

THE UNITED STATES NAVAL WAR COLLEGE

Operations Department



U.S. NATIONAL SPACE POLICY

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FACT SHEET
U.S. National Space Policy

On November 2, 1989, the President approved a national space policy that updates and reaffirms U.S. goals and activities in space. The updated policy is the result of a review undertaken by the National Space Council. The revisions clarify, strengthen, and streamline selected aspects of the policy. Areas affected include civil and commercial remote sensing, space transportation, space debris, federal subsidies of commercial space activities, and Space Station Freedom.

Overall, the President's newly-issued national space policy revalidates the ongoing direction of U.S. space efforts and provides a broad policy framework to guide future U.S. space activities.

The policy reaffirms the nation's commitment to the exploration and use of space in support of our national well being. United States leadership in space continues to be a fundamental objective guiding U.S. space activities. The policy recognizes that leadership requires United States preeminence in key areas of space activity critical to achieving our national security, scientific, technical, economic, and foreign policy goals. The policy also retains the long-term goal of expanding human presence and activity beyond Earth orbit into the Solar System. This goal provides the overall policy framework for the President's human space exploration initiative, announced July 20, 1989, in which the President called for completing Space Station Freedom, returning permanently to the Moon, and exploration of the planet Mars.

These and other aspects of U.S. national space policy are contained in the attached document entitled "National Space Policy."

Attachment

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NATIONAL SPACE POLICY

UNCLASSIFIED

November 2, 1989

NATIONAL SPACE POLICY

INTRODUCTION

This document contains national policy, guidelines, and implementing actions with respect to the conduct of United States space programs and related activities.

United States space activities are conducted by three separate and distinct sectors: two strongly interacting governmental sectors (Civil and National Security) and a separate, non-governmental Commercial Sector. Close coordination, cooperation, and technology and information exchange will be maintained among these sectors to avoid unnecessary duplication and promote attainment of United States space goals.

GOALS AND PRINCIPLES

A fundamental objective guiding United States space activities has been, and continues to be, space leadership. Leadership in an increasingly competitive international environment, does not require United States preeminence in all areas and disciplines of space enterprise. It does require United States preeminence in the key areas of space activity critical to achieving our national security, scientific, technical, economic, and foreign policy goals.

- The overall goals of United States space activities are: (1) to strengthen the security of the United States; (2) to obtain scientific, technological and economic benefits for the general population and to improve the quality of life on Earth through space-related activities; (3) to encourage continuing United States private-sector investment in space and related activities; (4) to promote international cooperative activities taking into account United States national security, foreign policy, scientific, and economic interests; (5) to cooperate with other nations in maintaining the freedom of space for all activities that enhance the security and welfare of mankind; and, as a long-range goal, (6) to expand human presence and activity beyond Earth orbit into the solar system.

- United States space activities shall be conducted in accordance with the following principles:

-- The United States is committed to the exploration and use of outer space by all nations for peaceful purposes and for the benefit of all mankind. "Peaceful purposes" allow for activities in pursuit of national security goals.

-- The United States will pursue activities in space in support of its inherent right of self-defense and its defense commitments to its allies.

-- The United States rejects any claims to sovereignty by any nation over outer space or celestial bodies, or any portion thereof, and rejects any limitations on the fundamental right of sovereign nations to acquire data from space.

-- The United States considers the space systems of any nation to be national property with the right of passage through and operations in space without interference. Purposeful interference with space systems shall be viewed as an infringement on sovereign rights.

-- The United States shall encourage and not preclude the commercial use and exploitation of space technologies and systems for national economic benefit. These commercial activities must be consistent with national security interests, and international and domestic legal obligations.

-- The United States will, as a matter of policy, pursue its commercial space objectives without the use of direct Federal subsidies.

-- The United States shall encourage other countries to engage in free and fair trade in commercial space goods and services.

-- The United States will conduct international cooperative space-related activities that are expected to achieve sufficient scientific, political, economic, or national security benefits for the nation. The United States will seek mutually beneficial international participation in space and space-related programs.

