



A quarterly electronic publication from the
NASA Scientific and Technical Information (STI) Program

[Subscribe or
Unsubscribe](#)

[STI Fact Sheets](#)

[Back Issues](#)

[Spinoff](#)

[NASA Commercial
Technology Network
\(NCTN\)](#)



January 2001

NASA STI News	Other NASA News	NCT Program *
<p>...From the STI Principal Center</p> <p>STI Program Plan</p> <p>...From Marshall</p>	<p>NASA History Office</p>	<p>NCTP Overview</p> <p>Spinoff</p> <p>* NASA Commercial Technology</p>



...From the NASA STI Program's Principal Center



NASA Image eXchange (NIX) Proposals Selected

The NASA STI Program has chosen the following centers to receive suballotted funds for FY 01 to expand and improve NIX. Proposals were accepted this year for:

- Unique collections of imagery that will expand the subject matter of NIX
- Beta-test sites to participate in, evaluate, and recommend improvements to a potential search engine replacement for NIX
- Automated technology or applications that improve the indexing of images or input of metadata for NIX

The centers that will receive suballotments are:

- Glenn Research Center to operate and maintain the NIX mirror site and participating in the NIX search engine upgrade beta-test
- Marshall Space Flight Center to add a new collection of imagery
- Dryden Flight Research Facility to participate in the NIX search engine upgrade beta-test
- Langley Research Center to upgrade the hardware for the main NIX site

Congratulations to these centers. Suballotted funds should be transferred to the centers in late January to early February 01 as long as the NASA budget remains at expected levels. Currently NIX links to more than 690,000 images, drawings, and QuickTime™ videos.

NASA STI Meets GPRA Metrics for FY 00

The Agency-wide STI Program successfully met its metrics for the Government Performance Review Act (GPRA) for FY 00. Metrics included four areas:

- Assisting customers within a specific time period who use the STI Help Desk
 - Technical and collection improvements for the NASA Image eXchange (NIX)
 - Increase in the amount of NASA-produced STI that is collected and made available by the program
 - Increase in imagery and other nontraditional STI that is made available through NIX.
-

STI Personnel to Present Paper at AIAA Conference

JoAnne Rocker, Technical Information Specialist, assigned to the STI Program Office via a temporary duty assignment, and George Roncaglia, Head, STI Program Office, will travel to Reno, Nevada, in early January, to present a paper at the 39th AIAA Aerospace Sciences Meeting and Exhibit. The presentation is based upon their co-authored paper, *Federal R&D Reductions, Market Share, and Aerospace Information Usage*, AIAA Paper 2001-0134. The focus of the talk is on the way scientific and technical information is used in the United States. Europeans spend less on governmental research and development yet they compete effectively with the U.S. One of their areas of strength is their ability to absorb and utilize scientific and technical information which appears in journal articles and conference proceedings. In response to foreign competition and reduction in federal funding for aerospace, the U.S. aerospace industry needs to maximize available resources. Better information usage could make a difference in how successful the U.S. is in maintaining its market share in the aerospace industry.

[Home](#)

[Subscribe or Unsubscribe](#)

[STI Fact Sheets](#)

[Back Issues](#)

[Spinoff](#)

[NASA
Commercial Technology
Network \(NCTN\)](#)



...STI Program Plan



[Home](#)

[Subscribe or Unsubscribe](#)

[STI Fact Sheets](#)

[Back Issues](#)

[Spinoff](#)

[NASA
Commercial Technology
Network \(NCTN\)](#)

In part, the NASA STI Program states, "The NASA Scientific and Technical Information Program is an integral part of NASA's future. The program supports the Agency's missions to communicate scientific knowledge and understanding to help transfer NASA's research and development to the aerospace and academic communities.... By ensuring a fast, two-way process of internal and external information exchange, the STI Program helps NASA avoid duplication of research, time, and cost and to make its wealth of information available to benefit its customers.... Each Center is responsible for acquiring, tracking, and producing, or having produced, NASA STI related to their Center mission; and for ensuring that Center STI reaches the STI Database [at the NASA Center for AeroSpace Information]."

