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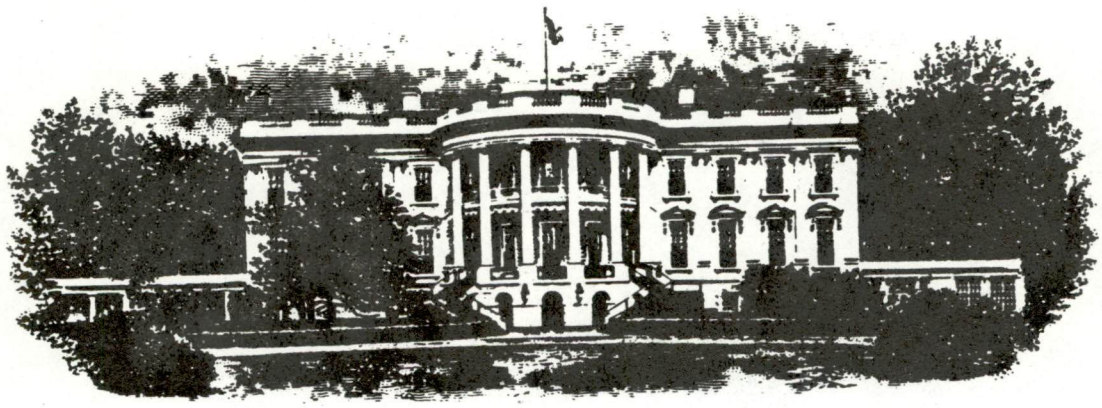
Record Group/Collection: George H.W. Bush Presidential Records
Collection/Office of Origin: Policy Development, White House Office of
Series: Lindsey, Lawrence, Files
Subseries:

OA/ID Number: 05628
Folder ID Number: 05628-007

Folder Title:
Office of Science and Technology Policy [1]

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OFFICE OF SCIENCE AND TECHNOLOGY POLICY
EXECUTIVE OFFICE OF THE PRESIDENT



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
WASHINGTON, D.C. 20506

November 28, 1988

MEMORANDUM FOR CRAIG FULLER
ROBERT TEETER

FROM: MICHELLE K. VAN CLEAVE mkv

SUBJECT: TRANSITION ORGANIZATION AND BRIEFING MATERIAL

In response to your memorandum of November 21, we have prepared this briefing book providing the information you requested concerning the Office of Science and Technology Policy.

Dr. William R. Graham, Director of OSTP, has designated me to serve as the point of contact for all transition activities affecting this office. Please let me know if we can be of further assistance.

Attachments

INDEX

ATTACHMENT A

I. ORGANIZATION AND MANAGEMENT

A. Organization

1. Organizational Structure: Basic organizational charts for department/agency, subordinate units and ancillary organizations, with a brief accompanying explanation. Include description of fie structures.

2. Goals and Functions: Brief statement of goals a functions of each organizational unit.

3. Resource Description: For each major organizational unit provide:

   a) number of FTE;s and current head count
   b) summary of FY 1989 operating budget.

   Limit: Chart plus
   1 page per organizational unit

B. Management

1. Chain of Command

   Description of basic chain of command (referenci organizational chart); including existing delegations of legal authorities (by reference) to eac operating unit or staff office.

   Limit: Summary, plus
   1 page per primary operating unit

2. Regulatory Authority

   Brief description of regulatory programs administered by each unit/agency. Cite statutory authority.

   Limit: 1 paragraph per program

3. Management Studies and Issues

   o Studies

   Brief review of recent major management studies, and their recommendations.

   Limit: 2 paragraphs per study

o Issues:

Other recent or current management issues and problems. Cite organizational changes that have occurred in the last year, or are currently pending. For pending changes, show how the change will affect current organization, missions, and budgets.

Limit: 1 page

C. External Process

1. Executive

o Key Interagency Relationships

Cite department/agency participation in policy development/decision-making interagency groups. Describe function and membership and indicate which organization has lead

Limit: 1 summary paragraph for each group

2. Congressional

o Key Committees

List committees with oversight responsibilities for each department and indicate those programs within each committee's jurisdiction

Limit: 1 page per committee

o Reports to Congress

List reports required to be submitted to Congress. Cite previous submission dates, reporting requirements and a brief description of each

Limit: 1 paragraph per report

o Legislative Issues

100th Congress

Synopsis of the key issues considered by the 100th Congress affecting your agency. Include current status of each

Limit: 4 pages

o 101st Congress

List the anticipated top 10 issues for the next session. Use your existing legislativ program or goals for your department. In t case of reauthorization of enabling statute cite dates and priorities.

Limit: 1 page summary discussion and 1 page per issue

II. BUDGET

A. Budget Detail

Submit FY 1989 budget justifications.

B. Budget Trends

Provide charts or graphs and brief description of budget trends and FTE levels in key unit/program area: Include data from FY 80 through FY 89 to show changes in resource allocation for units and programs. Show both Presidential budget request and Congressional appropriation.

Limit: 1 page text or chart per unit or program

C. Budget Issues

List the top 5-10 budget issues confronting your Agenc with a brief description of each. Include actions underway to clarify or address each issue

Limit: 1 page per issue

III. PERSONNEL

A. Summary Statistics

Provide a breakout by unit of all personnel classifications (e.g. career, PAS, non-career, SES, schedule C, schedule A, etc.

B. Appointive Positions

Provide list of names, titles and grades of all PAS's non-career SES's and schedule C employees

C. Equal Opportunity Program

Submit copies of most recent EEO reports and description of any special EEO initiatives undertaken by the department

D. Personnel Management Issues

Describe key personnel management issues which will require the attention of the Bush Administration

Limit: 1 page per issue

V. POLICY DEVELOPMENT GOALS

A. Overview of the Policy Development Process

Summarize policy development and decision-making process within the Department/Agency. Outline evaluation, decision making and implementation mechanisms. Cite role of key agency officials in the process, e.g. Agency head, General Counsel, Assistant Secretary for Management, etc.

Limit: 1 page plus chart if appropriate

B. Major Policy Issues

Summarize and prioritize top 5-15 major policy issues which will confront the new Administration. If you have discussed in previous section, please note.

Limit: 1 page per issue

C. Calendar of Major Challenges and Opportunities

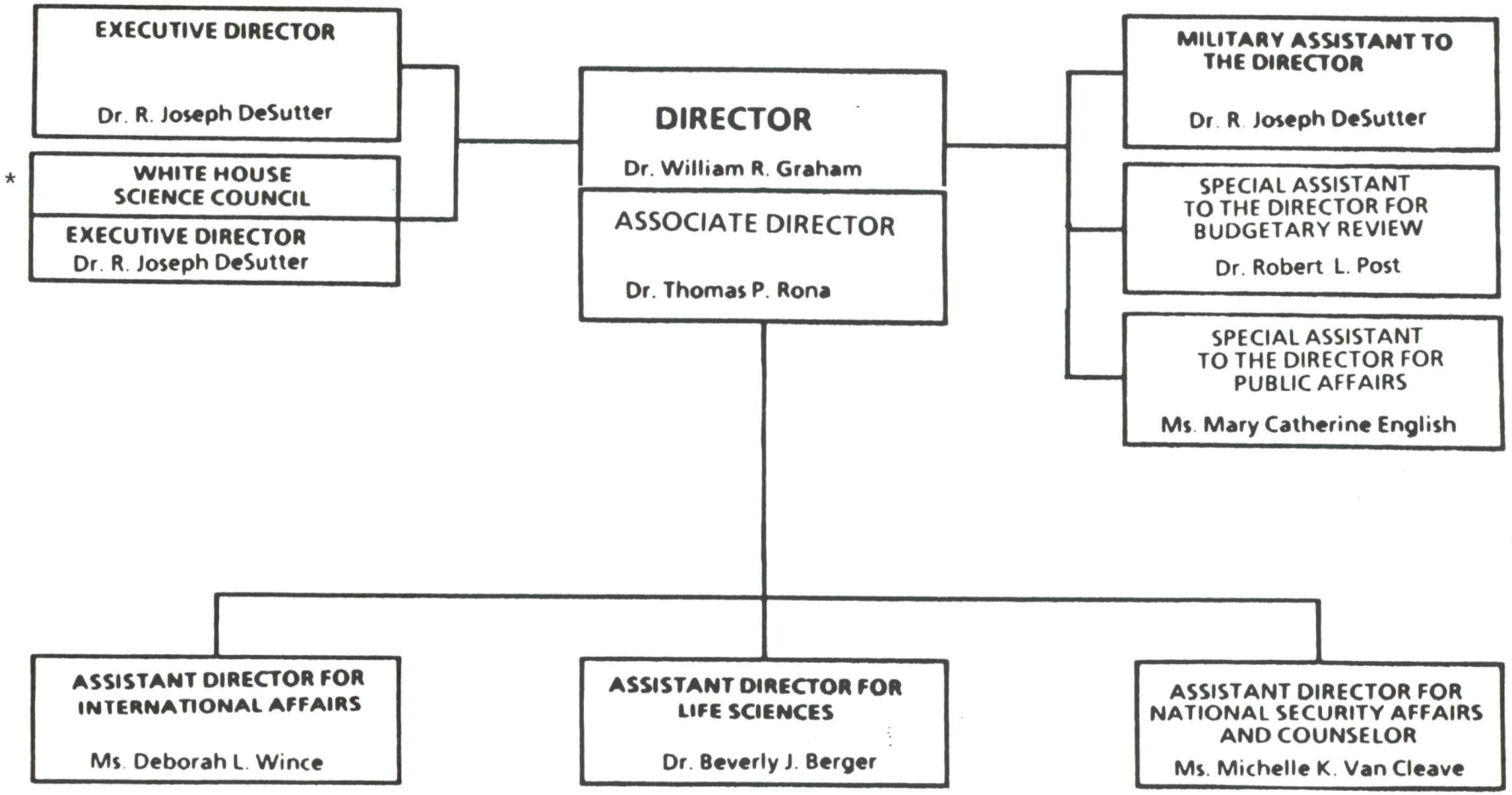
Provide a calendar of major events, decisions, and milestones that present challenges and opportunities for the Bush Administration in calendar year 1989.

Limit: Use basic calendar format - 1 page per month

ORGANIZATIONAL STRUCTURE

RETURN TO AIR FORCE OFFICE OF

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
EXECUTIVE OFFICE OF THE PRESIDENT



* WHSC: Established in 1982 under the Federal Advisory Committee Act to advise the Director of OSTP on science and technology issues of national concern. Currently consists of 17 eminent scientists and engineers appointed by the Director. Charter attached.

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

CHARTER

WHITE HOUSE SCIENCE COUNCIL

1. Committee's Official Designation:

White House Science Council (WHSC)

2. Objectives and scope of Activities and Duties:

- The purpose of the WHSC is to advise the Director, Office of Science and Technology Policy (OSTP), on science and technology issues of national concern.

- In furtherance of this mission the WHSC shall concern itself with specific issues assigned by the Director, OSTP, and will keep him informed of changing perspectives in the science and technology communities.

3. Duration:

The Council will terminate on December 31, 1989, unless sooner extended.

4. Official to Whom the Council Reports:

The WHSC will report to the Director, OSTP.

5. Agency Responsible for Providing Necessary Support for this Council:

Office of Science and Technology Policy.

6. Description of Duties:

The duties of the Council are solely advisory and are stated in paragraph 2 above.

7. Costs:

The estimated annual operating cost of the Council is $50,000.

8. Estimated Number and Frequency of Meetings:

The White House Science Council shall normally meet six times each year at regular intervals, and at such other times as may be called by the Director, OSTP. In addition, 10-15 meetings each year by subgroups are anticipated.

9. Subgroups:

Subgroups may be formed to conduct studies on specific issues assigned by the Director, OSTP.

10. Members:

WHSC members shall be appointed by the Director, OSTP. That appointment shall be subject to review every 365 days unless terminated earlier. The WHSC shall consist of no more than 20 members. The Director, OSTP shall appoint a Chairman and Vice Chairman from the members of the Council.

The Council shall utilize additional technical experts as needed to constitute its panels and study groups. These technical experts shall be appointed by the Director, OSTP, and shall be for the duration of the panel upon which the Associate Member serves or 365 days, whichever is sooner, unless terminated earlier by the Director.

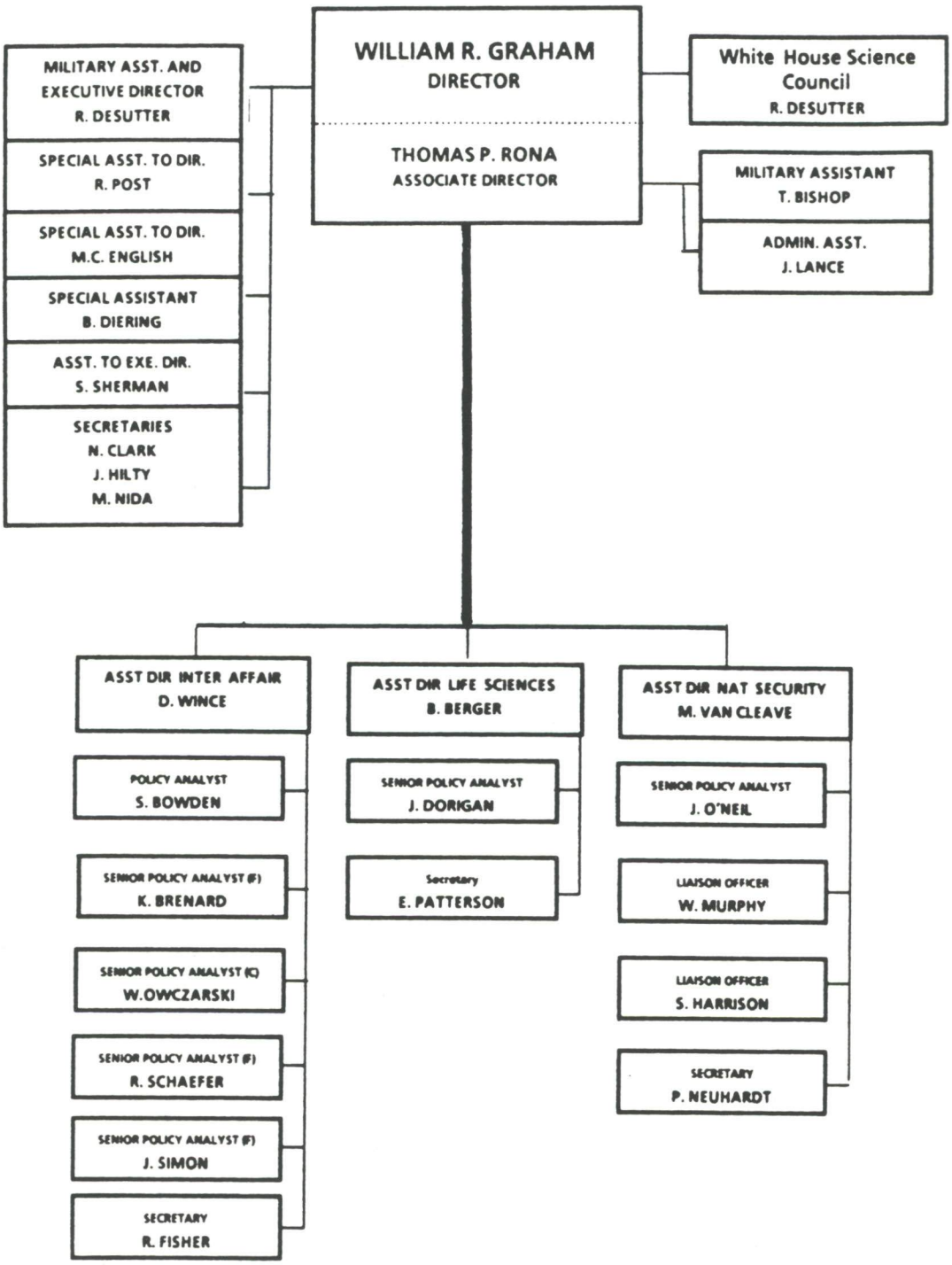
This Charter for the Advisory Committee named above is hereby approved on:

Date: December 16, 1987

Jonathan F. Thompson
Committee Management Officer

Date filed: December 21, 1987

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
EXECUTIVE OFFICE OF THE PRESIDENT



GOALS AND FUNCTIONS

FACT SHEET

ON

THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Background

The Office of Science and Technology Policy (OSTP) provides "a source of scientific and technological analysis and judgment for the President with respect to major policies, plans and programs of the federal government", as prescribed by the National Science and Technology Policy, Organizations, and Priorities Act of 1976 (Public Law 94-282).

The Director

Appointed by the President with the advice and consent of the Senate, the Director also serves as Science Advisor to the President with responsibility to:

(1) advise the President on science and technology considerations related to the economy, national security, foreign relations, health, energy, environment, resources, and other related matters;
(2) evaluate the federal effort in science and technology and recommend appropriate action on it;
(3) advise the President on science and technology considerations in the federal budget and work with the Office of Management and Budget on the review and analysis of research and development items in the budgets of all federal agencies; and
(4) assist the President in coordinating the research and development programs of the federal government.

The Director also serves as Chairman of the Federal Coordinating Council for Science, Engineering and Technology, and acts as advisor to the National Security Council on matters related to science and technology. Public Law 94-282 indicates that the Director of OSTP should work in close cooperation with the Council on Environmental Quality, Council of Economic Advisors, the Office of Management and Budget, the National Science Board, and the federal agencies and departments.

The Staff

The establishing Act provides positions for four Associate Directors of no higher than Executive Level III, nominated by the President and confirmed by the Senate. Assistant Directors and Policy Analysts, appointed by the Director, manage activities in specific policy areas. An Executive Director and an Administrative/Budget Officer are responsible for the administrative management of the agency.

Science Advisers -- Past and Present

Following the passage of P.L. 94-282, President Gerald R. Ford appointed Dr. H. Guyford Stever, then Director of the National Science Foundation, to be Science Advisor to the President and Director of the Office of Science and Technology Policy. He was succeeded by Dr. Frank Press, now president of the National Academy of Sciences, who served from 1977 to January 1981. Benjamin Huberman held the position in an acting capacity from January to August 1981. Dr. George A. Keyworth, II then served from August 1981 through December 1985. On January 1, 1986, Dr. John P. McTague, incumbent Deputy Director, became Acting Science Advisor to the President and Acting Director of the Office of Science and Technology Policy, serving until May 24, 1986. During the period May 24 through October 1, 1986, Dr. Richard G. Johnson served as the Acting Science Advisor to the President and Acting Director of the Office of Science and Technology Policy. On October 2, 1986, Dr. William R. Graham was appointed as the Science Advisor to the President and Director, Office of Science and Technology Policy.