CIVIL SPACE POLICY

- The United States civil space sector activities shall contribute significantly to enhancing the Nation's science, technology, economy, pride, sense of well-being and direction, as well as United States world prestige and leadership. Civil sector activities shall comprise a balanced strategy of research, development, operations, and technology for science, exploration, and appropriate applications.

- The objectives of the United States civil space activities shall be (1) to expand knowledge of the Earth, its environment, the solar system, and the universe; (2) to create new opportunities for use of the space environment through the conduct of appropriate research and experimentation in advanced technology and systems; (3) to develop space technology for civil applications and, wherever appropriate, make such technology available to the commercial sector; (4) to preserve the United States preeminence in critical aspects of space science,

applications, technology, and manned space flight; (5) to establish a permanently manned presence in space; and (6) to engage in international cooperative efforts that further United States overall space goals.

COMMERCIAL SPACE POLICY

The United States government shall not preclude or deter the continuing development of a separate non-governmental Commercial Space Sector. Expanding private sector investment in space by the market-driven Commercial Sector generates economic benefits for the Nation and supports governmental Space Sectors with an increasing range of space goods and services. Governmental Space Sectors shall purchase commercially available space goods and services to the fullest extent feasible and shall not conduct activities with potential commercial applications that preclude or deter Commercial Sector space activities except for national security or public safety reasons. Commercial Sector space activities shall be supervised or regulated only to the extent required by law, national security, international obligations, and public safety.

NATIONAL SECURITY SPACE POLICY

The United States will conduct those activities in space that are necessary to national defense. Space activities will contribute to national security objectives by (1) deterring, or if necessary, defending against enemy attack; (2) assuring that forces of hostile nations cannot prevent our own use of space; (3) negating, if necessary, hostile space systems; and (4) enhancing operations of United States and Allied forces. Consistent with treaty obligations, the national security space program shall support such functions as command and control, communications, navigation, environmental monitoring, warning, surveillance, and force application (including research and development programs which support these functions).

INTER-SECTOR POLICIES

This section contains policies applicable to, and binding on, the national security and civil space sectors.

- The United States Government will maintain and coordinate separate national security and civil operational space systems where differing needs of the sectors dictate.

- Survivability and endurance of national security space systems, including all necessary system elements, will be pursued commensurate with the planned use in crisis and conflict, with the threat, and with the availability of other assets to perform the mission.

- Government sectors shall encourage to the maximum extent feasible, the development and use of United States private sector space capabilities.

- A continuing capability to remotely sense the Earth from space is important to the achievement of United States space goals. To ensure that the necessary capability exists, the United States government will: (a) ensure the continuity of LANDSAT-type remote sensing data; (b) discuss remote sensing issues and activities with foreign governments operating or regulating the private operation of remote sensing systems; (c) continue government research and development for future advanced remote sensing technologies or systems; and (d) encourage the development of commercial systems, which image the Earth from space, competitive with, or superior to, foreign-operated civil or commercial systems.

- Assured access to space, sufficient to achieve all United States space goals, is a key element of national space policy. United States space transportation systems must provide a balanced, robust, and flexible capability with sufficient resiliency to allow continued operations despite failures in any single system. The United States government will continue research and development on component technologies in support of future transportation systems. The goals of United States space transportation policy are: (1) to achieve and maintain safe and reliable access to, transportation in, and return from, space; (2) to exploit the unique attributes of manned and unmanned launch and recovery systems; (3) to encourage to the maximum extent feasible, the development and use of United States private sector space transportation capabilities; and (4) to reduce the costs of space transportation and related services.

- Communications advancements are critical to all United States space sectors. To ensure necessary capabilities exist, the United States government will continue research and development efforts for future advanced space communications technologies.

- The United States will consider and, as appropriate, formulate policy positions on arms control measures governing activities in space, and will conclude agreements on such measures only if they are equitable, effectively verifiable, and enhance the security of the United States and our allies.

- All space sectors will seek to minimize the creation of space debris. Design and operations of space tests, experiments and systems will strive to minimize or reduce accumulation of space debris consistent with mission requirements and cost effectiveness. The United States government will encourage other space-faring nations to adopt policies and practices aimed at debris minimization.