To that end, each NASA Center executes the STI Program mission and objectives by way of a team of individuals that applies professional publishing standards to all scientific and technical information passing through its doors. Whether the information will result in a document to be distributed through the traditional print and mail process or an electronic document available on the Internet--or both--the team is responsible for making it happen, going through the process step-by-step with each customer. For information about the STI Program at any NASA Center, visit <http://www.sti.nasa.gov>.



...From Marshall Space Flight Center



Marshall History Wins AIAA Award

Andrew J. Dunar and Stephen P. Waring, authors of *Power to Explore: A History of the Marshall Space Flight Center* (NASA SP-4313, 1999), have been awarded the American Institute of Aeronautics and Astronautics (AIAA) 2001 History Book Award. The award will be presented in Reno, NV during January 2001. This work analyzes thirty years of history at Marshall--from its origins as an Army center where Wernher von Braun presided over the development of the Redstone IRBM, through the Saturn rocket development era, to its present multifaceted role as the center for excellence in space transportation systems and microgravity research. It traces the evolution of the institution from its origins as an Army missile development organization, to its status in 1990 as one of the most diversified of NASA's field Centers. This book is for sale for \$49.00 (domestic postpaid or \$65.25 abroad), from the U.S. Superintendent of Documents. By mail: U.S. Government Printing Office, Documents Warehouse, 8610 Cherry Lane, Laurel, MD 20707. By phone: (202) 512-1707 ext: 30273. By fax: (202) 512-1657. Order stock number 033-000-01221-7. This book also may be purchased from the NASA Information Center, Code CMI-1, NASA Headquarters, 300 E Street SW, Room 1H23, Washington, DC 20546-0001, (202) 358-0000. Order NASA SP-4313.

[Home](#)

[Subscribe or Unsubscribe](#)

[STI Fact Sheets](#)

[Back Issues](#)

[Spinoff](#)

[NASA
Commercial Technology
Network \(NCTN\)](#)



...From the NASA History Office

Challenge to Apollo Receives Popular Attention

We are very pleased to note the overwhelmingly warm reception for *Challenge to Apollo: The Soviet Race to the Moon, 1945-1974* (NASA SP-2000-4408), a seminal book appearing in the NASA History Series by Asif A. Siddiqi. Glen E. Swanson (NASA JSC Historian) described the result of 16 years of intense research, *Challenge to Apollo* as "the definitive western record of the Soviet space program." Siddiqi's masterpiece has received rave reviews, praised as "Absolutely mandatory on the bookshelf of anyone interested in space, no matter what the cost" (Mark Wade, Encyclopedia Astronautica), "A major, major addition to our understanding of the former USSR," (Steven Zaloga, Target America: The Soviet Union and the Strategic Arms Race, 1945-1964). "A must read for all history buffs," (James E. Oberg, Red Star in Orbit).

This book is available for public sale from the U.S. Superintendent of Documents. How to order: For sale for \$79.00 (domestic postpaid), \$98.75 (non-U.S.). By Mail: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. FAX: (202) 512-2250. Phone: (202) 512-1800 (7:30 a.m.-4:30 p.m. Eastern time). This book may be ordered on-line at <http://bookstore.gpo.gov/index.html> on the Web. Order stock number 033-000-01231-4. This book may also be purchased from the NASA Information Center, Code CMI-1, NASA Headquarters, 300 E Street SW, Room 1H23, Washington, DC 20546-0001, (202) 358-0000.