Public Law 94-282
94th Congress, H. R. 10230
May 11, 1976

An Act

To establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide a comprehensive survey of ways and means for improving the Federal effort in scientific research and information handling, and in the use thereof, to amend the National Science Foundation Act of 1950, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "National Science and Technology Policy, Organization, and Priorities Act of 1976". National Science and Technology Policy, Organization, and Priorities Act of 1976. 42 USC 6601 note.

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. (a) The Congress, recognizing the profound impact of science and technology on society, and the interrelations of scientific, technological, economic, social, political, and institutional factors, hereby finds and declares that— 42 USC 6601.

(1) the general welfare, the security, the economic health and stability of the Nation, the conservation and efficient utilization of its natural and human resources, and the effective functioning of government and society require vigorous, perceptive support and employment of science and technology in achieving national objectives;

(2) the many large and complex scientific and technological factors which increasingly influence the course of national and international events require appropriate provision, involving long-range, inclusive planning as well as more immediate program development, to incorporate scientific and technological knowledge in the national decisionmaking process;

(3) the scientific and technological capabilities of the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving critical and emerging international, national, and local problems, in strengthening the Nation's international economic position, and in furthering its foreign policy objectives;

(4) Federal funding for science and technology represents an investment in the future which is indispensable to sustained national progress and human betterment, and there should be a continuing national investment in science, engineering, and technology which is commensurate with national needs and opportunities and the prevalent economic situation;

(5) the manpower pool of scientists, engineers, and technicians, constitutes an invaluable national resource which should be utilized to the fullest extent possible; and

(6) the Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

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Priority goals.

(b) As a consequence, the Congress finds and declares that science and technology should contribute to the following priority goals without being limited thereto:

(1) fostering leadership in the quest for international peace and progress toward human freedom, dignity, and well-being by enlarging the contributions of American scientists and engineers to the knowledge of man and his universe, by making discoveries of basic science widely available at home and abroad, and by utilizing technology in support of United States national and foreign policy goals;

(2) increasing the efficient use of essential materials and products, and generally contributing to economic opportunity, stability, and appropriate growth;

(3) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(4) contributing to the national security;

(5) improving the quality of health care available to all residents of the United States;

(6) preserving, fostering, and restoring a healthful and esthetic natural environment;

(7) providing for the protection of the oceans and coastal zones, and the polar regions, and the efficient utilization of their resources;

(8) strengthening the economy and promoting full employment through useful scientific and technological innovations;

(9) increasing the quality of educational opportunities available to all residents of the United States;

(10) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(11) improving the Nation's housing, transportation, and communication systems, and assuring the provision of effective public services throughout urban, suburban, and rural areas;

(12) eliminating air and water pollution, and unnecessary, unhealthful, or ineffective drugs and food additives; and

(13) advancing the exploration and peaceful uses of outer space.

DECLARATION OF POLICY

42 USC 6602.

SEC. 102. (a) PRINCIPLES.—In view of the foregoing, the Congress declares that the United States shall adhere to a national policy for science and technology which includes the following principles:

(1) The continuing development and implementation of strategies for determining and achieving the appropriate scope, level, direction, and extent of scientific and technological efforts based upon a continuous appraisal of the role of science and technology in achieving goals and formulating policies of the United States, and reflecting the views of State and local governments and representative public groups.

(2) The enlistment of science and technology to foster a healthy economy in which the directions of growth and innovation are compatible with the prudent and frugal use of resources and with the preservation of a benign environment.

(3) The conduct of science and technology operations so as to serve domestic needs while promoting foreign policy objectives.

(4) The recruitment, education, training, retraining, and beneficial use of adequate numbers of scientists, engineers, and tech-

nologists, and the promotion by the Federal Government of the effective and efficient utilization in the national interest of the Nation's human resources in science, engineering, and technology.

(5) The development and maintenance of a solid base for science and technology in the United States, including: (A) strong participation of and cooperative relationships with State and local governments and the private sector; (B) the maintenance and strengthening of diversified scientific and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, together with elimination of needless barriers to scientific and technological innovation; (C) effective management and dissemination of scientific and technological information; (D) establishment of essential scientific, technical and industrial standards and measurement and test methods; and (E) promotion of increased public understanding of science and technology.

(6) The recognition that, as changing circumstances require periodic revision and adaptation of title I of this Act, the Federal Government is responsible for identifying and interpreting the changes in those circumstances as they occur, and for effecting subsequent changes in title I as appropriate.

(b) IMPLEMENTATION.—To implement the policy enunciated in subsection (a) of this section, the Congress declares that:

(1) The Federal Government should maintain central policy planning elements in the executive branch which assist Federal agencies in (A) identifying public problems and objectives, (B) mobilizing scientific and technological resources for essential national programs, (C) securing appropriate funding for programs so identified, (D) anticipating future concerns to which science and technology can contribute and devising strategies for the conduct of science and technology for such purposes, (E) reviewing systematically Federal science policy and programs and recommending legislative amendment thereof when needed. Such elements should include an advisory mechanism within the Executive Office of the President so that the Chief Executive may have available independent, expert judgment and assistance on policy matters which require accurate assessments of the complex scientific and technological features involved.

(2) It is a responsibility of the Federal Government to promote prompt, effective, reliable, and systematic transfer of scientific and technological information by such appropriate methods as programs conducted by nongovernmental organizations, including industrial groups and technical societies. In particular, it is recognized as a responsibility of the Federal Government not only to coordinate and unify its own science and technology information systems, but to facilitate the close coupling of institutional scientific research with commercial application of the useful findings of science.

(3) It is further an appropriate Federal function to support scientific and technological efforts which are expected to provide results beneficial to the public but which the private sector may be unwilling or unable to support.

(4) Scientific and technological activities which may be properly supported exclusively by the Federal Government should be distinguished from those in which interests are shared with State and local governments and the private sector. Among these enti-

ties, cooperative relationships should be established which encourage the appropriate sharing of science and technology decisionmaking, funding support, and program planning and execution.

(5) The Federal Government should support and utilize engineering and its various disciplines and make maximum use of the engineering community, whenever appropriate, as an essential element in the Federal policymaking process.

(6) Comprehensive legislative support for the national science and technology effort requires that the Congress be regularly informed of the condition, health and vitality, and funding requirements of science and technology, the relation of science and technology to changing national goals, and the need for legislative modification of the Federal endeavor and structure at all levels as it relates to science and technology.

(c) PROCEDURES.—The Congress declares that, in order to expedite and facilitate the implementation of the policy enunciated in subsection (a) of this section, the following coordinate procedures are of paramount importance:

(1) Federal procurement policy should encourage the use of science and technology to foster frugal use of materials, energy, and appropriated funds; to assure quality environment; and to enhance product performance.

(2) Explicit criteria, including cost-benefit principles where practicable, should be developed to identify the kinds of applied research and technology programs that are appropriate for Federal funding support and to determine the extent of such support. Particular attention should be given to scientific and technological problems and opportunities offering promise of social advantage that are so long range, geographically widespread, or economically diffused that the Federal Government constitutes the appropriate source for undertaking their support.

(3) Federal promotion of science and technology should emphasize quality of research, recognize the singular importance of stability in scientific and technological institutions, and for urgent tasks, seek to assure timeliness of results. With particular reference to Federal support for basic research, funds should be allocated to encourage education in needed disciplines, to provide a base of scientific knowledge from which future essential technological development can be launched, and to add to the cultural heritage of the Nation.

(4) Federal patent policies should be developed, based on uniform principles, which have as their objective the preservation of incentives for technological innovation and the application of procedures which will continue to assure the full use of beneficial technology to serve the public.

(5) Closer relationships should be encouraged among practitioners of different scientific and technological disciplines, including the physical, social, and biomedical fields.

(6) Federal departments, agencies, and instrumentalities should assure efficient management of laboratory facilities and equipment in their custody, including acquisition of effective equipment, disposal of inferior and obsolete properties, and cross-servicing to maximize the productivity of costly property of all kinds. Disposal policies should include attention to possibilities for further productive use.

(7) The full use of the contributions of science and technology to support State and local government goals should be encouraged.

(8) Formal recognition should be accorded those persons whose scientific and technological achievements have contributed significantly to the national welfare.

(9) The Federal Government should support applied scientific research, when appropriate, in proportion to the probability of its usefulness, insofar as this probability can be determined; but while maximizing the beneficial consequences of technology, the Government should act to minimize foreseeable injurious consequences.

(10) Federal departments, agencies, and instrumentalities should establish procedures to insure among them the systematic interchange of scientific data and technological findings developed under their programs.

TITLE II—OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Presidential Science and Technology Advisory Organization Act of 1976.

SHORT TITLE

SEC. 201. This title may be cited as the "Presidential Science and Technology Advisory Organization Act of 1976". 42 USC 6611 note.

ESTABLISHMENT

SEC. 202. There is established in the Executive Office of the President an Office of Science and Technology Policy (hereinafter referred to in this title as the "Office"). 42 USC 6611.

DIRECTOR; ASSOCIATE DIRECTORS

SEC. 203. There shall be at the head of the Office a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code. The President is authorized to appoint not more than four Associate Directors, by and with the advice and consent of the Senate, who shall be compensated at a rate not to exceed that provided for level III of the Executive Schedule in section 5314 of such title. Associate Directors shall perform such functions as the Director may prescribe. Appointment. Compensation. 42 USC 6612.

FUNCTIONS

SEC. 204. (a) The primary function of the Director is to provide, within the Executive Office of the President, advice on the scientific, engineering, and technological aspects of issues that require attention at the highest levels of Government. 42 USC 6613.

(b) In addition to such other functions and activities as the President may assign, the Director shall—

(1) advise the President of scientific and technological considerations involved in areas of national concern including, but not limited to, the economy, national security, health, foreign relations, the environment, and the technological recovery and use of resources;

(2) evaluate the scale, quality, and effectiveness of the Federal effort in science and technology and advise on appropriate actions;

(3) advise the President on scientific and technological considerations with regard to Federal budgets, assist the Office of Management and Budget with an annual review and analysis of funding proposed for research and development in budgets of all Federal agencies, and aid the Office of Management and Budget and the agencies throughout the budget development process; and

(4) assist the President in providing general leadership and coordination of the research and development programs of the Federal Government.

POLICY PLANNING, ANALYSIS, AND ADVICE

42 USC 6614.

SEC. 205. (a) The Office shall serve as a source of scientific and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out the provisions of this section, the Director shall—

(1) seek to define coherent approaches for applying science and technology to critical and emerging national and international problems and for promoting coordination of the scientific and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

Science and Technology Report.

(2) assist and advise the President in the preparation of the Science and Technology Report, in accordance with section 209 of this Act;

(3) gather timely and authoritative information concerning significant developments and trends in science, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority goals of the Nation as set forth in section 101(b) of this Act;

Data base.

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major governmental and public programs on human resources and their utilization;

Studies and analyses.

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technological programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority goals of the Nation as set forth in section 101(b) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with

recommendations for their elimination, reform, or updating as appropriate;

(8) develop, review, revise, and recommend criteria for determining scientific and technological activities warranting Federal support, and recommend Federal policies designed to advance (A) the development and maintenance of broadly based scientific and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science and technology can be used effectively in addressing national and international problems;

Report to President.

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 209 of this Act;

(12) periodically survey the nature and needs of national science and technology policy and make recommendations to the President, for review and transmission to the Congress, for the timely and appropriate revision of such policy in accordance with section 102(a)(6) of this Act; and

(13) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

Intergovernmental Science, Engineering, and Technology Advisory Panel. Establishment.

(b)(1) The Director shall establish an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel"), whose purpose shall be to (A) identify and define civilian problems at State, regional, and local levels which science, engineering, and technology may assist in resolving or ameliorating; (B) recommend priorities for addressing such problems; and (C) advise and assist the Director in identifying and fostering policies to facilitate the transfer and utilization of research and development results so as to maximize their application to civilian needs.

Membership.

(2) The Panel shall be composed of (A) the Director of the Office, or his representative; (B) at least ten members representing the interests of the States, appointed by the Director of the Office after consultation with State officials; and (C) the Director of the National Science Foundation, or his representative.

Chairman.

(3)(A) The Director of the Office, or his representative, shall serve as Chairman of the Panel.

(B) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

Compensation.

(4) Each member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS-18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and, while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703 (b) of title 5, United States Code, for persons in government service employed intermittently.

5 USC 5332 note.

FIVE-YEAR OUTLOOK

42 USC 6615.

SEC. 206. (a) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, and with appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary, identify and describe situations and conditions which warrant special attention within the next five years, involving—

(1) current and emerging problems of national significance that are identified through scientific research, or in which scientific or technical considerations are of major significance; and

(2) opportunities for, and constraints on, the use of new and existing scientific and technological capabilities which can make a significant contribution to the resolution of problems identified under paragraph (1) of this subsection or to the achievement of Federal program objectives or national goals, including those set forth in section 101(b) of this Act.

Annual revision.

(b) The Office shall annually revise the five-year outlook developed under subsection (a) of this section so that it takes account of new problems, constraints and opportunities and changing national goals and circumstances, and shall extend the outlook so that it always extends five years into the future.

Consultation.

(c) The Director of the Office shall consult as necessary with officials of the departments and agencies having programs and responsibilities relating to the problems, constraints, and opportunities identified under subsections (a) and (b) of this section, in order to—

(1) identify and evaluate alternative actions that might be taken by the Federal Government, State and local governments, or the private sector to deal with such problems, constraints, or opportunities; and

(2) ensure that alternative actions identified under paragraph (1) of this subsection are fully considered by departments and agencies in formulating their budget, program, and legislative proposals.

Consultation.

(d) The Director of the Office shall consult as necessary with officials of the Office of Management and Budget and other appropriate elements of the Executive Office of the President to ensure that the problems, constraints, opportunities, and alternative actions identified under subsections (a), (b), and (c) of this section are fully considered in the development of the President's Budgets and legislative programs.

ADDITIONAL FUNCTIONS OF THE DIRECTOR; ADMINISTRATIVE PROVISIONS

42 USC 6616.

SEC. 207. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating Council for Science, Engineering, and Technology established under title IV; and

(2) serve as a member of the Domestic Council.

(b) For the purpose of assuring the optimum contribution of science and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science and technology as relate to national security.

(c) In carrying out his functions under this Act, the Director is authorized to—

(1) appoint such officers and employees as he may deem necessary to perform the functions now or hereafter vested in him and to prescribe their duties;

(2) obtain services as authorized by section 3109 of title 5 of the United States Code, at rates not to exceed the rate prescribed for grade GS-18 of the General Schedule by section 5332 of title 5 of the United States Code; and 5 USC 5332 note.

(3) enter into contracts and other arrangements for studies, analyses, and other services with public agencies and with private persons, organizations, or institutions, and make such payments as he deems necessary to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 208. (a) In exercising his functions under this Act, the Director shall— 42 USC 6617.

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, the National Science Board, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public, concerning national needs and trends in science and technology; and Hearings.

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this Act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this Act.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205(a) of this Act.

SCIENCE AND TECHNOLOGY REPORT

Transmittal to Congress.
42 USC 6618.

SEC. 209. (a) The President shall transmit annually to the Congress, beginning February 15, 1978, a Science and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with appropriate assistance from Federal departments and agencies and such consultants and contractors as the Director deems necessary. The report shall draw upon the information prepared by the Director pursuant to section 206 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, discuss such issues as—

(1) a review of developments of national significance in science and technology;

(2) the significant effects of current and projected trends in science and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science- and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science and technology;

(5) the identification and assessment of scientific and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science- and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other Government departments and agencies.

Public document.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S COMMITTEE ON SCIENCE AND TECHNOLOGY

ESTABLISHMENT

42 USC 6631.

SEC. 301. The President shall establish within the Executive Office of the President a President's Committee on Science and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

42 USC 6632.

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President not more than sixty days after the Director has assumed office (as provided in section 203 of this Act).

(b) Members of the Committee appointed by the President pursuant to subsection (a)(2) of this section shall—

(1) be qualified and distinguished in one or more of the following areas: science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

Chairman.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice Chairman for such periods as the President may determine.

Compensation.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS-18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

5 USC 5332 note.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

42 USC 6633.

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall, among other things, consider needs for—

(1) organizational reform, including institutional realinement designed to place Federal agencies whose missions are primarily or solely devoted to scientific and technological research and development, and those agencies primarily or solely concerned with fuels, energy, and materials, within a single cabinet-level department;

(2) improvements in existing systems for handling scientific and technical information on a Government-wide basis including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science and technology, including the formation of Federal-State mechanisms for the mutual pursuit of this goal;

(6) reduction and simplification of Federal regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science and technology;

(9) ways and means of effectively integrating scientific and technological factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science and technology to major national problems or concerns.

Interim report.

(b)(1) Within twelve months from the time the Committee is activated in accordance with section 302(a) of this Act, the Committee shall issue an interim report of its activities and operations to date. Not more than twenty-four months from the time the Committee is activated, the Committee shall submit a final report of its activities, findings, conclusions, and recommendations, including such supporting data and material as may be necessary, to the President.

Report to President.

Transmittal to Congress.

(2) The President, within sixty days of receipt thereof, shall transmit each such report to each House of Congress together with such comments, observations, and recommendations thereon as he deems appropriate.

CONTINUATION OF COMMITTEE

42 USC 6634.

SEC. 304. (a) Ninety days after submission of the final report prepared under section 303 of this Act, the Committee shall cease to exist, unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

42 USC 6635.

SEC. 305. (a) In the performance of its functions under sections 303 and 304 of this Act, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its duties and functions, and to select, appoint, and employ, subject to the civil service laws, such other officers and employees as may be necessary for carrying out its duties and functions; and

(2) to provide for participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to

the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege, or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisions of subchapter III of chapter 33, title 5, United States Code. 5 USC 3341.