IMPLEMENTING PROCEDURES

Normal interagency procedures will be employed wherever possible to coordinate the policies enunciated in this directive.

Executive Order No. 12675 established the National Space Council to provide a coordinated process for developing a national space policy and strategy and for monitoring its implementation.

The Vice President serves as the Chairman of the Council, and as the President's principal advisor on national space policy and strategy. Other members of the Council are the Secretaries of State, Treasury, Defense, Commerce, and Transportation; the Chief of Staff to the President, the Director of the Office of Management and Budget, the Assistant to the President for National Security Affairs, the Assistant to the President for Science and Technology, the Director of Central Intelligence, and the Administrator of the National Aeronautics and Space Administration. The Chairman, from time to time, invites the Chairman of the Joint Chiefs of Staff, the heads of executive agencies and other senior officials to participate in meetings of the Council.

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POLICY GUIDELINES AND IMPLEMENTING ACTIONS

The following Policy Guidelines and Implementing Actions provide a framework through which the policies in this directive shall be carried out. Agencies will use these sections as guidance on priorities, including preparation, review, and execution of budgets for space activities, within the overall resource and policy guidance provided by the President. Affected Government agencies shall ensure that their current policies are consistent with this directive and, where necessary, shall establish policies to implement these practices.

CIVIL SPACE SECTOR GUIDELINES

- Introduction. In conjunction with other agencies: NASA will continue the lead role within the Federal Government for advancing space science, exploration, and appropriate applications through the conduct of activities for research, technology, development and related operations; National Oceanic and Atmospheric Administration will gather data, conduct research, and make predictions about the Earth's environment; DOT will license and promote commercial launch operations which support civil sector operations.

- **Space Science.** NASA, with the collaboration of other appropriate agencies, will conduct a balanced program to support scientific research, exploration, and experimentation to expand understanding of: (1) astrophysical phenomena and the origin and evolution of the universe; (2) the Earth, its environment and its dynamic relationship with the Sun; (3) the origin and evolution of the solar system; (4) fundamental physical, chemical, and biological processes; (5) the effects of the space environment on human beings; and (6) the factors governing the origin and spread of life in the universe.

- **Space Exploration.** In order to investigate phenomena and objects both within and beyond the solar system, NASA will conduct a balanced program of manned and unmanned exploration.

-- **Human Exploration.** To implement the long-range goal of expanding human presence and activity beyond Earth orbit into the solar system, NASA will continue the systematic development of technologies necessary to enable and support a range of future manned missions. This technology program (Pathfinder) will be oriented toward a Presidential decision on a focused program of manned exploration of the solar system.

-- **Unmanned Exploration.** NASA will continue to pursue a program of unmanned exploration where such exploration can most efficiently and effectively satisfy national space objectives by among other things: achieving scientific objectives where human presence is undesirable or unnecessary; exploring realms where the risks or costs of life support are unacceptable; and providing data vital to support future manned missions.

- **Permanent Manned Presence.** NASA will develop the Space Station to achieve permanently manned operational capability by the mid-1990s. Space Station Freedom will: (1) Contribute to United States preeminence in critical aspects of manned spaceflight; (2) provide support and stability to scientific and technological investigations; (3) provide early benefits, particularly in the materials and life sciences; (4) promote private sector experimentation preparatory to independent commercial activity; (5) allow evolution in keeping with the needs of Station users and the long-term goals of the United States; (6) provide opportunities for commercial sector participation; and (7) contribute to the longer term goal of expanding human presence and activity beyond Earth orbit into the solar system.

- **Manned Spaceflight Preeminence.** Approved programs such as efforts to improve and safely operate the Space Transportation System (STS) and to develop, deploy, and use the Space Station, are intended to ensure United States preeminence in critical aspects of manned spaceflight.

- Space Applications. NASA and other agencies will pursue the identification and development of appropriate applications flowing from their activities. Agencies will seek to promote private sector development and implementation of applications.

-- Such applications will create new capabilities, or improve the quality or efficiency of continuing activities, including long-term scientific observations.