Other New NASA History Publications

The Infinite Journey: Eyewitness Accounts of NASA and the Age of Space, published by Discovery Books/Random House and prepared under a Space Act Agreement, is an engaging overview of the U.S. space program and the people who took part in it. Noted space-historian and Pulitzer Prize-nominee William E. Burrows offers readers a unique compendium of the agency's most significant stories, told firsthand by astronauts, scientists, engineers, and other eyewitnesses. The volume contains contributions by NASA Administrator Daniel S. Goldin, Ray Bradbury, Sir Arthur C. Clarke, the late Carl Sagan and Homer Hickam, Jr. As Goldin remarks in the jacket notes, "Our nation's space program is strong, it is relevant and it is vital to every American.... Our mission, to explore the frontiers of space...and to enrich life here on Earth...is simply too exciting, too inspiring, too important to do anything else." Featuring 185 spectacular photographs from NASA archives that evocatively capture the spirit of space exploration enthusiasm, *The Infinite Journey* is a must-have book for anyone with an interest in the heroic drama of space exploration. The list price for this book is \$40.00 and it is presently available through numerous bookstores and on-line at Amazon.com and Barnesandnoble.com.

Now also available from the NASA History Office is *Partners in Freedom: Contributions of the Langley Research Center to U.S. Military Aircraft of the 1990s* (Monographs in Aerospace History #19, NASA SP-2000-4519, 2000), written by Joseph R. Chambers. This monograph describes the close working relationship between the aerospace research undertaken at the Langley Research Center in Hampton, Virginia and the development of military aircraft for the Department of Defense.

Also available now is *Black Magic and Gremlins: Analog Flight Simulations at NASA's Flight Research Center* (Monographs in Aerospace History #20, NASA SP-2000-4520, 2000), a monograph by Gene L. Waltman. This monograph covers the use of analog and hybrid (analog and digital) flight simulations done at NASA's Flight Research Center and its predecessor organization under the National Advisory Committee for Aeronautics (NACA) from 1955 to 1975. Among the projects covered in the monograph are the simulations for the X-15 rocket-powered aircraft, the lifting bodies, and the General Purpose Airborne Simulator. The monograph is rich in personal anecdotes and includes personal accounts by many people involved in the early simulations. Both *Partners in Freedom* and *Black Magic and Gremlins* are available free of charge. We ask that interested readers send a self-addressed 9x12" envelope with appropriate postage for 15 ounces (typically \$3.20 within the U.S., \$4.10 for Canada, and \$7.20 for overseas). International customers are asked to purchase U.S. postage through an outlet such as <http://www.stampsonline.com> to the NASA History Office, Code ZH, Washington, DC 20546.

Forthcoming NASA History Publications

Early in 2001, the NASA History Office will release *Apollo by the Numbers: A Statistical Reference for the Human Phase of Project Apollo* (NASA SP-2001-4029, 2001), a unique collection of valuable statistical information about Project Apollo. Richard Orloff compiled these statistics and also wrote narrative chapters on the various Apollo missions.

This winter we also plan to release a two-CD set containing PDF versions of all the Mercury, Gemini, and Apollo air-to-ground transcripts. Titled, *Mercury, Gemini, and Apollo Mission Transcripts: The Complete Air-to-Ground Transmissions* (NASA SP-2001-4601, 2001), this CD-ROM will capture, all of the voice transmission recordings between Mission Control and the Mercury, Gemini, and Apollo missions in space.

[Home](#)

[Subscribe or Unsubscribe](#)

[STI Fact Sheets](#)

[Back Issues](#)

[Spinoff](#)

[NASA Commercial
Technology Network
\(NCTN\)](#)

Special thanks to Glen E. Swanson, at the Johnson Space Center, for collecting all these transcripts, scanning them electronically, and organizing them. Thanks also to a large team of volunteers who helped Glen check the electronic transcripts for missing pages and other errors.

Also appearing early in 2001 will be *Humans to Mars: Fifty Years of Mission Planning, 1950-2000* (Monographs in Aerospace History #21, NASA SP-2001-4521), a monograph by David S.F. Portree. It will provide an overview of the history of the various plans developed since the dawn of the Space Age for the human exploration of Mars. Each type of mission will be categorized, its originators noted, its main elements detailed, and its legacy traced in the development of subsequent mission elements. This work should be useful reading for those who want to understand the long history of planning for human expeditions to the red planet.