TITLE IV—FEDERAL COORDINATING COUNCIL FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Council for Science, Engineering, and Technology (hereinafter referred to as the "Council"). 42 USC 6651.

(b) The Council shall be composed of the Director of the Office of Science and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, National Aeronautics and Space Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned. Membership.

(c) The Director of the Office of Science and Technology Policy shall serve as Chairman of the Council. The Chairman may designate another member of the Council to act temporarily in the Chairman's absence as Chairman. Chairman.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Council concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Council.

(e) The Council shall consider problems and developments in the fields of science, engineering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs,

(2) identify research needs including areas requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unwarranted duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Council shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Council shall furnish necessary assistance to the Council. Such assistance may include—

(1) detailing employees to the Council to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Council as come within the functions herein assigned.

Subcommittees and panels, establishment.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Council may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

42 USC 1862 note.

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

42 USC 1862 note.

TITLE V—GENERAL PROVISIONS

AUTHORIZATION

42 USC 6671.

SEC. 501. (a) For the purpose of carrying out title II of this Act, there are authorized to be appropriated—

(1) $750,000 for the fiscal year ending June 30, 1976;

(2) $500,000 for the period beginning July 1, 1976, and ending September 30, 1976;

(3) $3,000,000 for the fiscal year ending September 30, 1977; and

(4) such sums as may be necessary for each of the succeeding fiscal years.

(b) For the purpose of carrying out title III of this Act, there are authorized to be appropriated—

(1) $750,000 for the fiscal year ending June 30, 1976;

(2) $500,000 for the period beginning July 1, 1976, and ending September 30, 1976;

(3) $1,000,000 for the fiscal year ending September 30, 1977; and

(4) such sums as may be necessary for each of the succeeding fiscal years.

STATUTORY REPEAL

5 USC app.; 42 USC 1861 note.

SEC. 502. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

5 USC app. II; 50 USC app. 2271 note.

AMENDMENT

SEC. 503. Section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863) is amended by striking out subsection (g) and by redesignating subsections (h), (i), and (j), and all references thereto, as subsections (g), (h), and (i), respectively.

Approved May 11, 1976.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 94-595 (Comm. on Science and Technology) and No. 94-1046 (Comm. of Conference).

SENATE REPORTS: No. 94-622 accompanying S. 32 (Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences) and No. 94-765 (Comm. of Conference).

CONGRESSIONAL RECORD:

Vol. 121 (1975): Nov. 6, considered and passed House.

Vol. 122 (1976): Feb. 4, considered and passed Senate, amended, in lieu of S. 32.

Apr. 27, Senate agreed to conference report.

Apr. 29, House agreed to conference report.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS:

Vol. 12, No. 20 (1976): May 11, Presidential statement.

○

RESOURCE DESCRIPTION

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

CURRENT FTE'S:	9	
CURRENT ON BOARD STRENGTH:	9	OSTP
	12	DETAILEES
	1	CONSULTANT
	3	FELLOWS
	2	LIAISON OFFICERS
TOTAL:	27	

STANDARD FORM 300
July 1984, Bureau of the Budget
Circular No. A-11, Revised.

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
SALARIES AND EXPENSES

Object Classification (in thousands of dollars)

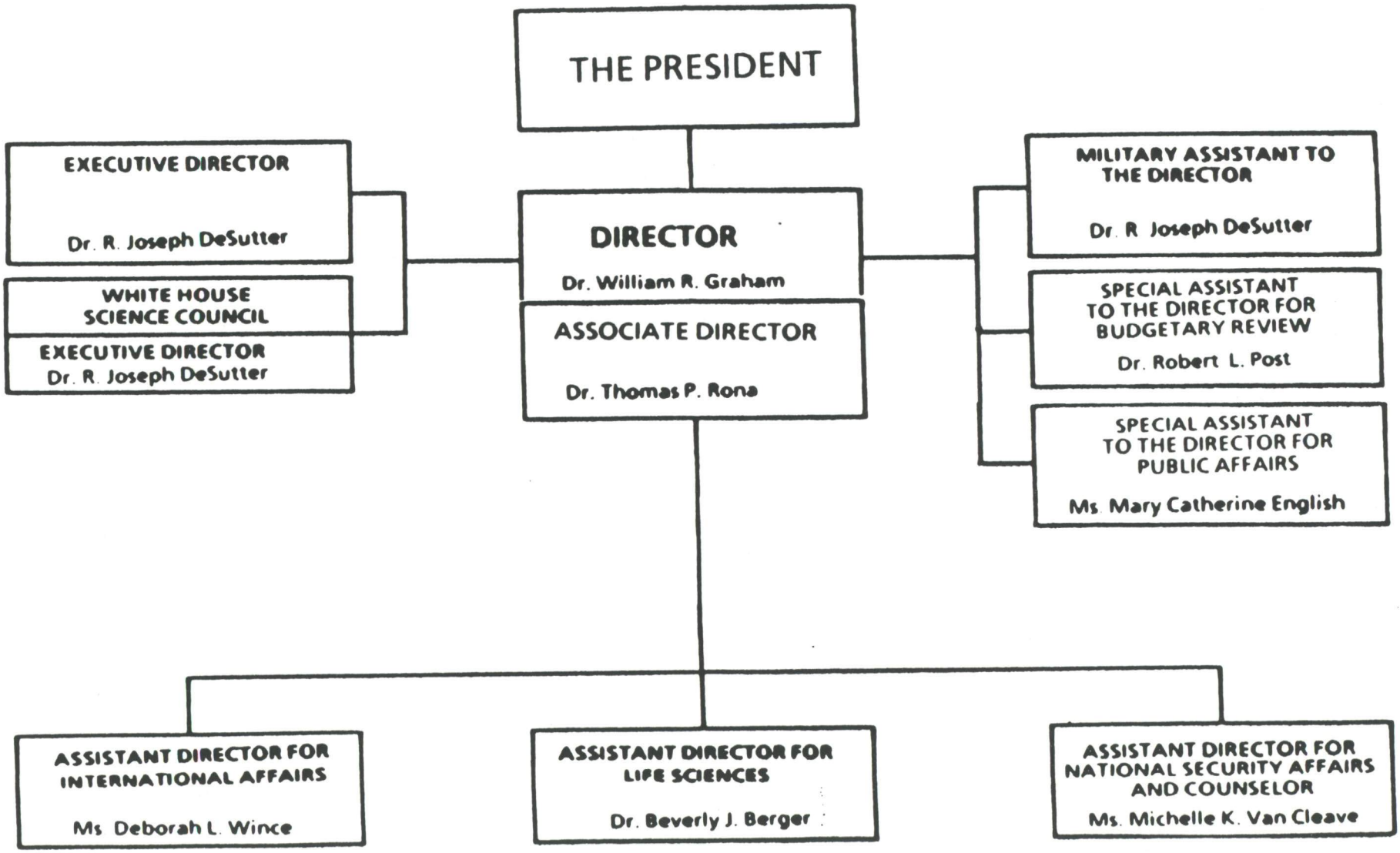
OCTOBER 31, 1988

Identification code [illegible]-0600-0-1-802	BUDGET AUTHORITY		
Personnel compensation:			
11.1 Full-time permanent	563		
11.3 Other than full-time permanent	20		
11.5 Other personnel compensation	10		
11.8 Special personal services payments	225		
11.9 Total personnel compensation	818		
12.1 Personnel benefits: Civilian	80		
21.0 Travel and transportation of persons	75		
22.0 Transportation of things	3		
23.1 Standard level user charges	442		
23.3 Communications, utilities, and miscellaneous charges	114		
24.0 Printing and reproduction	4		
25.0 Other services	27		
26.0 Supplies and materials	19		
31.0 Equipment	5		
99.9 [illegible]obligations	1,587		

CHAIN OF COMMAND

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
EXECUTIVE OFFICE OF THE PRESIDENT

CHAIN OF COMMAND



OFFICE OF SCIENCE AND TECHNOLOGY POLICY

DELEGATION OF LEGAL AUTHORITY

Internal Controls Officer (Federal Managers' Financial Integrity Act of 1982)

Ms. Michelle K. Van Cleave

Ethics Officer (Ethics in Government Act of 1978)

Ms. Michelle K. Van Cleave

Administrative/Budget Officer

Ms. Michelle K. Van Cleave

Security Officer

Mrs. Barbara J. Diering

REGULATORY AUTHORITY

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

REGULATORY AUTHORITY

NONE

MANAGEMENT STUDIES AND ISSUES

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

MANAGEMENT STUDIES AND ISSUES

NONE

EXECUTIVE

FEDERAL COORDINATING COUNCIL
ON SCIENCE, ENGINEERING AND TECHNOLOGY (FCCSET)

- FCCSET Committee on International Science, Engineering, and Technology (CISET)

  Purpose is to coordinate among agencies on policy matters relating to international science and technology. It will provide technical oversight on major programs, advise on broad policy issues for international S&T cooperation, identify issues with international implications, and identify areas of opportunity for new international science initiatives. Lead agency - OSTP.

- Committee on Earth Sciences

  Addresses the overall effectiveness and productivity of federal research efforts for understanding of the Earth as a global system. Lead agency - USGS.

- Committee on Life Sciences

  Provides a central forum for overall interagency policy coordination and guidance and for the exchange of information regarding the federal programs, policies, and procedures relating to the life sciences. Lead agency - OSTP.

- Biotechnology Science Coordinating Committee

  Coordinating forum for scientific issues related to biotechnology. Lead agency - NIH.

- FCCSET Committee on Computer Research and Applications

  Committee consists of three subcommittees focused on all aspects of computer research, ensuring U.S. retains leadership in high performance computing; addresses mechanisms by which increasing numbers of researchers have access to state-of-the-art supercomputing; provides coordination among agencies as contributors to the U.S. computing technology base; supports current U.S.-Japan S&T Agreement implementation as well as other interagency policy issues. Lead agency - OSTP.

- FCCSET Committee on Materials (COMAT)

  Purpose is to coordinate R&D in field of materials and materials processing, to identify issues which impact this field, and to raise any issues to the attention of the Director of OSTP. Lead agency - OSTP.

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(2) identify research needs including areas requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unwarranted duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Council shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Council shall furnish necessary assistance to the Council. Such assistance may include—

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(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Council may be established.

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42 USC 1862 note.

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OSTP Key Interagency Relationships

- Arms Control Experts Group

  Summit and Ministerial related; as appropriate. Lead agency - Interagency Group.

- Interagency Committee for Federal Laboratory Technology Transfer

  Purpose is to monitor progress relative to Technology Transfer Act of 1986 and E.O. 12591. Lead agency - Department of Commerce.

- Interagency Group on Supercomputers

  This group deals with such current supercomputer issues as export control policy, licensing of supercomputers for proscribed countries, market access (in Japan) of U.S. supercomputer vendors, and predatory pricing issues. Lead agency - OSTP.

- Trade Policy Review Group

  Purpose is to coordinate trade and international economic policies among agencies. OSTP participates when issues relating to international science and technology, including protection of intellectual property rights, are discussed. Lead agency - Office of the United States Trade Representative.

- President's Committee on the National Medal of Science

  The Science Adviser to the President is an ex-officio member. Lead agency - a Presidential nominating committee operating under the auspices of OSTP and supported by the National Science Foundation.

OSTP Key Interagency Relationships

- Joint Telecommunications Resources Board (JTRB)

  On July 30, 1984, the Director, OSTP, established the Joint Telecommunications Resources Board (JTRB) in accordance with E.O. 12472. The Board consists of the following members: Director, OSTP (Chairman), Department of Defense, Department of Commerce, General Services Administration, Federal Emergency Management Agency, Federal Communications Commission, National Communications System. An SOP is now ready for approval by the Board.

- The National Security Telecommunications Advisory Committee (NSTAC) meets semiannually to advise the President. The NSC coordinates and OSTP participates. NSTAC IX met on September 30, 1988. NSTAC X is expected to meet during May 1989, and the activities of its subcommittees will be monitored in preparation for the next meeting.

- An Interagency Communications Coordinating Group of Continuity of Government communications agencies is being formed with OSTP as chair and NCS as the secretariat. Terms of Reference have been drafted and are pending approval at a December 8, 1988, meeting.

- Lead agency - OSTP.

CONGRESSIONAL

KEY COMMITTEES

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

CONGRESSIONAL OVERSIGHT COMMITTEES

SENATE COMMITTEE ON COMMERCE, SCIENCE AND TECHNOLOGY

SENATE COMMITTEE ON APPROPRIATIONS -- SUBCOMMITTEE ON HUD AND INDEPENDENT AGENCIES

HOUSE COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY

HOUSE COMMITTEE ON APPROPRIATIONS -- SUBCOMMITTEE ON HUD AND INDEPENDENT AGENCIES

REPORTS TO CONGRESS

Reports to Congress

National Action Plan on Advanced Superconductivity R&D

H.R. 3048, the National Superconductivity and Competitiveness Act of 1988, calls for OSTP to establish a five-year National Action Plan on Advanced Superconductivity Research and Development and to submit a subsequent annual report to Congress evaluating the progress of the Plan. The annual report shall be submitted with the President's annual budget request to Congress. The National Action Plan is due nine months after enactment (August 1989). OSTP, with help from Commerce and Energy Department Secretaries, shall identify those federal policies and regulations which impede superconductivity commercialization opportunities.

Science, Technology and American Diplomacy (Title V) Report

P.L. 95-426, Section 503(b) of Title V requires the President to submit to Congress an annual report on international science and technology. The report deals with foreign policy implications and scientific and technological benefits of bilateral and multilateral scientific and technological activities and agreements. It is prepared by the State Department for OSTP transmittal to the Congress. [give next due date]

Science and Technology Report to the Congress, 1985-1988

While the statute (P.L. 94-282) requires an annual report, a subsequent arrangement with the Congress has provided for a biennial and, this year, a quadrennial report, to be submitted by the end of Calendar Year 1988. OSTP prepares the Report with the assistance of the National Science Foundation.

Desalinization

OSTP Report to Congress recommending a lead agency for conduct of desalinization R&D, due December 1, 1988. Requirement in the Authorization Act for the National Science Foundation.

(continued)

Reports to Congress (continued)

Joint Research with the Soviet Union on the "Nuclear Winter" Hypothesis

Report to Congress on the status of cooperative work. Report to Senate Committee on Appropriations, Subcommittee on HUD and Independent Agencies, due January 1, 1989.

OSTP believes that the detailed scientific work on "nuclear winter" being conducted under the U.S.-USSR Agreement on Environmental Protection meets scientific needs and satisfies Congressional wishes. The report has been completed and is being revised internally. The probable completion date is approximately December 9, 1988.

High Performance Computing

Congress has requested that OSTP evaluate the national impact of implementing the OSTP Strategy on High Performance Computing. OSTP has responded that it will provide an initial response based on anecdotal data by the time of the FY 90 budget submission to Congress, with a more extensive assessment to be provided within the year. The FCCSET Committee on Computer Research is working this issue.

Small Business Innovative Research (SBIR)

P.L. 97-219 requires OSTP to monitor the program and file an annual report to Congress. Last report submitted, estimated to be December 1986. The report shall cover "all phases of the implementation and operation of SBIR programs within agencies required to establish an SBIR program, together with such recommendations as the Director may deem appropriate."

LEGISLATIVE ISSUES

100TH CONGRESS

Legislative Issues - The 100th Congress

- OSTP budget and staffing. See items II, Budget and III, Personnel, for status.

101ST CONGRESS

Legislative Issues - The 101st Congress

- As an office within the Executive Office of the President, OSTP does not have an independent legislative program. The Director, OSTP, is available to testify on science and technology issues, as the Congress may request. OSTP works with Executive Departments and agencies to support the President's legislative goals.

- In FY 90, the question of supplemental funding for OSTP may be an issue the new Administration may want to address. See section II, Budget, for details.

BUDGET DETAIL

FISCAL YEAR **1989**

BUDGET

EXECUTIVE OFFICE OF
THE PRESIDENT

OFFICE OF SCIENCE AND
TECHNOLOGY POLICY

Executive Office of the President
Office of Science and Technology Policy
Budget Submission
FY 1989

Table of Contents

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I. GENERAL STATEMENT

Executive Office of the President
Office of Science and Technology Policy

The Office of Science and Technology Policy (OSTP) was created by the National Science and Technology Policy, Organization, and Priorities Act of 1976 (Public Law 94-282). The Office serves as a source of science and technology expertise for the President and other organizations within the Executive Office of the President and other organizations within the Executive Office of the President; provides for coordination and policy analysis of research and development programs of the Federal government; and conducts reviews and analyses, with the Office of Management and Budget, of research and development programs of the Federal government.

Major objectives of the OSTP include the following:

- Advise the President on scientific and technological considerations involved in areas of national and international concern.

- Assist the Office of Management and Budget with reviews of proposed budgets for Federal R&D programs.

- Advise the National Security Council on the scientific and technological factors related to national security and international issues.

- Provide general leadership and coordination of the research and development programs of the Federal government; analyze problems and developments in science and technology affecting more than one Federal agency and recommend policies and procedures for dealing with them.

- Encourage a stronger partnership between Federal research, State and local governments, and the scientific community.

- Provide Executive Branch perspectives regarding science and technology policy to the Congress.

The White House Science Council was established to advise the Director on science and technology issues of specific concern to the President as well as other issues of importance to the nation. The Council has concerned itself with a number of issues assigned by the Director and has also kept him informed of changing perspectives in the science and technology communities.

II. SUMMARY OVERVIEW

The FY 1989 budget request for the Office of Science and technology Policy (OSTP) continues to reflect a new vision and direction for OSTP. Following the appointment of a new director, an exhaustive review of OSTP's operations and role as principal science adviser to the President was conducted. Several areas of need were identified including a lack of office automation capabilities and the need to realign staff configurations. The redistribution of FY 1987 funds combined with our FY 1988 request enabled us to improve our support and services to the President, while emphasizing fiscal constraint.

OSTP respectfully requests an appropriation for FY 1989 of $1,787,000 which represents a 5.35% or $101,000 reduction from that currently appropriated for FY 1988.