-- NASA will seek to ensure its capability to conduct selected critical missions through an appropriate mix of assured access to space, on-orbit sparing, advanced automation techniques, redundancy, and other suitable measures.

-- Agencies may enter cooperative research and development agreements on space applications with firms seeking to advance the relevant state-of-the-art consistent with United States Government space objectives.

-- Management of Federal civil operational remote sensing is the responsibility of the Department of Commerce. The Department of Commerce will: (a) consolidate Federal needs for civil operational remote sensing products to be met either by the private sector or the Federal government; (b) identify needed civil operational system research and development objectives; and (c) in coordination with other departments or agencies, provide for the regulation of private sector operational remote sensing systems.

- Civil Government Space Transportation. The unique Space Transportation System (STS) capability to provide manned access to space will be exploited in those areas that offer the greatest national return, including contributing to United States preeminence in critical aspects of manned spaceflight. The STS fleet will maintain the Nation's capability and will be used to support critical programs requiring manned presence and other unique STS capabilities. In support of national space transportation goals, NASA will establish sustainable STS flight rates to provide for planning and budgeting of Government space programs. NASA will pursue appropriate enhancements to STS operational capabilities, upper stages, and systems for deploying, servicing, and retrieving spacecraft as national and user requirements are defined.

- International Cooperation. The United States will foster increased international cooperation in civil space activities by seeking mutually beneficial international participation in civil space and space-related programs. The National Space Council shall be responsible for oversight of civil space cooperation with the Soviet Union. No such

cooperative activity shall be initiated until an appropriate interagency review has been completed. United States cooperation in international civil space activities will:

-- United States participation in international space ventures, whether public or private, must be consistent with United States technology transfer laws, regulations, Executive Orders and presidential directives.

-- Support the public, nondiscriminatory direct readout of data from Federal civil systems to foreign ground stations and the provision of data to foreign users under specified conditions.

-- Be conducted in such a way as to protect the commercial value of intellectual property developed with Federal support. Such cooperation will not preclude or deter commercial space activities by the United States private sector, except as required by national security or public safety.

COMMERCIAL SPACE SECTOR GUIDELINES

- NASA, and the Departments of Commerce, Defense, and Transportation will work cooperatively to develop and implement specific measures to foster the growth of private sector commercial use of space. A high-level focus for commercial space issues has been created through establishment of the National Space Council.

- To stimulate private sector investment, ownership, and operation of space assets, the United States Government will facilitate private sector access to appropriate U.S. space-related hardware and facilities, and encourage the private sector to undertake commercial space ventures. Governmental Space Sectors shall:

-- Utilize commercially available goods and services to the fullest extent feasible, and avoid actions that may preclude or deter commercial space sector activities except as required by national security or public safety. A space good or service is "commercially available" if it is currently offered commercially, or if it could be supplied commercially in response to a government service procurement request. "Feasible" means that such goods or services meet mission requirements in a cost-effective manner.

-- Enter into appropriate cooperative agreements to encourage and advance private sector basic research, development, and operations while protecting the commercial value of the intellectual property developed;

-- Provide for the use of appropriate Government facilities on a reimbursable basis;

-- Identify, and eliminate or propose for elimination, applicable portions of United States laws and regulations that unnecessarily impede commercial space sector activities;

-- Encourage free and fair trade in commercial space activities. Consistent with the goals, principles, and policies set forth in this directive, the United States Trade Representative will consult, or, as appropriate, negotiate with other countries to encourage free and fair trade in commercial space activities. In entering into space-related technology development and transfer agreements with other countries, Executive Departments and agencies will take into consideration whether such countries practice and encourage free and fair trade in commercial space activities.

-- Provide for the timely transfer of Government-developed space technology to the private sector in such a manner as to protect its commercial value, consistent with national security.

-- Price Government-provided goods and services consistent with OMB Circular A-25.

NATIONAL SECURITY SPACE SECTOR GUIDELINES

- General:

-- The Department of Defense (DOD) will develop, operate, and maintain an assured mission capability through an appropriate mix of robust satellite control, assured access to space, on-orbit sparing, proliferation, reconstitution or other means.