Also forthcoming is *Uplink/Downlink: A History of the Deep Space Network* (NASA SP-2001-4225, 2001), by Douglas J. Mudgway. This book will describe and analyze the complex history of the Deep Space Network (DSN) from its origins, as a result of the early years of the planetary science program in the late 1950s, through its current role in the present as the most capable communications system in the world. It will assess the role of this critical communications method for both providing control to planetary probes and a means of obtaining the scientific data collected. This project is complete and the manuscript is in production.

In early spring 2001, we anticipate publishing the fifth volume in a continuing series of key documents. *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume V, Space Science, Part 1* (NASA SP-2000-4407, 2000), is being produced under the general editorship of John M. Logsdon. This volume will contain key documentary materials on the origins, evolution, and organization of the space science enterprise at NASA, the history of planetary exploration, and Earth science. A future volume will contain documentary materials on astronomy and astrophysics, microgravity and life sciences, solar science, and solar-terrestrial physics.

New NASA Historical Information Online

Now available online is NASA-SP-4001, *Project Mercury Chronology*, published in 1963. Covering 1944-1963, this chronology recalls and explores key aspects of the Project Mercury missions. Prepared by James M. Grimwood and scanned/formatted for the Web by Malcolm Munro, *Project Mercury Chronology* is now available online at <http://history.nasa.gov/SP-4001/cover.htm>.

Also new to our online material collection is *Skylab: A Chronology* by Roland W. Newkirk and Ivan D. Ertel with Courtney G. Brooks. This 1977 publication tracks the history and future of Skylab starting in 1923, when Hermann Oberth first proposed the idea of a manned space station. *Skylab: A Chronology* can be found on the Web at <http://history.nasa.gov/SP-4011/cover.htm>.

Touchdown: The Development of Propulsion Controlled Aircraft at NASA Dryden, number 16 of the *Monographs in Aerospace History Series*, is now on the Web. Tom Tucker's monograph is a well-written narrative of the development of aeronautics and propulsion, following the experiences of several pilots and developers in the late 1980's through the 1990's. To read *Touchdown* online, please see <http://www.dfrc.nasa.gov/History/Publications/PCA/>.

Other Electronic Resources

The National Archives and Records Administration announces a new project in the Digital Classroom section of its web site. *Frontiers in History: Ideas from the National Archives* presents descriptions of 44 collections of records that are available for student research and relate to the 2001 National History Day theme, *Frontiers in History: People, Places, Ideas*. The URL for this resource is <http://www.nara.gov/education/historyday/frontier/2001.html>. NARA's online resource, *Frontiers in History: Ideas from the National Archives*, encourages students to investigate archival resources related to a wide range of subjects, including air and space, atomic energy, civil rights, the environment, and foreign affairs. *Frontiers in History: Ideas from the National Archives* is the latest in a series of online projects that the National Archives and Records Administration produces for teachers and students to encourage archival research.



...The NASA Commercial Technology Program *An Overview*



- [Home](#)
- [Subscribe or Unsubscribe](#)
- [STI Fact Sheets](#)
- [Back Issues](#)
- [Spinoff](#)
- [NASA Commercial Technology Network \(NCTN\)](#)

The NASA Commercial Technology Program encompasses a national network of specialized centers and organizations that assist U.S. businesses and industry in accessing, utilizing and commercializing NASA-funded research and technology. The organizations work closely with each other to provide a full range of technology transfer and commercialization services and assistance. The NASA Commercial Technology Network (NCTN) consists of the Commercial Technology Organizations at each of the NASA field centers, the Jet Propulsion Laboratory, the National Technology Transfer Center (NTTC), the six Regional Technology Transfer Centers (RTTCs), NASA Tech Briefs, UNISPHERE, and other specialized organizations and services. All are dedicated to fostering dual-use technology partnerships and the transfer and commercialization of NASA-sponsored research and technology.