In FY 1987, a major drive was begun to automate our office operation providing us compatibility with other agencies in the Executive Office of the President and with the science community at large. The next phase of the automation drive will require less emphasis on equipment acquisition. Except for a slight increase in the Standard Level Users Charge, rent, all categories other than personnel reflect little or no changes. Personnel compensation categories reflect major changes in the categories of full-time permanent and benefits.

BUDGET OVERVIEW
(Dollars in 000s)

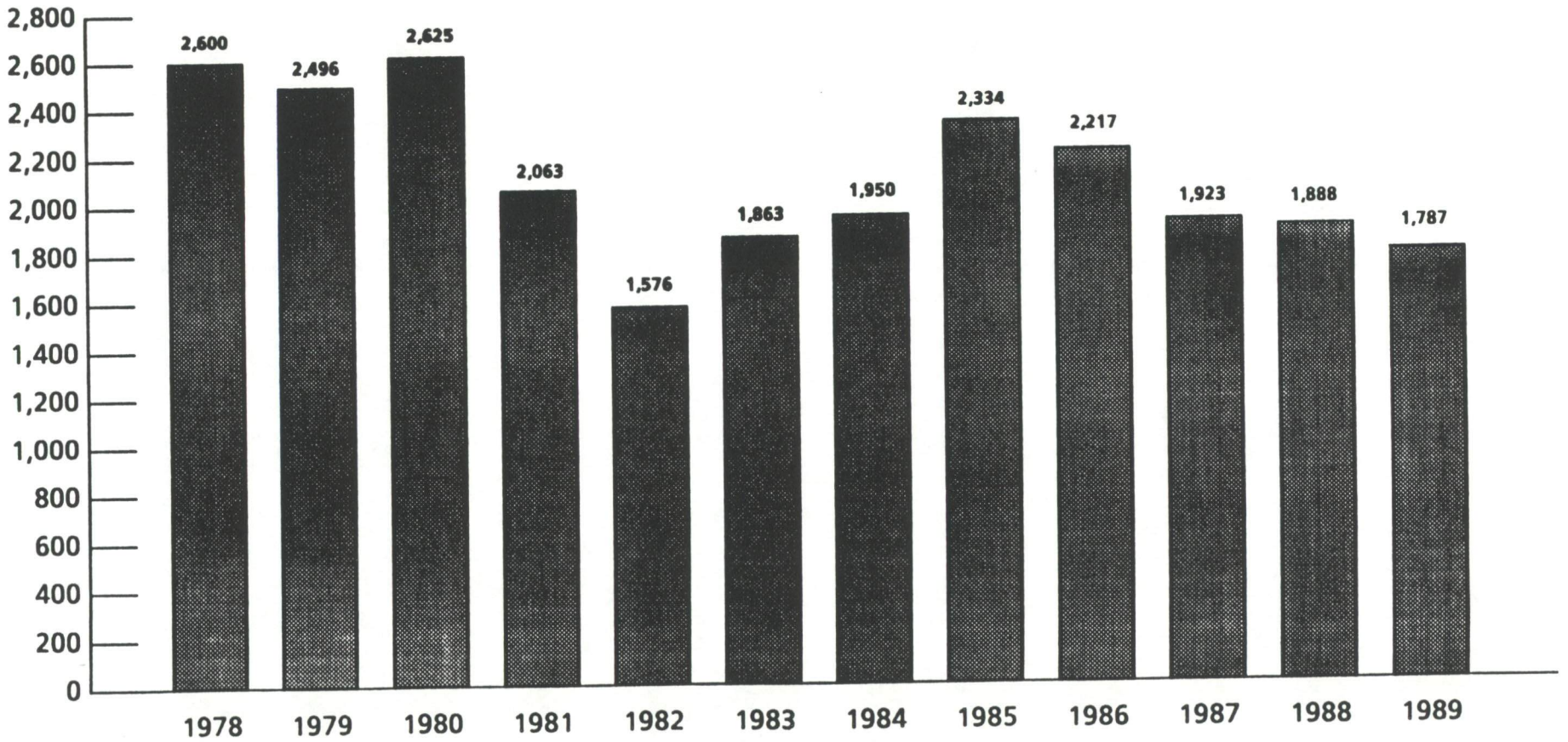
	Actual FY 1987	Estimated FY 1988	Estimated FY 1989	Net Changes FY 88-89
Budget Authority:				
Appropriation	1,875	1,888	1,787	(101)
FTE Employment:				
FTP	7	15	15	0
Total FTE	10	23	20	(3)

Executive Office of the President
Office of Science and Technology Policy

Historical Summary of Appropriations

Fiscal Years 1978 – 1989

(IN THOUSANDS OF DOLLARS)



III. APPROPRIATION LANGUAGE

Executive Office of the President
Office of Science and Technology Policy

Salaries and Expenses

For necessary expenses of the Office of Science and Technology Policy, in carrying out the purposes of the National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6601 and 6671), hire of passenger motor vehicles, services as authorized by 5 U.S.C. 3109, not to exceed $1,500 for official reception and representation, expenses, and rental of conference rooms in the District of Columbia, [$1,888,000] $1,787,000. Provided, That the Office of Science and Technology Policy shall reimburse other agencies for not less than one-half of the personnel compensation costs of individuals detailed to it. (Department of Housing and Urban Development-Independent Agencies Appropriations Act, 1988)

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Case 210

STANDARD FORM 300
July 1964, Bureau of the Budget
Circular No. A-11, Revised.
300-101

Office of Science and Technology Policy
Salaries and Expenses

Program and Financing (in thousands of dollars)

Identification code 11-2600-0-1-802	19 87 actual	19 88 estimate	19 89 estimate
Program by activities:			
00.01 Direct program: Administrative support	1,816	1,888	1,787
01.01 Reimbursable program	59	---	---
10.00 Total obligations	1,875	1,888	1,787
Financing:			
11.00 Offsetting collections from: Federal funds	-59	---	---
25.00 Unobligated balance lapsing	107	---	---
40.00 Budget authority (appropriation)	1,923	1,888	1,787
Relation of obligations to outlays:			
71.00 Obligations incurred, net	1,816	1,888	1,787
72.40 Obligated balance, start of year	927	1,222	1,215
74.40 Obligated balance, end of year	-1,222	-1,215	-1,175
77.00 Adjustments in expired accounts	-181	---	---
90.00 Outlays	1,340	1,895	1,827

(Memo ent: 21.5) (Memo ent: 5) (Memo ent: 5) (Memo ent: 4.1

Office of Science and Technology Policy

Program and Performance

The Office of Science and Technology Policy (OSTP) provides advice to the President concerning policies in science and technology and on the utilization of science and technology in addressing important national problems. The OSTP operations include support to other Executive Office of the President organizations on issues with science and technology considerations; review and analysis, with the Office of Management and Budget, of research and development budgets for all Federal agencies; coordination of research and development programs of the Federal Government; and other activities necessary to carry out the duties, functions, and activities described in Public Law 94-282, the National Science and Technology Policy, Organization, and Priorities Act of 1976.

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STANDARD FORM 300
July 1964, Bureau of the Budget
Circular No. A-11, Revised.
300-101

Office of Science and Technology Policy
Salaries and Expenses

Object Classification (in thousands of dollars)

Identification code 11-2600-0-1-802	19 87 actual	19 88 estimate	19 89 estimate
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	254	726	628
11.3 Other than full-time permanent	107	30	30
11.5 Other personnel compensation	7	10	10
11.8 Special personal services payments	562	251	251
11.9 Total personnel compensation	930	1,017	919
12.1 Personnel benefits: Civilian	44	65	80
21.0 Travel and transportation of persons	61	105	100
22.0 Transportation of things	3	3	3
23.1 Rental Payments to GSA	433	436	442
23.3 Communications, utilities, and miscellaneous charges	116	119	120
24.0 Printing and reproduction	12	15	15
25.0 Other services	41	48	48
26.0 Supplies and materials	33	35	35
31.0 Equipment	143	45	25
99.0 Subtotal, direct obligations	1,816	1,888	1,787
99.0 Reimbursable obligations	59	---	---
99.9 Total obligations	1,875	1,888	1,787

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Case 210

STANDARD FORM 300
July 1964, Bureau of the Budget
Circular No. A-11, Revised.
300-101

Office of Science and Technology Policy
Salaries and Expenses

Personnel Summary

Identification code: 11-2600-0-1-802	19 87 actual	19 88 estimate	19 89 estimate
Total number of full-time permanent positions	7	15	15
Total Compensable workyears:			
Full-time equivalent employment	10	23	20
Full-time equivalent of overtime and holiday hours	---	1	1

9

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STANDARD FORM 306
July 1968, Bureau of the Budget
Circular No. A-11, Revised.
206-103

Office of Science and Technology Policy
Salaries and Expenses

DETAIL OF PERMANENT POSITIONS

11-2600-0-1-802

	19 87 actual	19 88 estimate	19 89 estimat
Executive Level II	1	1	1
Executive Level III	0	1	1
Subtotal	1	2	2
ES-6	1	1	1
ES-2	0	1	1
ES-1	0	2	2
Subtotal	1	4	4
GS-12	3	3	3
GS-10	1	1	1
GS-8	1	2	2
GS-7	0	3	3
Subtotal	5	9	9
Total permanent positions	7	15	15
Unfilled positions, end of year	8	---	---
Total permanent employment, end of year	7	15	15
	(Mono cast: 16.3)	(Mono cast: 4.9)	(Mono cast: 4.9)	(Mono cast

GPO: 1976—241-530/2037

IV. SUMMARY TABLES

Executive Office of the President
Office of Science and Technology Policy

Summary of Budget Authority by Object Class

FY 1987-1989

BUDGET OVERVIEW
(in thousands of dollars)

	Actual FY 1987	Estimated FY 1988	Estimated FY 1989	Net Change FY 88 - 89
Personnel Compensation:				
Full-time permanent	254	726	628	(98)
Other than full-time permanent	107	30	30	0
Other personnel compensation	7	10	10	0
Special personal services payments	562	251	251	0
Total personnel compensation	930	1,017	919	(98)
Personnel benefits: Civilian	44	65	80	15
Total compensation & benefits	974	1,082	999	(83)
Travel & transportation of persons	61	105	100	(5)
Transportation of things	3	3	3	0
Rental payments to GSA	433	436	442	6
Comm., util., & misc. chgs.	116	119	120	1
Printing and reproduction	12	15	15	0
Other services	41	48	48	0
Supplies and materials	33	35	35	0
Equipment	143	45	25	(20)
Subtotal, direct obligations	1,816	1,888	1,787	(101)
Reimbursable obligations	(59)	---	---	0
Lapse	107	---	---	0
Budget Authority	1,864	1,888	1,787	(101)

Office of Science and Technology Policy

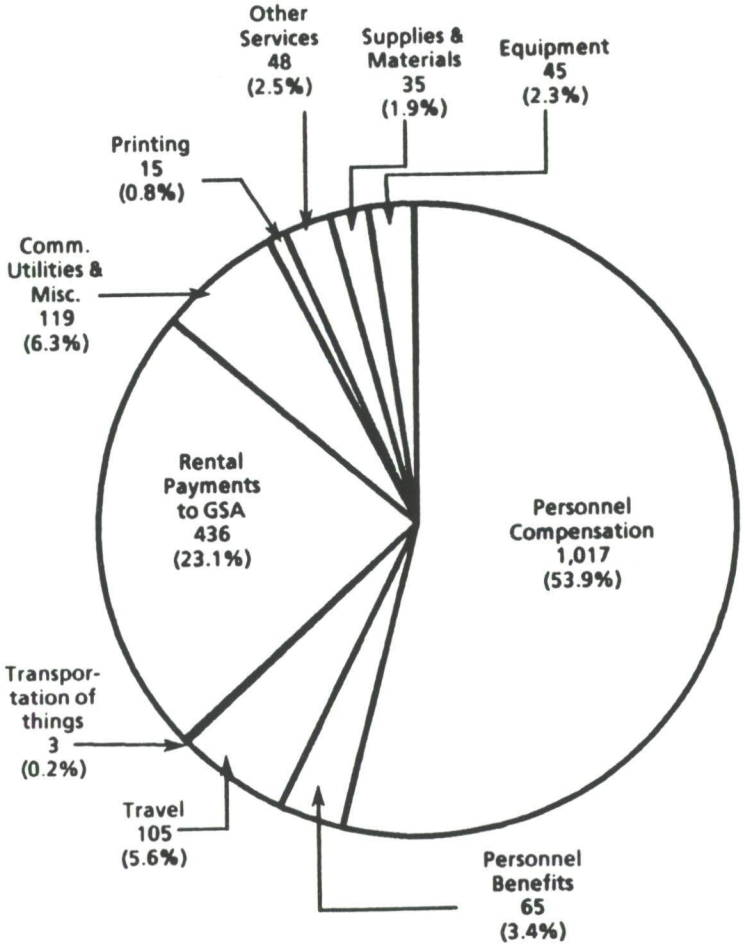
Summary of Changes from FY 1988 to FY 1989
By Object Class (in thousands of dollars)

FY 1988 Budget Authority			$1,888
	Increases	Decreases	
Current Proposed FY 1989			$1,787
Personnel compensation	0	(98)	
Personnel benefits	15	0	
Total compensation & benefits	0	(83)	
Travel & transportation of persons	0	(5)	
Transportation of things	0	0	
Rental payments to GSA	6	0	
Comm., util., & misc. chgs.	1	0	
Printing and reproduction	0	0	
Other services	0	0	
Supplies and materials	0	0	
Equipment	0	(20)	
Total	7	(108)	
Net Increase/Decrease		$101	

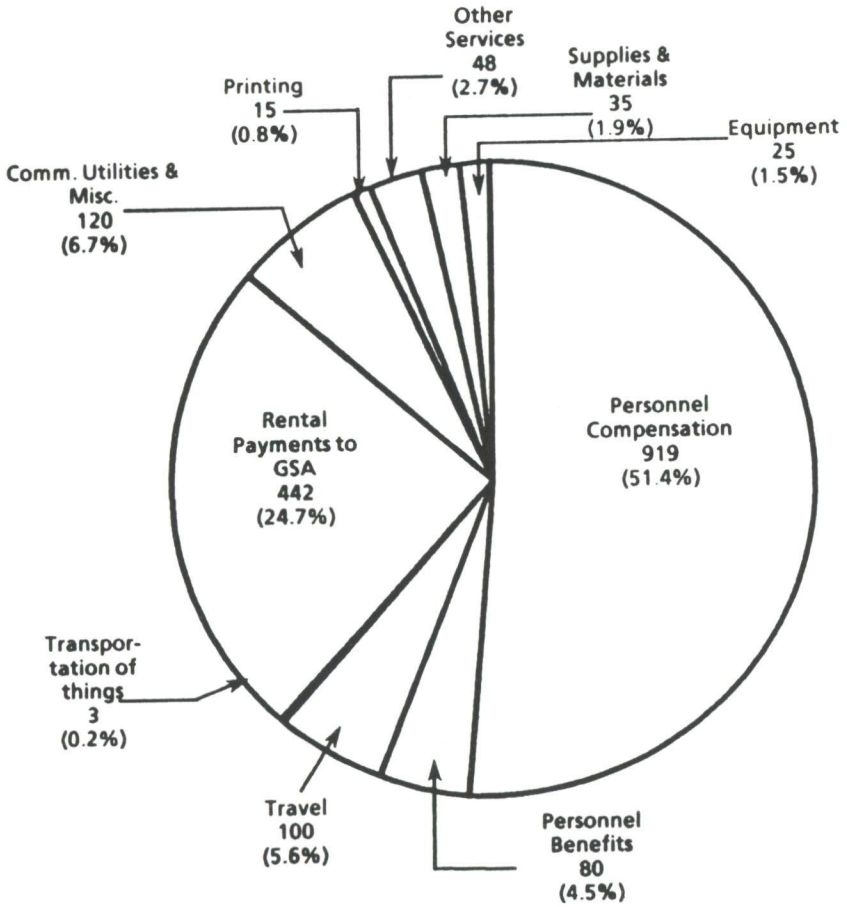
Executive Office of the President
Office of Science and Technology Policy

Funding By Object Class

Fiscal Years 1988 – 1989
(IN THOUSANDS OF DOLLARS)



FY 1988



FY 1989

V. EXPLANATION AND JUSTIFICATION OF CHANGES BY OBJECT CLASS FOR FY 1989

Executive Office of the President
Office of Science and Technology Policy
(in thousands of dollars)

I. Increases to Maintain Current Services and Requests Levels $ 0

FY 88	FY 89		
		Personnel compensation and benefits	
$1,082	$ 999	This funding amount will provide for a staffing level of 15 full-time permanent (FTP) and 20 full-time equivalent (FTE).	-$ 83
$ 105	$ 100	Travel and transportation of persons The decrease of $5 anticipated in this category is in support of the Administration's desire to review and reduce travel funding levels. This is consistent with the terms agreed to with the Congress during the budget deliberations in 1987.	-$ 5
$ 3	$ 3	Transportation of things There is no change to this category. The existing funding level is sufficient to cover the cost of commercial courier services and transportation companies.	$ 0
$ 436	$ 442	Rental Payments to GSA (SLUC) No additional space is being requested for FY 1989. However, due to an increase in the cost of office space charges by GSA, an additional $6 is requested.	+$ 6

$ 119	$ 120	Communications, utilities, and miscellaneous charges Our request will provide for OSTP's area commercial utilities primarily telephone (AT&T and FTS service), GSA after-hour utilities, postage, and the cost of data lines and other communication links between OSTP, all EOP agencies, and the science community at large.	$	1
$ 15	$ 15	Printing and reproduction These funds provide for the government and commercial printing requirements including publication charges for the Federal Register. The current funding level is sufficient to meet OSTP's printing requirements.	$	
$ 48	$ 48	Other services Our request for this line item will provide for normal maintenance costs of reproduction and ADP equipment and the cost of subscriptions to commercial data based systems. Also funded is the reduced cost of specialized systems development and maintenance provided by the Office of Administration due to OSTP's office automation plan.	$	
$ 35	$ 35	Supplies and materials OSTP's use of traditional office supplies has decreased while the need for specialized office supplies such as off-the-shelf software and ADP supplies has increased. The current funding level is sufficient will allow us to meet this change as office automation becomes more integral to our operation.	$	
$ 45	$ 25	Equipment In an effort to increase OSTP's efficiency and enhance communication, a major drive was made in FY 1987 and will be continued in FY 1988 to purchase ADP equipment. This equipment allows OSTP to reduce	-$	2

		dependence upon personnel resources and allow increased compatibility with the EOP information network. The next phase of the automation process will enable a reduced funding level of $25 that will continue to provide for purchases which enhance existing equipment and replace outdated office equipment.	
$1,888	$1,787	Total all object classes	-$ 101

A SUMMARY OF ACCOMPLISHMENTS IN FY 1987 BY THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

The Reagan Administration's science and technology policy and actions are designed to increase the contribution of science and technology to the national goals of improved economic competitiveness and a strong national defense. This has been and will continue to be reflected in the annual federal budgets.