-- The national security space program, including dissemination of data, shall be conducted in accordance with Executive Orders and applicable directives for the protection of national security information and commensurate with both the missions performed and the security measures necessary to protect related space activities.

-- DOD will ensure that the national security space program incorporates the support requirements of the Strategic Defense Initiative.

- Space Support:

-- The national security space sector may use both manned and unmanned launch systems as determined by specific

mission requirements. Payloads will be distributed among launch systems and launch sites to minimize the impact of loss of any single launch system or launch site on mission performance. The DOD will procure unmanned launch vehicles or services and maintain launch capability on both the East and West coasts. DOD will also continue to enhance the robustness of its satellite control capability through an appropriate mix of satellite autonomy and survivable command and control, processing, and data dissemination systems.

-- DOD will study concepts and technologies which would support future contingency launch capabilities.

- Force Enhancement:

-- The national security space sector will develop, operate, and maintain space systems and develop plans and architectures to meet the requirements of operational land, sea, and air forces through all levels of conflict commensurate with their intended use.

- Space Control:

-- The DOD will develop, operate, and maintain enduring space systems to ensure its freedom of action in space. This requires an integrated combination of antisatellite, survivability, and surveillance capabilities.

-- Antisatellite (ASAT) Capability. The United States will develop and deploy a comprehensive capability with programs as required and with initial operations capability at the earliest possible date.

-- DOD space programs will pursue a survivability enhancement program with long-term planning for future requirements. The DOD must provide for the survivability of selected, critical national security space assets (including associated terrestrial components) to a degree commensurate with the value and utility of the support they provide to national-level decision functions, and military operational forces across the spectrum of conflict.

-- The United States will develop and maintain an integrated attack warning, notification, verification, and contingency reaction capability which can effectively detect and react to threats to United States space systems.

- Force Application. The DOD will, consistent with treaty obligations, conduct research, development, and planning to be prepared to acquire and deploy space systems should national security conditions dictate.

INTER-SECTOR GUIDELINES

The following paragraphs identify selected, high priority cross-sector efforts and responsibilities to implement plans supporting major United States space policy objectives:

- Space Transportation Guidelines.

-- The United States national space transportation capability will be based on a mix of vehicles, consisting of the Space Transportation System (STS), unmanned launch vehicles (ULVs), and in-space transportation systems. The elements of this mix will be defined to support the mission needs of national security and civil government sectors of United States space activities in the most cost effective manner.

-- As determined by specific mission requirements, national security space sector will use the STS and ULVs. In coordination with NASA, the DOD will assure the Shuttle's utility to national defense and will integrate missions into the Shuttle system. Launch priority will be provided for national security missions as implemented by NASA-DOD agreements. Launches necessary to preserve and protect human life in space shall have the highest priority except in times of national security emergency.

-- The STS will continue to be managed and operated in an institutional arrangement consistent with the current NASA/DOD Memorandum of Understanding. Responsibility will remain in NASA for operational control of the STS for civil missions, and in the DOD for operational control of the STS for national security missions. Mission management is the responsibility of the mission agency.

-- United States commercial launch operations are an integral element of a robust national space launch capability. NASA will not maintain an expendable launch vehicle (ELV) adjunct to the STS. NASA will provide launch services for commercial and foreign payloads only where those payloads must be man-tended, require the unique capabilities of the STS, or it is determined that launching the payloads on the STS is important for national security or foreign policy purposes. Commercial and foreign payloads will not be launched on government owned or operated ELV systems except for national security or foreign policy reasons.

-- Civil Government agencies will encourage, to the maximum extent feasible, a domestic commercial launch industry by contracting for necessary ELV launch services directly from the private sector or with DOD.

-- NASA and the DOD will continue to cooperate in the development and use of military and civil space transportation

systems and avoid unnecessary duplication of activities. They will pursue new launch and launch support concepts aimed at improving cost-effectiveness, responsiveness, capability, reliability, availability, maintainability, and flexibility. Such cooperation between the national security and civil sectors will ensure efficient and effective use of national resources.

- Guidelines for the Federal Encouragement of Commercial Unmanned Launch Vehicles (ULVs):

-- The United States Government fully endorses and will facilitate the commercialization of United States unmanned launch vehicles (ULVs).