The NCTN provides access to a wide variety of information resources that can be searched and consulted for research and technology, patents, technical expertise, and R&D facilities, as well as for technology partnering, licensing, and commercialization opportunities. In addition to serving as an integrated information resource, the NCTN is developing into an electronic marketplace for NASA-sponsored technology, facilitating communications, transactions, and partnerships between NASA and the U.S. private sector.

Visit the NCTN website at <http://nctn.hq.nasa.gov> for more information on the NASA Commercial Technology Program and the members of its network.



...From NASA's *Spinoff* Magazine

About *Spinoff*

NASA's premier publication, *Spinoff*, annually features over 40 companies that have successfully utilized NASA technology in commercial products and processes. Each year NASA distributes tens of thousands of *Spinoffs* through trade shows, conferences, and special requests. The *Spinoff* web site, located at <http://www.sti.nasa.gov/tto/spinoff.html>, contains a searchable database which includes an entry for every article ever featured. If you know of any companies that have successfully commercialized NASA technology, please contact the *Spinoff* editor, Ms. Sarah Sheehan, via e-mail at sanderson@sti.nasa.gov, or by telephone at (301) 621-0244.

To receive a printed copy of *Spinoff*, please contact the National Technology Transfer Center (NTTC) at (800) 678-6882, or visit the NTTC web site at <http://www.nttc.edu>.

Special Feature: Technology Transfer History

Under NASA's authorizing legislation, the National Aeronautics and Space Act of 1958 (the Space Act), NASA is directed to conduct its activities so that NASA contributes to the preservation of the role of the United States as a leader in aeronautical and space science and technology and their applications.

Congress granted NASA very broad authority to carry out its functions. The Administrator is authorized to enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate, with any agency or instrumentality of the United States, or with any state, territory, or possession, or with any person, firm association, corporation or education institution.

Early in its history, NASA achieved technology transfer with the aerospace community through joint research and development (R&D) efforts, technical papers, participation in technical societies, and through funding graduate level research and development. While these mechanisms effectively transferred technology to the aerospace community, many of the technologies had non-aerospace applications that were not being pursued. To address this, NASA established the Technology Utilization (TU) Office to facilitate the transfer of technology from the government to the private sector. The legislation as a whole, promotes the vesting of exclusive rights in the government-funded technology with the private sector to encourage the private investment of commercialization funds. The most pertinent legislation is described below:

For many years, U.S. policy promoted the unrestricted dissemination of the scientific and technical information produced by the Federal laboratories, with little concern for the role of intellectual property protection in encouraging the commercial development of inventions. Consequently, U.S. companies were sometimes unwilling to turn federally funded technologies into commercially attractive products and processes. In cases where the private sector company would have to commit its own resources to develop the final products, the lack of exclusive rights provided by intellectual property protection made companies reluctant to commercialize federal technology. To address this concern, major legislation was enacted. The legislation as a whole, promotes the vesting of exclusive rights in government-funded technology with the private sector to encourage the private investment of commercialization funds. The most pertinent legislation is listed below:

- Chiles Act of 1978 (Public Law 97-258)
- Stevenson-Wydler Technology Innovation Act of 1980 (Public Law 96-480)
- Bayh-Dole Act of 1980 (Public Law 96-517)
- Trademark Clarification Act of 1984 (Public Law 98-620)
- Federal Technology Transfer Act of 1986 (Public Law 99-502)
- Executive Order 12591 Facilitating Access to Science and Technology of 1987
- Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418)
- National Institute of Standards and Technology Authorization Act of 1989 (Public Law 100-519)
- National Competitiveness Technology Transfer Act of 1989 (Public Law 101-189)
- National Technology Transfer and Advancement Act of 1995 (Public Law 104-113)

For more information on this legislation you may access the *Technology Commercialization Process Handbook* on the web at http://www.nctn.hq.nasa.gov/division/commtechhandbook3_19.pdf.

[Home](#)

[Subscribe or Unsubscribe](#)

[STI Fact Sheets](#)

[Back Issues](#)

[Spinoff](#)

[NASA Commercial
Technology Network
\(NCTN\)](#)