Federal government agencies responsible for the support of research and development carefully evaluate projects on the basis of excellence, relevance, and appropriateness. In an effort to maximize the return on the nation's investment in R&D to U.S. society, various R&D performers are encouraged to collaborate. The broad aim is to ensure that the U.S. continue to lead the world in research and technology, maintain a competitive position in international markets and, in cooperation with allies, retain a national security strategy based on credible deterrence.

The activities and accomplishments of the Office of Science and Technology Policy during fiscal year 1987 are summarized in the following pages.

SPECIFIC ACTIVITIES

AERONAUTICS POLICY

The national aeronautics policy was developed during 1982 in an integrated process chaired by OSTP. This approved national policy establishes the importance of aeronautical systems for America's national security and commercial competitiveness. In addition, the policy reaffirmed the U.S. government's role in supporting aeronautical research and technology (R&T).

After assessment of current and proposed government programs in aeronautical research by the OSTP-sponsored Aeronautical Policy Review Committee, a series of national goals was established in 1985 to fulfill the policy objectives of attaining specific aeronautical capabilities by the turn of the century. Included are a subsonics goal to establish a firm U.S. aeronautical leadership into the next century; a supersonics goal to develop technology for efficient, long-distance supersonic cruise; and, a trans-atmospherics goal to exploit the growing convergence of aeronautics and space technology. Pursuit of these goals will focus government, industry, and university efforts and opportunities essential to U.S. leadership in aeronautics.

The committee's sequel to the R&D Goals Report defines specific steps for government and industry toward achieving these goals. This report -- National Aeronautical R&D Goals: Agenda for Achievement -- was released in February 1987, and over 8,000 copies have been distributed within the government, industry, and academic communities. Since aeronautics provides the largest positive contribution to the U.S. balance of trade, OSTP has been reviewing the Committee's recommendations in light of the President's competitiveness initiative and is working closely with government agencies, the academic research communities, and the industrial sector to develop specific implementation plans that respond to the report's recommendations.

OSTP continues to place special emphasis on the DOD/NASA-sponsored activities for the National Aerospace Plane program, high speed civil transport studies, efforts to develop a civil version of tilt-rotor technology, and efforts within the government to increase university support for and interest in the aerospace field.

AGENCY LONG-RANGE PLANNING REVIEWS

During this period of rapid advances in virtually all fields of scientific and engineering research, it is essential that OSTP stay abreast of federal plans to meet national S&T objectives, including recommendations of presidentially commissioned and White House Science Council reports. Accordingly, the Science Adviser has invited all major agencies supporting R&D to review their long-range plans, major research goals, scientific thrusts, and key issues with OSTP staff. This is done as part of the budget process where OSTP works with OMB in reviewing and analyzing funding for R&D in budgets of all federal agencies.

PRESIDENTIAL AWARDS FOR EXCELLENCE IN SCIENCE AND MATHEMATICS TEACHING

In 1987 the President greeted, at the White House, the recipients of the Presidential Awards for Excellence in Science and Mathematics Teaching. OSTP provided staff support and coordinated activities with the National Science Foundation for the event. The award was established by President Reagan in 1983 and represents the highest honor that any mathematics or science teach can receive. The teachers were nominated

by their peers with final screening by a distinguished panel of educators and scientists. The awards are presented annually to 108 science and mathematics teachers selected from across the nation, two from each state, plus two from the District of Columbia, Puerto Rico, the Department of Defense Dependents schools, and U.S. territories. Not only do these awards focus national attention on the importance of precollege science and mathematics education, they also encourage increased local support and contributions from industry.

To reduce the shortage of college faculty in engineering and science, NSF is administering the Presidential Young Investigator Awards Program, designed to induce outstanding young science and engineering faculty to remain in academia rather than leave for industry. The awards, including matching funds from industry, provide up to $100,000 each year for five years. Industry has responded enthusiastically with matching funds for over 70 percent of the possible total. The first 200 awards (100 in engineering) selected from 1,400 nominations were announced in February 1984. In 1985, NSF gave 200 new awards; in 1986, 100. In 1987, there were 200 new awards.

SMALL BUSINESS INNOVATION RESEARCH

OSTP is required by the Small Business Innovation Research Act to "monitor the implementation and operation of the SBIR program." The required evaluation is carried out on a continuing basis and reported to the Congress in an annual report.

FY 86 marked the first year that any SBIR Phase II contracts were consummated. OSTP now has an opportunity to have a data base of completed SBIR awards that offer the potential to be statistically significant and can be evaluated in total (Phase I and Phase II). OSTP took the first steps in FY 87 to conduct a review of the SBIR with two major components:

(1) an analysis of the mechanism by which the quality of research in Phase I and II is assured, and

(2) a study of the criteria that can be used to evaluate the relative success of the Phase III portion of the program.

ARCTIC RESEARCH

In 1984, Congress passed legislation under which the President established the Arctic Research Commission whose purpose is to establish and implement (by means of an Interagency Arctic Research Policy Committee) a national arctic research program plan. To insure that the results were consistent with Administration policy, OSTP participated in the activities of the Commission and the Interagency Committee as the two groups developed the plan. The program plan document and the interagency review and concurrence process was completed in FY 1987. The plan lays out an extensive arctic research program which stresses national security, rational development with minimum adverse environmental or social impact, and an emphasis on phenomena best studied in that region. The budgets for the various agency parts of the program must now go through normal agency channels. In addition to NSF, which chairs the group, the Interagency Committee consisted of the Departments of Commerce, Defense, Energy, Interior, State, Transportation, Health and Human Services as well as the National Aeronautics and Space Administration and the Environmental Protection Agency. The Commission report on the plan has been approved and will be submitted to Congress by the President.

FEDERAL COORDINATING COUNCIL FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

The FCCSET was established in 1976 by P.L. 94-282 to deal with science and technology policy issues affecting more than one federal agency. It is chaired by the Director, Office of Science and Technology Policy. During FY 1987, the active committees were:

Earth Sciences
Human Subjects
International Science, Engineering, and Technology
Materials
Radiation Research and Policy Coordination
Solar-Terrestrial Research
Supercomputers

Two new FCCSET committees were established in 1987, the Committee on Earth Sciences (CES) and the Committee on Life Sciences (CLS).

COMMITTEE ON EARTH SCIENCES

The Committee on Earth Sciences (CES) was established in March 1987 by the Science Adviser to the President, Dr. William R. Graham, to increase the overall effectiveness and productivity of federal research efforts directed toward an understanding of the Earth as a global system. To better understand humankind's influence on the global environment, as well as to understand the natural global changes, federal agencies have intensified their research activities in Earth system science. In the process, it became clear that the existing FCCSET Committee on Oceans and Atmospheres was not sufficiently broad in scope to deal with the intensified activities. Accordingly, the Committee on Oceans and Atmospheres was terminated and the applicable subcommittees subsumed into CES, including the Federal Oceanographic Fleet Coordination Council and the Subcommittee on Atmospheric Research.

COMMITTEE ON LIFE SCIENCES

With the expansion of scientific and policy issues in the life sciences, it became clear that a broad coordinating committee was needed to facilitate communication between the federal agencies. In November 1987, the Committee on Life Sciences (CLS) of the Federal Coordinating Council on Science, Engineering, and Technology was established to meet this need. This Committee will provide a central forum for overall interagency policy coordination and guidance and for the exchange of information regarding the federal programs, policies, and procedures relating to the life sciences, including human genome research, plant sciences, and risk assessment.

COMMITTEE ON MATERIALS

In response to new challenges and opportunities in the field of materials, the FCCSET Committee on Materials (COMAT) was restructured at the first biannual meeting for 1987. The changing emphasis by government agencies involved in materials research was the foundation for the following changes in COMAT:

(1) Superconducting Materials -- A new subcommittee was established to coordinate superconductor materials interagency coordination and cooperation in materials research by representatives of those

federal agencies working in the area of superconductivity. The charter provides that the results of the subcommittee's work be disseminated at regular COMAT meetings and then reported to the Science Adviser as appropriate.

(2) Rapid Solidification Technology -- Incorporated into the Interagency Materials Group to streamline efforts in this area of materials.

(3) Sensors for Processing -- Subcommittee retitled as "Automation of Materials Processing" to reflect the broader scope of subcommittee activities.

Within the context of the role of materials in U.S. competitiveness, an initiative by COMAT is to catalog and assess the available resources for materials science and engineering. The effort will be targeted toward available information regarding research conducted by other nations.

The Composites Subcommittee of COMAT called a meeting of representatives of government agencies and other organizations concerned with advanced composites. The meeting was in response to a letter from Mr. Joesph O'Grady, President of the American Society for Testing and Materials, in which he called attention to the need for a government-wide policy to deal with problems in the classification of composite materials, the development of standards, and the unification of test methods in this rapidly growing advanced materials area. The meeting brought together many groups dealing with this complex set of problems and initiated new interactions and discussions, which continue.

COMAT continues to be one of the longest standing committees of FCCSET. In 1976, COMAT formalized and consolidated under the FCCSET mechanism the several related activities that had existed since 1959. The Administration reaffirmed COMAT with the National Materials and Minerals Program Plan of 1982. Responsibilities assigned to OSTP by the materials acts of 1980 and 1984 (P.L. 96-479 and P.L. 98-373) are handled by COMAT.

MODEL POLICY FOR THE PROTECTION OF HUMAN SUBJECTS

In its first biennial report published in December 1983, the President's Commission for the Study of Ethical Problems in Medicine in Biomedical and Behavioral Research made several recommendations to

improve the uniformity of federal rules and policies pertaining to the protection of human subjects. As a direct outgrowth of the Commission's report, OSTP chartered a FCCSET Committee for the Protection of Human Subjects. The committee drafted a policy to serve as a model for all federal departments and agencies that conduct, support, or regulate human subjects research, which should be ready for publication in 1988.

RADIATION RESEARCH AND POLICY COORDINATION

The Committee on Interagency Radiation Research and Policy Coordination (CIRRPC) has completed its third full year of activities. CIRRPC is charged to co-ordinate radiation matters between agencies, evaluate research on radiation, and provide advice on the formulation of radiation policy.

During its third year CIRRPC issued two major reports: the first, the SI Metric Radiation Units Report, discusses the use of the International System of Units (SI) for radiological quantities. The recommendation of the report was that it be U.S. policy to use dual radiation units (SI unit of 0.01 sievert Sv = 1 rem) in federal activities.

The CIRRPC-sponsored report of the National Council on Radiation Protection (NCRP) Scientific Committee #48 entitled "Exposure of the Population in the United States to Ionizing Radiation" summarizes assessments of the major natural and man-made sources of exposure by identifying natural radioactivity as the source of more than 80 percent of radiation exposure in the U.S.

COMPUTER RESEARCH AND APPLICATIONS

Under the FCCSET Committee on Computer Research and Applications, three interagency subcommittees were set up by OSTP in May of 1987. The subcommittee on Science and Engineering Computing examined the potential for developing new supercomputer applications (particularly through massively parallel systems). This FCCSET subcommittee has continued to survey the U.S. super-computer industry and has noted again this year the increased capability of the Japanese to produce state-of-the-art memory chips, the use of dumping techniques to capture world markets (thereby removing U.S. competition), and finally the withholding of the latest chips from U.S. supercomputer manufacturers.

The FCCSET subcommittee on Networking, Infrastructure, and Digital Communications initiated a study of a greatly expanded user network system which could allow interaction of several existing networks and greatly expand scientific collaboration in the U.S. It considered the use of higher speed network technology to create an omnibus system which would extend access of academic users to the federally supported high performance computing resources. This group was charged with the responsibility of carrying out the national network study required of OSTP by P.L. 99-383.

The third subcommittee on Computer Research and Development updated the analysis of the federal investment and its consequences for the commercial High Performance Computing market. It has also reviewed the need for future high performance computing systems.

In August 1987, OSTP tasked the FCCSET to produce an integrated set of recommendations, derived from the work of the three subcommittees. After review of these recommendations, OSTP provided a report to Congress entitled A Research and Development Strategy for High Performance Computing. OSTP has directed FCCSET to produce an action plan to determine how the federal government can best implement the report's recommendations in cooperation with industry and academia.

INTERDISCIPLINARY RESEARCH CENTERS

The concept of Engineering Research Centers (ERCs) to encompass multidisciplinary centers of science and technology excellence was first advanced by OSTP in November 1985. Eleven ERCs, six established in FY 1985 and five in 1986, were joined by two new centers in FY 1987. They are: the University of California at Los Angeles, Center for Hazardous Substance Control, and the University of Colorado, Center for Optoelectronic Computing Systems.

Plans are being made to evaluate ERCs after completion of three years' work.

INTERNATIONAL COMPETITIVENESS

Overview: OSTP has actively participated in the formulation of the Administration's science and technology initiatives affecting the nation's long-term global competitiveness. These initiatives were defined in the President's State of the Union Address, January

1987, with more specific aspects covered in the Presidential Executive Order 12591, April 10, 1987. The Executive Order showed continuing solid support for the Administration-backed Public Law 99-502, the Technology Transfer Act of 1986.

"THE QUEST FOR EXCELLENCE" -- THE PRESIDENT'S STATE OF THE UNION ADDRESS, JANUARY 1987

Federal government responsibility for promoting the development of science and technology is fundamental to U.S. competitiveness. Our policies should serve three broad objectives:

(1) generating new knowledge in the sciences and advanced technologies;

(2) swiftly transferring technologies to the market place; and

(3) expanding the nation's talent base in science and technology fields.

OSTP has a major role in each of these three objectives. This Administration will establish a number of new government-private "science and technology centers" based at U.S. universities. These centers will focus on fundamental science that has the potential to contribute to our nation's economic competitiveness, including areas such as robotics for automated manufacturing and microelectronics, new materials processing, biotechnology, plant science, and superconductivity.

"People-to-People" exchange programs will be initiated in which scientists and engineers from federal laboratories and the private sector will be encouraged to make their expertise available to each other through temporary assignment exchanges.

EXECUTIVE ORDER 12591 -- FACILITATING ACCESS TO SCIENCE AND TECHNOLOGY

A. TRANSFER OF FEDERALLY FUNDED TECHNOLOGY

The head of each Executive department and agency, to the extent permitted by law, shall encourage and facilitate collaboration among federal laboratories, state and local governments, universities, and the

private sector, particularly small business, in order to assist in the transfer of technology to the marketplace.

Heads of all agencies are asked to delegate authority to their government-owned, government-operated federal laboratories:

(1) to enter into cooperative research and development agreements with other government laboratories, state and local governments, universities and the private sector;

(2) to license, assign, or waive rights to intellectual properties developed by the laboratory under such cooperative research and development agreements.

Agency heads are also ordered to:

(1) promote commercialization of patentable results of federally funded research by granting to all contractors, regardless of size, the title to patents made in whole or in part with federal funds, in exchange for royalty-free use by or on behalf of government;

(2) implement, as expeditiously as practicable, royalty-sharing programs with inventors who were employees of the agency at the time their inventions were made, and cash award programs; and

(3) cooperate, under policy guidance provided by the Office of Federal Procurement Policy, with heads of other affected departments and agencies, in the development of a uniform policy permitting federal contractors to retain rights to software, engineering drawings, and other technical data generated by federal grants and contracts, in exchange for royalty-free use by or on behalf of the government.

B. TECHNOLOGY SHARE PROGRAM

As part of Executive Order 12591, the heads of Agriculture, Commerce, Energy, and Health and Human Services and the National Aeronautics and Space Administration were instructed to select one or more of the federal laboratories to participate in the Technology Share Program. Each federal laboratory so selected is to:

(1) identify areas of research and technology of potential importance to long-term national economic competitiveness and in which the laboratory possesses special competence and/or unique facilities;

(2) establish a mechanism through which the laboratory performs research in areas so identified as a participant of a consortium composed of United States industries and universities. All consortia established shall consist of companies that conduct the majority of their business in the United States;

(3) participate in any consortium through the use of laboratory personnel and facilities. However, each laboratory may also provide financial support generally not to exceed 25 percent of the total budget for the activities of the consortium.

C. INTERNATIONAL SCIENCE AND TECHNOLOGY

To ensure that the United States benefits from and fully exploits scientific research and technology developed abroad,

(a) The head of each Executive department and agency, when negotiating or entering into cooperative research and development agreements and licensing arrangements with foreign persons or industrial organizations (where these entities are directly or indirectly controlled by a foreign company or government), shall, in consultation with the United States Trade Representative, give appropriate consideration:

(1) to whether such foreign companies or governments permit and encourage United States agencies, organizations, or persons to enter into cooperative research and development agreements and licensing arrangements on a comparable basis;

(2) to whether those foreign governments have policies to protect United States intellectual property rights; and

(3) where cooperative research will involve data, technologies, or products subject to national security export controls under the law of the United States, to whether those foreign governments have

adopted adequate measures to prevent the transfer of strategic technology to destinations prohibited under such national security export controls, either through participation in the Coordinating Committee for Multilateral Export Controls (COCOM) or through other international agreements to which the United States and such foreign governments are signatories.

(b) The Secretary of State shall develop a recruitment policy that encourages scientists and engineers from other federal agencies, academic institutions, and industry to apply for assignments in embassies of the United States; and

(c) The Secretaries of State and Commerce and the Director of the National Science Foundation shall develop a central mechanism for the prompt and efficient dissemination of science and technology information developed abroad to users in federal laboratories, academic institutions, and the private sector on a fee-for-service basis.

