600 (2 of 4) 1976-1980 |
| Box 4, Folder 2 | System A3, CDC 7600 (3 of 4) 1976-1980 |
| Box 4, Folder 3 | System A3, CDC 7600 (4 of 4) 1976-1980 |
| Box 4, Folder 4 | System AN, Shared VAXs 1979-1980 |
| Box 4, Folder 5 | Advanced Computation and Management Office Establishment, Correspondence 1981-1982 |
| Box 4, Folder 6 | CRAY-2, Cyber 205 Procurement 1983 |
| Box 4, Folder 7 | CRAY-2, Cyber 205 Government Accountability Office Audit 1984 |
| Box 4, Folder 8 | Numerical Aerodynamic Simulation Program Overviews 1980s |
| Box 4, Folder 9 | Numerical Aerodynamic Simulation Program Formulation (1 of 2) 1982-1985 |
| Box 4, Folder 10 | Numerical Aerodynamic Simulation Program Formulation (2 of 2) 1982-1985 |
| Box 4, Folder 12 | Numerical Aerodynamic Simulation Program Management Reports May 1984-September 1985 |
| Box 5, Folder 1 | Numerical Aerodynamic Simulation Monthly Status Reports October 1984, July 1985 |
| Box 5, Folder 2 | Numerical Aerodynamic Simulation User Interface Group Meeting January 10, 1986 |
| Box 5, Folder 3 | Numerical Aerodynamic System Capability Dedication March 9, 1987 |
| Box 5, Folder 4 | Research Institute for Advanced Computer Science, Reports and Plans 1983-1986 |
| Box 5, Folder 5 | Appropriation Integrity Study, Moffett Briefing October 19, 1987 |
| Box 5, Folder 6 | Center Budget Projections for Automatic Data Processing 1987 |
| Box 5, Folder 7 | Computer Systems and Research Division Presentation November 21, 1989 |
| Box 5, Folder 8 | Fiftieth Anniversary of Ames Research Center, Central Computer Facility 1989 |
| Box 5, Folder 9 | Records Disposition Correspondence 1989-1991 |
| Box 5, Folder 11 | NASA Information Resources Management, Proposed Strategic Plan 1991 |
| Box 5, Folder 12 | Ames Long-Range Imaging Plan 1992 |
| Box 5, Folder 13 | Desktop Technology Cost/Benefit Analysis 1993 |
| Box 5, Folder 14 | Ames Reorganization, Computer Systems and Research Division 1994 |
| Box 5, Folder 15 | Ames Named NASA Center of Excellence for Information Technology 1995 |
| Box 6, Folder 1 | NASA Internet Protocol Networks Architecture Consolidation Analysis Draft 1996 |
| Box 6, Folder 2 | Applied Information Technology Briefing March 6, 1996 |
| Box 6, Folder 3 | Center of Excellence and Lead Center Briefing 1997 |
| Box 6, Folder 4 | History, Automatic Data Processing, and Center-wide: Ames, Langley, Lewis 1980s-1990s |