-- The Department of Transportation (DOT) is the lead agency within the Federal Government for developing, coordinating, and articulating Federal policy and regulatory guidance pertaining to United States commercial launch activities in consultation with DOD, State, NASA, and other concerned agencies. All Executive departments and agencies shall assist the DOT in carrying out its responsibilities, as set forth in the Commercial Space Launch Act and Executive Order 12465.

-- The United States Government encourages the use of its launch and launch-related facilities for United States commercial launch operations.

-- The United States Government will have priority use of government facilities and support services to meet national security and critical mission requirements. The United States Government will make all reasonable efforts to minimize impacts on commercial operations.

-- The United States Government will not subsidize the commercialization of ULVs, but will price the use of its facilities, equipment, and services with the goal of encouraging viable commercial ULV activities in accordance with the Commercial Space Launch Act.

-- The United States Government will encourage free market competition within the United States private sector. The United States Government will provide equitable treatment for all commercial launch operators for the sale or lease of Government equipment and facilities consistent with its economic, foreign policy, and national security interests.

-- NASA and DOD, for those unclassified and releasable capabilities for which they have responsibility, shall, to the maximum extent feasible:

--- Use best efforts to provide commercial launch firms with access, on a reimbursable basis, to national launch

and launch-related facilities, equipment, tooling, and services to support commercial launch operations;

--- Develop, in consultation with the DOT, contractual arrangements covering access by commercial launch firms to national launch and launch-related property and services they request in support of their operations;

--- Provide technical advice and assistance to commercial launch firms on a reimbursable basis, consistent with the pricing guidelines herein; and

--- Conduct, in coordination with DOT, appropriate environmental analyses necessary to ensure that commercial launch operations conducted at Federal launch facilities are in compliance with the National Environmental Policy Act.

- Government ULV Pricing Guidelines. The price charged for the use of United States Government facilities, equipment, and service, will be based on the following principles:

-- Price all services (including those associated with production and launch of commercial ULVs) based on the direct costs incurred by the United States Government. Reimbursement shall be credited to the appropriation from which the cost of providing such property or service was paid.

-- The United States Government will not seek to recover ULV design and development costs or investments associated with any existing facilities or new facilities required to meet United States Government needs to which the U.S. Government retains title;

-- Tooling, equipment, and residual ULV hardware on hand at the completion of the United States Government's program will be priced on a basis that is in the best overall interest of the United States Government, taking into consideration that these sales will not constitute a subsidy to the private sector operator.

- Commercial Launch Firm Requirements. Commercial launch firms shall:

-- Maintain all facilities and equipment leased from the United States Government to a level of readiness and repair specified by the United States Government;

-- ULV operators shall comply with all requirements of the Commercial Space Launch Act, all regulations issued under the Act, and all terms, conditions or restrictions of any license issued or transferred by the Secretary of Transportation under

the Act.

- Technology Transfer Guidelines.

-- The United States will work to stem the flow of advanced western space technology to unauthorized destinations. Executive departments and agencies will be fully responsible for protecting against adverse technology transfer in the conduct of their programs.

-- Sales of United States space hardware, software, and related technologies for use in foreign space projects will be consistent with relevant international and bilateral agreements and arrangements.

- Space Infrastructure. All Sectors shall recognize the importance of appropriate investments in the facilities and human resources necessary to support United States space objectives and maintain investments that are consistent with such objectives. The National Space Council will conduct a feasibility study of alternate methods for encouraging private sector investment, including capital funding, of United States space infrastructure such as ground facilities, launcher developments, and orbital assembly and test facilities.

- The primary forum for negotiations on nuclear and space arms is the Nuclear and Space Talks (NST) with the Soviet Union in Geneva. The instructions to the United States Delegation will be consistent with this National Space Policy directive, established legal obligations, and additional guidance by the President. The United States will continue to consult with its Allies on these negotiations and ensure that any resulting agreements enhance the security of the United States and its Allies. Any discussions on arms control relating to activities in space in forums other than NST must be consistent with, and subordinate to, the foregoing activities and objectives.

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