D. TECHNOLOGY TRANSFER FROM THE DEPARTMENT OF DEFENSE

Within 6 months of the date of Executive Order 12591, April 10, 1987, the Secretary of Defense shall identify a list of funded technologies that would be potentially useful to United States industries and universities. The Secretary shall then accelerate efforts to make these technologies more readily available to United States industries and universities.

E. BASIC SCIENCE AND TECHNOLOGY CENTERS

The head of each executive department and agency shall examine the potential for including the establishment of university research centers in engineering, science, or technology in the strategy and planning for any future research and development programs.

Such university centers shall be jointly funded by the federal government, the private sector, and, where appropriate, the states and shall focus on areas of fundamental research and technology that are both scientifically promising and have the potential to contribute to the nation's long-term economic competitiveness.

F. REPORTING REQUIREMENTS

Within 1 year from the date of the Order, April 10, 1987, the Director of the Office of Science and Technology Policy shall convene an interagency task force comprised of the heads of representative agencies and the directors of representative federal laboratories, or their designees, in order to identify and disseminate creative approaches to technology transfer from federal laboratories. The task force will report to the President on the progress of and problems with technology transfer from federal laboratories.

Specifically, the report shall include:

(1) a listing of current technology transfer programs and an assessment of the effectiveness of these programs;

(2) identification of new or creative approaches to technology transfer that might serve as model programs for federal laboratories;

(3) criteria to assess the effectiveness and impact on the nation's economy of planned or future technology transfer efforts; and

(4) a compilation and assessment of the Technology Share Program established in Section 2 and, where appropriate, related cooperative research and development venture programs.

INTERNATIONAL SCIENCE

OSTP continues to coordinate and implement the President's policy and priority programs in international science and technology cooperation to advance broad national goals. In selected areas, OSTP has developed new or revised Administration policies and initiatives in the international arena of science and technology.

Recent years have seen growing recognition of the significance of the international dimensions of science and technology for economics and research, for competitiveness, for U.S. foreign policy goals, and for national security interests. One factor is the number and complexity of international S&T issues, research activities, and programs that cut across federal departments and agencies.

In December 1985, the President's Science Adviser, Dr. George A. Keyworth, established of the Committee on International Science, Engineering, and Technology (CISET) under FCCSET. CISET's purpose is to bring high-level scientific and technical expertise and responsibility in the government to bear on critical international issues and to integrate international S&T activities into the framework of broad domestic policies, consistent with the Administration's priorities and budgetary resources. CISET, chaired by OSTP, began its work in early 1986 to ensure that senior policymakers oversee key international S&T issues and activities. CISET has established four working groups, on (1) International Science, Engineering, and Technology Education, Infrastructure, and Facilities; (2) Strategic Science, Engineering, and Technology Cooperation, and Technology Transfer; (3) Science, Engineering, Technology, and International Competitiveness; and (4) Bilateral and Multinational Activities. Each of these working groups is developing specific policy recommendations to advance national goals, enhance the effectiveness of U.S. activities, and protect our long-term national interests. For example, a task force reviewed and made policy recommendations on the U.S.-Japan S&T relationship which were referred to, and ultimately approved by, the Economic Policy Council.

Several provisions of the President's Executive Order on Facilitating Access to Science and Technology address the international dimension: strengthening U.S. S&T representation abroad; improving U.S. access to S&T information generated in foreign countries; provision for protection of intellectual property rights in bilateral S&T cooperation agreements. OSTP is overseeing interagency implementation of the President's new directives pertaining to international science and technology agreements, specifically those key provisions of the Executive Order that require R&D agencies to take into consideration in negotiating agreements and Memoranda of Understanding (MOU) whether the foreign country provides for equitable access, adequately protects intellectual property, and controls the transfer of strategic technologies.

During FY 87 OSTP devoted considerable attention to articulating an overall policy framework for bilateral S&T cooperation and overseeing the application of those principles in specific agreements with individual countries. The key themes of equity and reciprocity of access, balance of contributions and benefits, and

protection of intellectual property rights have been underscored by the Science Adviser and OSTP staff in international fora, bilateral negotiations, and private meetings with S&T officials from foreign countries. OSTP will ensure that these issues are adequately addressed in each bilateral S&T agreement that is signed or renewed. To carry out the provision of the Executive Order regarding intellectual property rights, OSTP is leading an interagency effort to develop a comprehensive annex on intellectual property protection to serve as a general model for use in bilateral S&T agreements. Such a model will see immediate use in discussions underway or anticipated within the next few months with Japan, China, Korea, India, and Brazil, to name just a few.

As one of the highest priority international science programs of the government, U.S.-China science and technology agreements and cooperative activities continue to be monitored by OSTP. The fifth meeting of the U.S.-PRC Joint Commission on Science and Technology took place in Beijing in June 1987. The highly successful meeting was co-chaired by the Science Adviser, Dr. William R. Graham, and his PRC counterpart, Dr. Song Jian. The two sides agreed to establish a working group to study the issue of intellectual property protection and to begin bilateral negotiations to conclude a comprehensive annex on intellectual property rights for the U.S.-China umbrella S&T agreement. This is a key agenda item for an Executive Secretaries meeting scheduled for Washington in spring 1988. Several new protocols have been signed and existing protocols extended during the course of the year, bringing to 29 the number of active protocols now being carried out under the umbrella S&T agreement initiated in 1978. Discussions are currently being held on additional agreements in the areas of space science and technology and health.

The Presidential Science and Technology Initiative (STI) established by President Reagan and the late Prime Minister Indira Gandhi in July 1982, was designed to elevate and sharply focus bilateral science and technology cooperation to improve the overall relationship between the United States and India.

An objective of the STI has been to invest shared resources in those selected research programs that would utilize the complementary expertise and accomplishments of both scientific communities. This partnership-investment approach to scientific cooperation was initiated in 1983 with joint

activities established in the priority areas of health, agriculture, and monsoon prediction. In spring 1985, the fourth research area of photo-voltaics was redirected to encompass solid state science and engineering. OSTP continues to provide policy guidance for the STI, and NSF, as Executive Agent, coordinates program activities on a government-wide basis.

On the occasion of Prime Minister Rajiv Gandhi's visit to Washington in June 1985, the two governments agreed to renew the STI for an additional three years. The STI continues to live up to its reputation as a high caliber program in all areas except the monsoon program, which has been hampered to date by lack of access to Indian data. Recent communications from India indicate that the requisite monsoon data can be expected to be provided soon, allowing this important project area to move forward. As the second phase of STI approaches its scheduled conclusion, OSTP is assessing the accomplishments and lessons to be applied in the next phase of the STI program.

During Prime Minister Rajiv Gandhi's visit to Washington on October 20, 1987, he and President Reagan announced the extension of the STI for an additional three years. The President's Science Adviser may go to India in spring 1988 to sign the renewal. The next phase of the STI may include new project areas, reflecting advances in science since the initiative began in 1982, as well as continuation of current areas.

In a related effort OSTP is overseeing negotiation of adequate provisions for protection of intellectual property in our extensive bilateral S&T program with India.

OSTP takes the lead in formulating U.S. objectives and positions on S&T issues within the context of the annual Economic Summit meetings.

The OECD Committee on Science and Technology Policy (CSTP) convened a meeting of the S&T Ministers from member states in October 1987. The Science Adviser led the U.S. delegation and chaired the ministerial level discussion on "Science, Technology, and International Economic Relations." These ministerial level meetings, held at approximately five-year intervals, present a useful opportunity to coordinate policies and focus attention on priority issues for the leading industrialized countries of the free world. At this meeting, the U.S. presented a draft policy framework for international cooperation in Science and

Technology. Follow up meetings to further discuss and develop this proposed set of agreed principles will be held in early 1988. Adoption by the OECD of such a framework would represent an important achievement in assuring the vitality of international cooperation and facilitating future collaborative agreements.

U.S.-Brazil Presidential S&T Initiative. In September 1986, Presidents Reagan and Sarney agreed to establish a joint panel of eminent scientists, engineers, and industrial experts to determine priorities for cooperation in areas of mutual strength and benefit. On the U.S. side, the appointments were made by the Science Adviser. The joint U.S.-Brazil panel met twice. The panel recommended six priority areas for cooperative research: biomedical and agricultural research; oceanography and meteorology; engineering and materials sciences; alternative energy sources; basic sciences; and ecology and environment. The panel's recommendations, sent to the Science Advisers of the two countries, will constitute an initial agenda to implement the 1984 U.S.-Brazil S&T Agreement. The Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs will be responsible for implementing these activities under the auspices of the U.S.-Brazil S&T Commission, which will hold its first meeting in FY 88. The National Science Foundation will provide administrative coordination for U.S. agency participation in this initiative. The U.S. Congress has appropriated $2 million in the FY 87 supplemental for the State Department to be used as seed money for U.S.-Brazil scientific cooperation. These funds will be available through FY 88.

The U.S.-Japan S&T Relationship. The deadline for renewal of the 1979 presidential S&T agreement with Japan, scheduled for May 1987, was extended to March 31, 1988 to allow for further negotiations on a new policy framework for bilaterial cooperation. The Science Adviser heads the U.S. delegation for joint commission meetings called for in the agreement. Under the auspices of the FCCSET Committee on International Science, Engineering, and Technology (CISET), OSTP led an interagency review of the subject agreement and developed policy recommendations to refocus the substance of collaboration and to better address the equity and balance of science and technology interactions between the United States and Japan. The Science Adviser led a delegation to Japan in February 1987 and held high-level policy discussions with

Japanese officials relating to the agreement's renewal. In July 1987 the Economic Policy Council approved a set of guiding principles and negotiation instructions for the U.S. team negotiating the terms for the next phase of this agreement. Bilateral negotiations were held in the fall of 1987, continuing into early 1988. U.S.-Japan S&T cooperation has major implications for both nations' global competitiveness and a new relationship, based on equity and reciprocal access, is of paramount importance as we face the technological challenges of the twenty-first century.

U.S./Soviet Bloc S&T Relationship. During 1985, OSTP monitored U.S.-Soviet S&T cooperation under the seven existing bilateral agreements and conducted an internal evaluation of policy for S&T interactions with the Soviets as well as the effectiveness of current U.S. Government coordination mechanisms. OSTP participated in the S&T issues associated with the President's meeting in Geneva with Secretary Gorbachev, including the joint decision to increase multilateral cooperation in fusion research. In this regard, OSTP also played a major role in the preparation and negotiations of a Civilian Space Cooperation Agreement with the Soviet Union, which was negotiated in October 1986 and signed in the spring of 1987. The changing environment of U.S.-Soviet relations and the President's agreement in Geneva to expand bilateral contacts in many areas, including science and technology, calls for an integrated policy to underpin our technical agency programs to achieve national goals and protect security interests. Toward this end, the President's Science Adviser has established a sub-Cabinet level working group on S&T policy and priorities for cooperation with the USSR and Eastern Europe, under the FCCSET Committee on International Science (CISET).

During 1987 OSTP continued to play an important role in U.S.-Soviet-bloc S&T initiatives. Most notably, OSTP participated in negotiations resulting in a U.S.-Poland S&T agreement. OSTP also chaired interagency preparation for a possible U.S.-Soviet Basic Science Agreement and led "exploratory" discussions in Moscow toward that end. OSTP continues to chair the interagency group that is reviewing the results of those discussions for possible next steps. OSTP continues its involvement in the U.S.-Soviet space agreement as a member of an interagency group overseeing its implementation. OSTP also played a significant role in the development of U.S. government positions for the Reagan-Gorbachev Washington Summit.

OSTP participates in the International Political Committee established to monitor the UNESCO reform process and develop U.S. alternatives to UNESCO activities in education, cultural, and scientific arenas. Such alternative activities will be designed to directly benefit U.S. interests and also to provide bilateral assistance to UNESCO-type programs that will benefit developing nations.

In compliance with Title V of the Foreign Relations Authorization Act of 1979, OSTP transmitted to Congress in early 1987 the President's 1987 Report on Science, Technology, and American Diplomacy, which reports on U.S. Government policies and activities in international science and technology as an adjunct to U.S. foreign policy objectives. The President's transmittal letter to the Congress serves as a key statement of the Administration's policies and thrusts in international science. The next report, to be delivered in early 1988, has a streamlined format.

OSTP guided State/OES, in consultation with the staffs of the interested congressional committees, to develop this revised format, which simplifies interagency production of this annual report, and should also make it easier to use as a reference tool.

OSTP has continuing responsibility to provide staff support to senior White House officials to plan and help coordinate state visits that may affect science and technology related activities or that may affect the nation's science and technology cooperation. OSTP works closely with the NSC, State, and the appropriate USG technical agencies, as well as the nation's scientific establishment, to assure the success of such visits in terms of U.S. foreign policy goals and other national interests. OSTP's coordinating role includes active participation in the initial planning stages, events associated with the visit itself, and follow-up actions to implement any Presidential policy decisions or initiatives resulting from the visit. Recent state visits for which OSTP had such responsibilities include those of Japan's Prime Minister Nakasone in April 1987, and of his successor, Prime Minister Takeshita, on January 13-14, 1988.

TECHNOLOGY TRANSFER POLICY

OSTP helped to obtain interagency concurrence on a statement of Administration policy on the transfer of scientific and technical information that was signed by

the President early last year. The national policy statement establishes security classification as the mechanism for control of scientific and technological information resulting from basic research at universities and laboratories under contract to the U.S. government. OSTP chaired an interagency working group on scientific communication, as a subcommittee to the Interagency Committee on Technical Data Controls, which is revising Section 379 of the Export Administration Act. As a result, this section is now consistent with the policy statement on the transfer of scientific and technical information. The constraints on the export of scientific and technical information either publicly available, or derived from basic research, are unambiguously spelled out for the first time. OSTP has been closely monitoring the implementation of the Presidential policy statement.

OSTP has assisted the National Security Council in redefining the President's policy on U.S. export controls. Our principal activities involved U.S. export control policy toward the People's Republic of China, West-West trade, COCOM, and the review of technology transfer requirements and policies formulated by government departments. As an example, OSTP played a central role in coordinating government-wide activities to finalize technical guidelines for U.S. industry to use in the potential sale of a direct broadcast satellite to the People's Republic of China.

OSTP continues to serve on several Interagency Groups involved in technology transfer policy and technical issues. The newly established CISET working group on international technological cooperation and technology transfer provides another mechanism for examining national technology transfer policy issues.

FUSION ENERGY

Substantial improvements in the technology to produce a controlled thermonuclear fusion system have continued to emerge. Plasma temperatures consistent with an operating reactor have been reached and an injection system for the deuterium/tritium interaction has been constructed. The design for a Compact Ignition Tokomak (CIT) anticipated to reach full ignition has been completed. The device will allow technologists to study the design and control characteristics that could eventually lead to a design for an experimental test reactor. OSTP participates in a program to define

what is expected to result in an efficient fusion-based power production process. This program will take into account the issues of technical feasibility in light of the Geneva summit agreements aimed at achieving a realistic timetable.

THE SSC

The proposal for the U.S. to retain leadership in high energy particle physics through the construction of a Superconducting Super Collider (SSC) has drawn considerable interest from the scientific community. OSTP supported an objective assessment of the SSC through a process that allowed technical considerations to be carried out apart from other pressures. In January of 1987 the President announced his support for the construction of the SSC.

SUPERCONDUCTIVITY

One of the most significant scientific breakthroughs of recent decades, the achievement of high temperature superconductivity (HTS), occurred in 1986 and 1987. As a result of the outstanding discoveries made by scientists in the U.S. and elsewhere, OSTP initiated several activities aimed at broadening and strengthening the role of the federal government in HTS, and stimulating U.S. industry to take advantage of our national preeminence in basic research through the commercial applications of superconductivity.

Much of the excitement about HTS came after Dr. Paul Chu's announcement in February 1987 of a new class of ceramic materials that would superconduct at 93K. The new materials, metal oxide ceramics known as perovskites, were first discovered to superconduct by Alex Muller and Johann Bednorz at the IBM Research Laboratory in Zurich, Switzerland. The temperature they had achieved was 35K and their findings were published in October 1986. The economic significance, however, became evident with Chu's breakthrough in that inexpensive liquid nitrogen, which exists at 77K at one atmosphere pressure, could be used as a cooling medium. Previous superconductors required the more costly liquid helium.

Recognizing the important scientific and technological significance and enormous economic prospects for superconductivity, the Science Adviser initiated, in early May, plans for a "Federal Conference on Commercial Applications of Superconductivity." The conference was hosted by OSTP and the Department of Energy and was co-sponsored by the Departments of Commerce and Defense, the National Science Foundation, and the National Research Council of the National Academies of Science and Engineering. The conference was designed to provide a forum for representatives of industry, academia, and government to participate in exploring the opportunities in superconductivity. Although the science of HTS was mentioned, the emphasis of the conference was on commercial applications.

Interest in the two-day event on July 28 and 29 peaked with President Reagan's keynote address in which he was accompanied by Secretary of Defense Caspar Weinberger, Secretary of State George Shultz, Secretary of Energy John Herrington, and Director of the National Science Foundation Erich Bloch. The luncheon speaker was Ambassador Clayton Yeutter, U.S. Trade Representative.

Distinguished scientists, business leaders, and university officials gave outstanding speeches throughout the two days, and cited examples of existing and future commercial applications. The latter half of the second day was punctuated with five workshops designed to provide a mechanism to encourage interactive discussion and private sector feedback, particularly in the areas of industry, government, and university cooperation.

A second major accomplishment for OSTP in the area of superconductivity was the advice and recommendations provided to the Economic Policy Council for the President's Superconductivity Initiative. The initiative includes eleven major areas in which the Administration will "promote further work in the field of superconductivity and ensure U.S. readiness in commercializing technologies resulting from recent and anticipated scientific advances." The President's Superconductivity Initiative was announced during his keynote address at the Federal Conference on Commercial Applications of Superconductivity.

The President's Superconductivity Initiative incorporates a number of new thrusts designed (1) to promote better cooperation among industry, academia, and government in the basic research of enabling

technologies of superconductivity, (2) to enable the U.S. private sector to convert more products, and (3) to protect intellectual property rights of scientists, engineers, and businessmen working in superconductivity.

The initiative includes a legislative package on process patents, changes to antitrust legislation, and recommended revisions to the Freedom of Information Act. An Advisory Group on Superconductivity under the auspices of the White House Science Council provides advice to the Administration. Superconductivity Research Centers and programs are established at DOE, NBS, NSF, DOD, and NASA.

U.S. COMPETITIVENESS IN THE SEMICONDUCTOR INDUSTRY

The U.S. semiconductor industry has steadily lost its once commanding lead in overall market share and manufacturing technology. The Japanese are also challenging U.S. leadership in design. Major Japanese companies have pulled ahead in dynamic random access memories, static random access memories, bipolar gate arrays, optoelectronics, gallium arsenide technology, and packaging technology. The U.S. has remained strong primarily in microprocessors and semi-custom and custom logic chip design, but Japan is making inroads in these areas also.

OSTP has become involved in various investigations related to the semiconductor industry. These investigations include the Committee for Foreign Investment in the United States (CFIUS), chaired by the Treasury Department. CFIUS looked into the proposed acquisition of Fairchild, an important U.S. semiconductor manufacturer, by a Japanese firm, Fujitsu. The Committee is represented by most of the major U.S. government agencies dealing with international trade and science and technology issues.

A second study initiated by the National Security Council was designed to look into the national security implications of a diminishing U.S. semiconductor industry. OSTP directed the NSF to lead an interagency task force to examine the state of the U.S. semiconductor industry, determine the effects of loss of competitiveness in this industry on downstream and upstream industries, the national security impact of the loss, and any recommendations for improving the situation. A report of the study's findings is planned for 1988.

Finally, because of the importance of the semiconductor industry, the Science Adviser asked the White House Science Council (WHSC) to create a panel to review possible options for action available to the federal government and industry. The findings of the panel were provided to the Economic Policy Council Working Group on Semiconductors and was critical to that group's recommendations to the full EPC. The panel's report was published in September 1987.

AGRICULTURAL RESEARCH -- PLANT SCIENCE INITIATIVE

OSTP identified the need for plant science centers based on its 1985-1986 review of the competitive funding for basic research in biological sciences in U.S. colleges and universities. The results of that survey indicated that less than 5 percent, or approximately $110 million of federal obligations for competitive awards in basic research at colleges and universities, was earmarked for plant science research. The future applications of plant biotechnology to agriculture will depend upon today's investment in basic research. Accordingly, under the leadership of OSTP, three agencies (NSF, USDA, and DOE) jointly proposed a new competitive awards program in plant science for multidisciplinary basic research and training centers at academic institutions. Funds were requested and approved in the FY 88 budgets of each of these agencies. The program calls for a federal funding commitment for an initial five-year period to establish multidisciplinary centers at universities in high-priority areas of plant science. Funds for new facility construction are not included. The program emphasizes research, training, education, and the provision of funds for instrumentation and equipment. The centers would establish foci for industrial, other private sector, and local and state government participation. Significant industrial participation is strongly encouraged. Such partnerships would encourage cost sharing. It is expected that the centers would form, wherever possible, research and training relationships with existing facilities and expertise in laboratories such as those of the Agricultural Research Service and Forest Service Research, the National Laboratories, and universities. Industry participation is key to transfer of technology to aid in U.S. industrial competitiveness in biotechnology.

ATMOSPHERIC OZONE POLICY

The Domestic Policy Council has reviewed the U.S. policy positions on the international control of chlorofluorocarbons and other chemicals that may contribute to the projected depletion of stratospheric ozone. OSTP has supported the DPC in reviewing and assessing the scientific basis for ozone depletion projections and for the projected effects of any ozone depletion that may occur. OSTP has been an influential participant in the development of policy options for the President, and in providing guidance for the U.S. negotiators of the protocol.

DOMESTIC POLICY COUNCIL WORKING GROUP ON AGENT ORANGE

The Agent Orange Working Group (AOWG) is chaired by the Department of Health and Human Services and includes scientific, legal, and policy representatives from that Department. Also represented at the AOWG are other appropriate agencies and the Executive Office of the President. The major expenditures ($155M) in federally sponsored Agent Orange research over the past five years have been for ten major epidemiological studies and five health surveillance projects. These studies and projects have committed the Veterans Administration, the Department of Health and Human Services, and the Department of Defense to long-term studies involving more than 50,000 veterans of the Vietnam era.

DOMESTIC POLICY COUNCIL WORKING GROUP ON HEALTH POLICY AND ECONOMICS

OSTP is participating in the DPC Working Group on Health Policy that is developing policy options in such areas as catastrophic health care and AIDS. The working group has focused on the steps that the federal government is taking to combat the spread of HIV, the virus that causes AIDS, including principles to guide the federal government's educational efforts, and the means of estimating prevalence and rates of spread of the virus. Also considered were policy proposals for testing federal prisoners; adding HIV to the dangerous contagious diseases list pertaining to immigrants and aliens; reviewing expanded routine testing potential in the federal government, including the Veterans Administration; and encouraging states to increase routine testing in hospitals, sexually transmitted disease and drug abuse clinics, for marriage licenses, and in state and local prisons. OSTP has been most

involved in issues related to the spread of AIDS and technical content of educational materials. OSTP and HHS, at the direction of the President, are working together to take the lead in an integrated scientific modeling effort to evaluate data already obtained and to guide further data collection to reduce the uncertainties in estimates of prevalence and rates of spread.

COMMERCIAL SPACE ACTIVITIES

OSTP participates in the activities of the Interagency Commercial Space Working Group. This group was established by the National Space Strategy of 1984 under the Economic Policy Council (EPC) to develop and implement specific measures to foster the growth of private sector commercialization in space. The working group examined a range of policy concerns that affect commercial space activities (e.g., antitrust laws, tax laws, patent laws, and industry-government relationships) and forwarded to the Economic Policy Council in December 1985 a report that identified several areas appropriate for further consideration and action by the working group.

In June 1987, the working group began a task to extend the work presented in the December 1985 report. In particular, the group will interact with the emerging commercial space industry and the aerospace industry in order to identify factors that may be hampering the further growth of the industry. This task activity is continuing.

FORMULATION OF NATIONAL SPACE POLICY

By the start of FY 1987 it became apparent that the then current U.S. national space policy, as stated in NSDD-42, no longer satisfies the urgent need for top level guidance of the Nation's space program, in spite of the several attempts toward piecemeal updating. The basic driving forces for a comprehensive review were: (1) the recognized need for a nationwide effort to bring about low-cost, high-capacity, reliable, and flexible access to space; (2) the growth in potential military space applications; (3) the clearly apparent challenge in space by the Soviet Union; (4) the rise of technical and commercial competency of several allied nations. Several important programmatic issues also await top policy guidance; among these the objectives

and the cost and schedules of the manned Space Station; the role of the space shuttle in the Space Station logistics; the national investment in advanced heavy-lift capability; the conduct of the national aerospace plane program and the support for space scientific exploration, are the most urgent ones.

The OSTP participated with the National Security Council staff in establishing a rationale for the national space policy revision as well as in the definition of the Terms of Reference. Its representative serves as the Deputy Chairman of the Interagency Group responsible for this policy review. Resulting from this study was the Presidential mandate to study the financing alternatives of the space infrastructure to be provided in support of the nation's space program.

A national space policy was announced on February 11, 1988.

INTERAGENCY COORDINATING COMMITTEE ON SOLAR TERRESTRIAL RESEARCH

The policy-level Interagency Coordinating Committee on Solar Terrestrial Research (ICCSTR) as well as the Committee's Program Planning Group (PPG) met during 1987. The PPG has drafted a report on the health of solar physics in the United States. The ICCSTR has reviewed the document and has required a number of necessary extensions and revisions. The Committee has served as a forum for interagency coordination of solar-terrestrial research, including the international components.

NATIONAL COMMISSION ON SPACE (NCOS) REPORT

The National Commission on Space was created by Public Law 98-361 "to study existing and proposed U.S. space activities; to formulate an agenda for the U.S. civilian space program; to identify long-range goals, opportunities, and policy options for civilian space activity for the next twenty years." The Commission's report was completed in April 1986 and released to the public in May 1986. The OSTP conducted a review of the report with the participation of other agencies and has concluded that the recommendations to the President should be formulated as part of a comprehensive review of the U.S. national space policy (see previous

section). The essential substance of the OSTP recommendations on the NCOS report is as follows: (1) the long-range goals stated by the Commission are truly visionary and could be accepted as part of the longer-term U.S. goals in the 25- to 50-year perspective; (2) the report itself constitutes a sound description of the technical aspects of the several civilian space missions that could be undertaken; (3) the report assumes that the civil space program has essential priorities over other claims on the federal budget, and thus does not address the problem of operating in a budget-constrained environment; (4) the report does not fully reflect the dissenting voices within the scientific community that oppose large manned space missions in order to emphasize the unmanned scientific exploration of the accessible universe; and (5) OSTP recommends that, with the NCOS long-range goals in mind, the U.S. civil space program be focused, over the next five to ten years, on developing a solid technology base for the longer-term undertakings. The latter should include and emphasize the development of low-cost, high-capacity, and flexible access to space, serving the needs of both civilian and military space missions.

SPACE SCIENCE

The President's National Space Strategy Directive directs the agencies to maintain a vigorous and balanced program in the space sciences. In 1984, OSTP issued a report on funding trends in NASA's Office of Space Science and Applications, which identified large fluctuations in the budgets of individual space science disciplines as having a significant impact on discipline balance, continuity, and stability. The Challenger accident, and the attendant need to maintain several complete or nearly complete major payloads (e.g., Space Telescope and Galileo) in working order on the shelf until they can be launched, has strained the stability and continuity of the science disciplines as well as the NASA space science budget.

OSTP continues to work with OMB, NASA, and the science communities on these issues, in order to maintain a vigorous space science program. OSTP has worked closely with the scientific community and the NASA advisory committees to establish mechanisms which assure that inputs from the scientific communities to the process of cross-disciplinary ranking of scientific programs are effectively formulated and utilized by the agency.

SPACE STATION

As a result of an internal program cost review undertaken by NASA, the agency developed revised cost estimates for the Space Station which exceeded the original estimates. OSTP worked closely with OMB, NSC, and NASA to develop revised Space Station capabilities, schedules, and costs. An independent review of the Space Station Program was preformed by the National Research Council's Committee on Space Station. The review was performed on a schedule permitting incorporation of any revised program scope in the forthcoming budget.

CHEMICAL AND BIOLOGICAL WARFARE (CBW)

The proliferation of chemical weapons, apparent Soviet violations of the 1972 Biological Weapons Ban, in-progress negotiations on a chemical weapons ban, and the environmental issues of defensive biotechnology research have focused attention on the national security implications of biotechnology and other technical aspects of CBW. OSTP identified the need for national attention to be focused on some of these issues and initiated an in-house review of the threat and current U.S. programs. OSTP is also a participant in the interagency group addressing chemical warfare arms control policy. Continued attention to these important national issues will be required as the implications of advances in biotechnology become more widely understood. OSTP is trying to better understand these issues.

COMMISSION ON LONG-RANGE INTEGRATED NATIONAL SECURITY STRATEGY

In early spring 1987 a Commission was established to assess the adequacy of our currently pursued national security aimed at possible improvements. The Commission is co-sponsored by the President's National Security Adviser and the Secretary of Defense. The members of the Commission include policy and military experts of high stature, who are in position to examine our national security strategies without biases based on the views of former or current Administrations. On the other hand, the charge to the Commission specifically includes the consideration of political, economic, socio/ideological factors, as well as those more closely associated with purely military projections. The purpose of this effort is to offer a clear picture

to Congress and the next Administration of the strengths and weaknesses of our national strategic posture and of the choices available for the near future.

In addition to participating in the top-level overview of the Commission's efforts through its Director, OSTP representatives also serve on the Working Groups on Future Security Environment, on Offense and Defense Interactions, and on Technology Projections; OSTP contributes, as required and appropriate, comments and position papers to these groups. OSTP is expected to be part of the final review team for the Integrated Report, to be iterated several times before its scheduled publication in summer 1988.

DEFENSE BASIC RESEARCH

OSTP has been an active proponent of maintaining sustained growth in defense funding of basic research. Through a series of technology based briefings by the services, the Defense Advanced Research Projects Agency, and OSD, OSTP has maintained familiarity with the goals, the objectives, and the management of the various defense programs that sponsor laboratory and university research. The Director has interceded with the Secretary of Defense on behalf of the basic research defense community to protect these programs from funding cuts. In particular, OSTP continues to monitor the funding and management of the University Research Initiative.

EMERGENCY PREPAREDNESS PLANNING

By Executive Order, the Director, OSTP, is assigned the responsibility for managing the nation's telecommunications resources during wartime and non-wartime national crisis and emergency situations. Preparation for executing this responsibility entails a constant level of involvement in planning, training, and supervision. By focusing attention on the critical tasks associated with this responsibility, OSTP has maintained a high state of readiness to execute the essential functions of emergency telecommunications management in wartime and non-wartime situations. Concurrently the office has addressed key planning and programming issues related to the government's preparedness to respond to a spectrum of national emergencies.

FOLLOW ON FORCES ATTACK (FOFA)

As a leading Department of Defense initiative to leverage advanced technology for enhancement of the conventional defense of NATO Europe, the concept of deep attack, or FOFA, utilizes a suite of sensors, command and control systems, fusion systems, and attack means including smart munitions to attack targets deep behind enemy lines. OSTP has maintained active interest and involvement in this thrust of technology development. An OSTP initiative was the creation of the Interagency Technology Assessment Group (ITAG) to look at FOFA technologies and analysis. The ITAG is an interagency body of intelligence, research and development, doctrine, and analysis experts organized for the purpose of evaluating studies of the advantages offered by new technologies on the European battlefield from the perspectives of the threat, technology risk, and modeling accuracy. During FY 87 the ITAG completed a review of a study done by the Army which examined the relative leverage offered by the FOFA suite of systems.

MILITARY TACTICAL EXPLOITATION OF NATIONAL TECHNICAL COLLECTION MEANS

OSTP has maintained close interest and involvement in the planning, technology development, and analysis that addresses the military's ability to receive and exploit intelligence collected by national technical means. Issues involving requirements generation, hardware development, downlink and processing centers, and doctrinal approaches to utilizing the intelligence have received attention throughout FY 87. Emphasis in this important area will continue in FY 88 with the goal of answering several key issues upon which the future of this program depends.

NATIONAL SECURITY STUDIES

The OSTP stimulates a broad range of queries associated with national security, participates in the efforts aimed at resolving critical scientific and technical issues, and provides for the drafting of position and issue papers for use by the National Security Council, the OMB, and participating agencies.

A major concern of the nation in FY 87 is the course of the President's Strategic Defense Initiative. OSTP supported the NSC staff by evaluating a Department of Defense report on the impact of ABM Treaty interpretation alternatives on the confidence levels associated with the operational performance of the SDI-derived systems, as well as on the costs and schedules of the several possible deployment options. The OSTP continues its strategic defense and arms control-related activities by means of a panel of the White House Science Council, organized in June of 1987 to assess the science and technology related issues affecting the program.

The strategic offensive systems are under close scrutiny by both the Congress and the Administration. Specifically, the two ICBM basing modes currently under development (the Garrison Rail Mobile Basing for the MX and Hardened and Mobile basing for the Small ICBM) have command and control related issues that need to be examined in more detail. The OSTP has provided its observations both to the NSC staff and to the Air Force.

OSTP also closely follows the modernization of strategic bombers, including the production of the B-1B, as well as the development of other (classified) aircraft programs.

An OSTP-initiated study is aimed at the understanding of military command structure that should integrate the CINCs possibly involved in large-scale use of both offensive and defensive forces.

NUCLEAR WINTER

The Director, OSTP, is the Chairman of the Coordinating Committee on the Interagency Research Program (CCIRP) overseeing federally funded research on the "nuclear winter" hypothesis. These research efforts are funded by the Departments of Defense and Energy, the National Science Foundation, and the National Oceanic and Atmospheric Administration, and are conducted by national laboratories, universities, and private corporations across the nation.

The research community's consensus is that the "nuclear winter" first postulated (and publicized) is far too extreme and was only an initial estimate. Further research is being done to address the remaining uncertainties in the models and physical processes.

PRIORITIES FOR CONVENTIONAL FORCES TECHNOLOGY DEVELOPMENT

OSTP actively participated in the formulation of a National Security Study Directive which directed the Department of Defense to study the linkage between national security strategy and conventional forces modernization priorities. The final objective of the study directive, signed by the President and passed to the Department of Defense in FY 87, is a National Security Decision Directive outlining national priorities for technology development and procurement of major conventional capabilities. OSTP has maintained an active role in this project.

S&T COMPETITIVENESS IN THE NATIONAL SECURITY ARENA

OSTP completed an analysis of scientific and technological competition between the Soviet Union and the U.S. in the national security arena. This effort was based on the premise that maintaining a strong United States science base and the effective focusing of this base toward key national security issues would have the potential to maintain and to enhance the U.S. defense posture vs. that of the Soviet Union. This study focused on defining the National Defense problem and on assessing the United States position relative to the Soviet Union in terms of national doctrine, defense budgets, military and political intent, survivability, weapons systems development and capability, and fielded weapons systems. It also addressed the science base from which each country operates and the relation of this base to the national defense posture of the Soviet Union and the United States respectively.

STRATEGIC SURFACE TRANSPORT

The adequacy of merchant marine and naval cargo ship capacity to meet current and projected national security strategic mobility requirements is an area of national concern. The potential of advanced technology to address this problem has not received significant attention. One such application of advanced technology worthy of consideration is the Surface Effects Fast Sealift Ship (SFS). Throughout FY 1987, OSTP has maintained an active interest in this project and has promoted exposure of various study groups addressing sealift shortfalls and future strategic mobility requirements.

TECHNOLOGY FOR COUNTERTERRORISM

The government's program for applying advanced technology to counter the threat of terrorism is coordinated by a senior interagency group on counterterrorism. This group selects projects for funding on the basis of relative potential benefits and technology risk assessment of competing candidates. In FY 87 OSTP organized and implemented a senior technology oversight panel to review candidate projects with the purpose of insuring that projects are selected with full understanding of the technological issues and risks involved in each project. Through the mechanism of this panel, OSTP has maintained active interest and involvement in this vital national security concern.

TELECOMMUNICATIONS POLICY

Because of the Director's presidentially assigned operational responsibilities in the area of emergency telecommunications management, OSTP has remained an active player in emergency telecommunications planning and in the telecommunications policy formulation process. Through membership on steering groups and advisory boards, interaction with the National Security Council and OMB, and a working relationship with the National Communications Systems and its members, OSTP has been a reviewer and coordinator of proposed telecommunications standards and policies. As chairman of the Joint Telecommunications Resources Board, the Director, OSTP, approves the telecommunications planning guidance issued to all departments and agencies controlling telecommunications resources. An updated version of this plan was published in FY 87.

FREEDOM OF INFORMATION ACT

As part of the President's Competitiveness Initiative announced during the February 1987 State of the Union Address and the President's Superconductivity Initiative, OSTP provided assistance regarding proposed changes to the Freedom of Information Act (FOIA).

As FOIA is currently written, no provisions exist to prevent disclosure of public records with reference to scientific and technical information that:

(1) has commercial value, which upon release would harm U.S. economic competitiveness, or

(2) is unclassified, but represents technologically sensitive information that would not otherwise be protected from disclosure by the Export Administration Act or the Arms Export Control Act.

OSTP will continue to work with the agencies and the Congress in recommending changes to FOIA that provide relief from the two problems cited above.

MINORITY ISSUES IN S&T

OSTP and the White House Initiative on Historically Black Colleges and Universities (HBCU) jointly sponsored an effort to increase the number of minorities in science and engineering professions. An advisory committee composed of business, science, and black community leaders organized a September 1986 conference that examined the characteristics of HBCU alliances with frontier sciences. By recognizing the strengths of joint programs between minority schools and national laboratories, major universities, or corporate research programs we are encouraging emulation by federal agency programs, foundations, and the private sector. The September conference was also supported by Members of Congress and was capped by a ceremony of recognition at the White House.

The groundwork was also laid for an ongoing task force that will permit a three-year agency/corporate/university approach to overcoming under-representation of women, minorities, and the handicapped in science and technology, as required under P.L. 99-383. The first meeting was held in June of 1987.

NATIONAL MEDAL OF SCIENCE

In June of 1987 the President, in a Rose Garden ceremony, awarded 20 National Medals of Science and 4 National Medals of Technology, the nation's highest honor for achievement in mathematics, science and engineering, and technology. OSTP provided staff support and implemented recommendations by the President's Committee on the National Medal of Science.

SCIENCE APPOINTMENT CANDIDATES

OSTP continues to work with the Office of Presidential Personnel to identify highly qualified candidates for a range of top-level science appointments. These have included all the Presidential appointments to the National Science Foundation, the National Science Board, and key positions in the National Aeronautics and Space Administration, Department of Energy, Department of Commerce, and Department of Defense. OSTP has also helped select numerous committees, boards, and commissions set up by the President or Congress.

BUDGET TRENDS

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
(DOLLARS IN THOUSANDS)

	1976/ AND TQ	1977	1978	1979	1980	1981
BUDGET AUTHORITY	1,500	2,300	2,800	2,513	2,712	2.734
FTP	32	32	24	24	24	24
FTE	32	34	42	36	36	36
EXPENDITURES/OBS	908	2,201	2,600	2,496	2,625	2,063
FTP	0	22	23	23	24	12
FTE	0	34	30	33	32	25
DETAILEES	11	11	17	12	14	23

	1982	1983	1984	1985 PRES.	1985 CON.	1986 PRES.	1986 CON.
BUDGET AUTHORITY	1,578	1,912	1,988	2,194	2,334 1/	2,091	2,217 2/
FTP	11	11	15	15	15	15	15
FTE	23	23	23	23	23	23	23
EXPENDITURES/OBS	1,576	1,863	1,950		2,300		2,040
FTP	11	11	13		13		6
FTE	19	20	21		21		12
DETAILEES	24	23	25		22		21

	1987 PRES.	1987 CON.	1988 PRES.	1988 CON.	1989 PRES.	1989 CON.
BUDGET AUTHORITY	1,720	1,923 3/	2,101	1,888 4/	1,787	1,587 5/
FTP	15	15	15	15	15	15
FTE	23	23	23	23	20	20
EXPENDITURES/OBS		1,879		1,630		
FTP		7		11		
FTE		10		11		
DETAILEES		20		16		

1/ OMB approved $2,194,000 for OSTP, however, Congress added $140,000 to the OSTP request for FY 85.

2/ OMB approved $2,091,000 for OSTP, however, Congress added $252,000 but reduced the authority by $26,000 under PL 99-160. The OSTP budget was then $2,317,000 before $100,000 for Gramm-Rudman was applied.

3/ OMB approved $1,671,000 plus pay and benefits supplemental of $49,000. Congress reduced supplemental and added $203,000, resulting in a BA of $1,923,000 for FY 87.

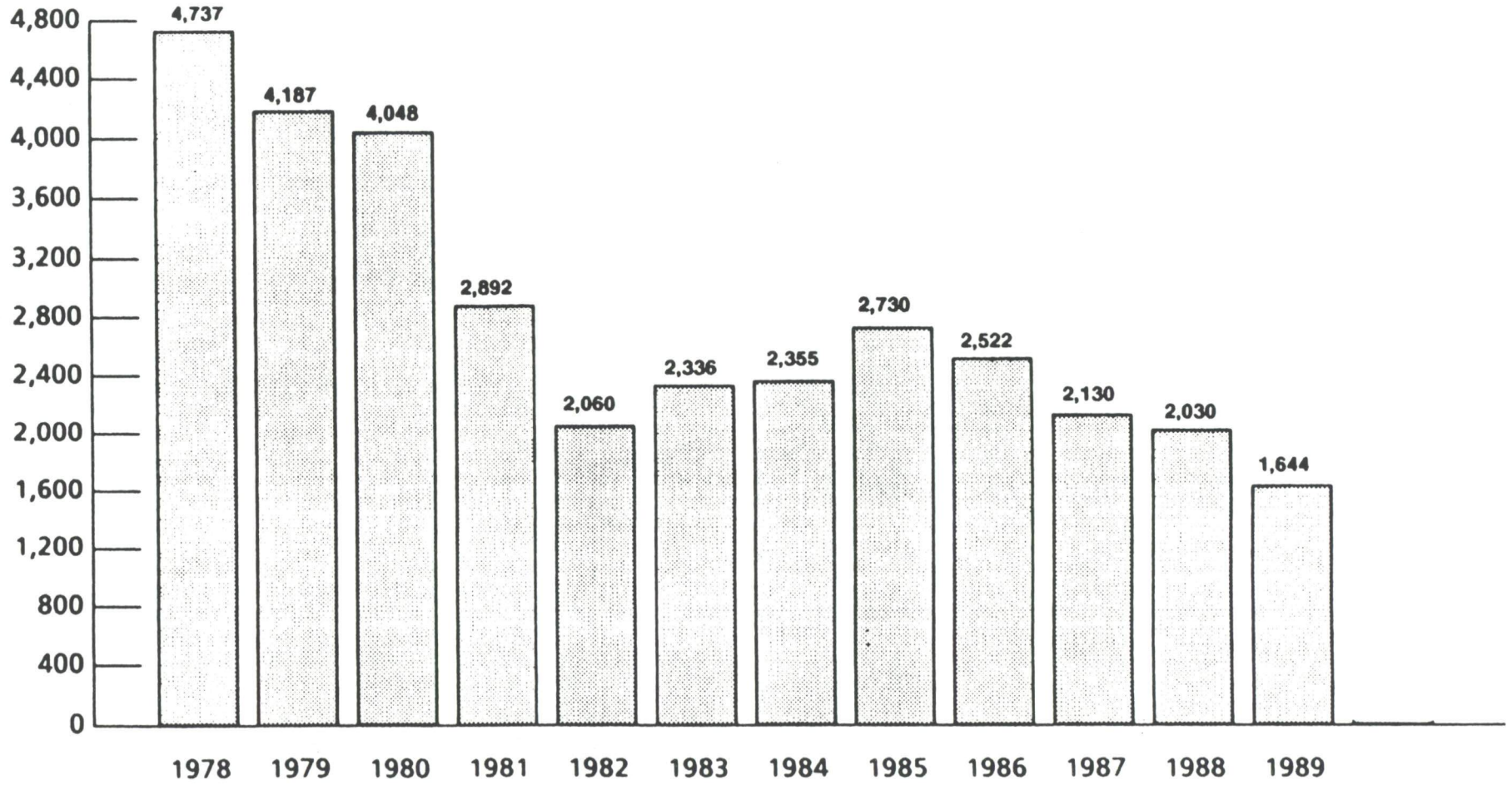
4/ OMB approved $2,101,000 but a $213,000 reduction was applied due to Gramm-Rudman.

5/ OMB approved $1,787,000 but Congressional action under PL 100-404 reduced the FY 89 to $1,587,000.

Executive Office of the President
Office of Science and Technology Policy

HISTORICAL SUMMARY OF APPROPRIATIONS

In Constant Dollars 1/
Fiscal Years 1978 – 1989
(IN THOUSANDS OF DOLLARS)



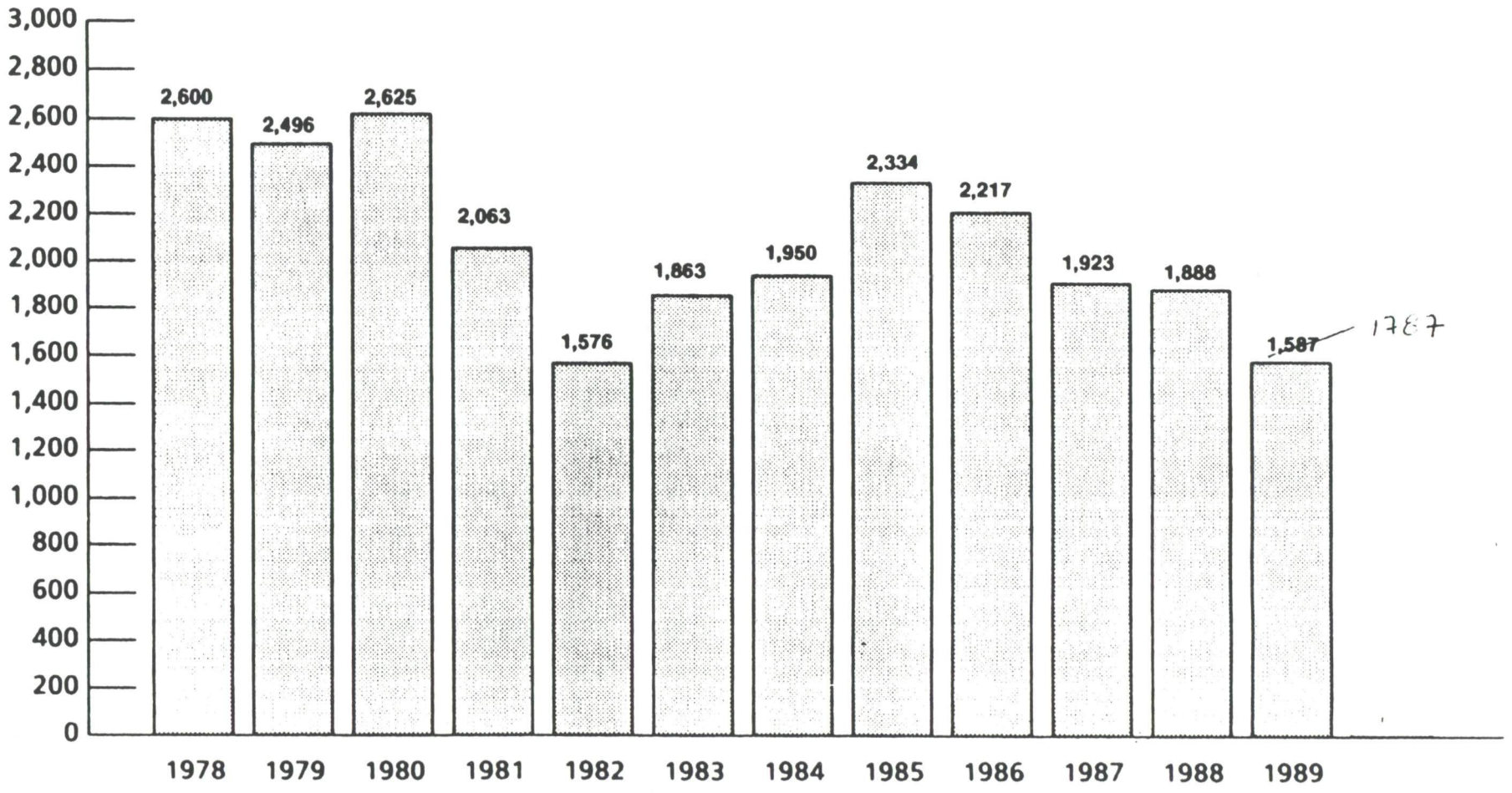
1/ In constant 1990 Dollars

Executive Of of the President
Office of Science and Technology Policy

HISTORICAL SUMMARY OF APPROPRIATIONS

Fiscal Years 1978 – 1989

(IN THOUSANDS OF DOLLARS)



BUDGET ISSUES

Budget Issues

Substantial cuts in OSTP's budget (see Budget Trends, above) have forced a severe reduction in personnel, as well as the loss of office space.

SUMMARY STATISTICS

AND

APPOINTIVE POSITIONS

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

PERSONNEL SUMMARY

TYPE OF APPOINTMENT	INDIVIDUAL/ POSITION TITLE	GRADE
PAS	Dr. William R. Graham, Jr. Science Advisor to the President and Director, OSTP	EL II
	Dr. Thomas P. Rona Associate Director	EL III
SES (Non-Career)	Ms. Michelle K. Van Cleave Assistant Director and Counselor	SES 2
Schedule C	Ms. Marian Nida Confidential Secretary to the Science Advisor to the President and Director, OSTP	GS 12
	Ms. Sally Sherman Assistant to the Executive Director	GS 12
Career	Mrs. Barbara J. Diering Special Assistant	GS 12
	Miss Nancy Clark Secretary	GS 9
	Ms. Ruth Fisher Secretary	GS 10
	Mrs. Elsie Patterson Secretary	GS 8

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

PERSONNEL SUMMARY
OTHER THAN PERMANENT OSTP

TYPE OF APPOINTMENT/ DEPARTMENT	INDIVIDUAL/ POSITION TITLE	GRADE
Career/DOE Detailee	Dr. Beverly J. Berger Assistant Director for Life Sciences	GS 15
Career/DOC Detailee	Sara R. Bowden Policy Analyst	GS 13
Career/DOE Detailee	Dr. Janet V. Dorigan Senior Policy Analyst	GS 15
Career/Interior Detailee	Joann Hilty Secretary	GS 10
Career/CIA Detailee	Pat Neuhardt Secretary	IS 3
Career/OMB Detailee	Dr. Robert L. Post Special Assistant to the Director for Budgetary Review	GS 15
Career/NSF Detailee	Deborah L. Wince Assistant Director for International Affairs	GS 15
Military/USAF Detailee	Thomas J. Bishop Military Assistant to the Deputy Director and Senior Policy Analyst	LtCol
Military/USAF Detailee	Dr. R. Joseph DeSutter Military Assistant to the Director and Executive Director	LtCol
Military/USMC Detailee	John F. O'Neil Senior Policy Analyst	LtCol

TYPE OF APPOINTMENT/ DEPARTMENT	INDIVIDUAL/ POSITION TITLE	GRADE	
Schedule C/AID Detailee	Mary Catherine English Director for Public Affairs	GS 15	
Schedule C/ACTION Detailee	Jonina L. Lance Secretary	GS 8	
Temporary/OSTP AEA Fellow	Kathleen Bernard Senior Policy Analyst	WOC	1/
Temporary/OSTP Consultant	William Owczarski Senior Policy Analyst	WOC	1/
Temporary/OSTP IRI Fellow	Robert Schaefer Senior Policy Analyst	WOC	1/
Temporary/OSTP SAE Fellow	Jack Simon Senior Policy Analyst	WOC	1/
Military/USA	Dr. Steven Harrison Liaison Officer (DNA Representative)	Major	
Military/USA	Wayne Murphy Liaison Officer (SDIO Representative)	LtCol	

1/ WOC: Without Compensation

EQUAL OPPORTUNITY PROGRAM

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

EQUAL OPPORTUNITY PROGRAM

The following information is provided regarding the structure of the Office of Science and Technology Policy (OSTP). The OSTP supports the Equal Opportunity Program of the Government.

	MALE		FEMALE	
	BLACK	CAUCASIAN	BLACK	CAUCASIAN
PROFESSION STAFF	0	11	0	8
SUPPORT STAFF	0	0	1	7
TOTAL	0	11	1	15

PERSONNEL MANAGEMENT ISSUES

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

PERSONNEL MANAGEMENT ISSUES

NONE

OVERVIEW OF THE POLICY DEVELOPMENT PROCESS

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Overview of the Policy Development Process

Policy development and decision-making are directed, first, toward initiating, where appropriate, and otherwise supporting the development of Presidential policies through the NSC, DPC, and EPC processes, and, second, applying Presidential policies to specific circumstances where science and technology have a significant role. The process involves the OSTP staff in reviewing existing Presidential and statutory guidance, conducting program reviews, and preparing and justifying options for selection by the Director. Counsel is frequently obtained from members of other governmental agencies (both executive and legislative), the White House Science Council, and other non-governmental groups and individuals.

MAJOR POLICY ISSUES

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Major Policy Issues

- Strategic Defense Initiative. As SDI moves from a pure research and development program to production of some elements, key decisions are pending concerning budget, architecture, phased deployment, and strategic offense-defense integration.

- Intelligence Assets. Changes in the threat and the special demands of arms control pose new requirements for technical collection capabilities, as well as new advantages and risks associated with on-site verification regimes.

- Strategic Arms Control. Material Breach, arms reduction objectives, verification, tie-in with strategic defenses.

- Space Station. Continuing commitment to the program, release of full funding planned for FY89 in February/April time frame.

- International Science and Technology Agreements. Emphasis on achieving reciprocal and balanced access, adequate intellectual property rights protection, and appropriate enforcement of security obligations from all participants.

- International Competitiveness and National Security. Science, technology, and technology transfer play important roles in economic strength and national security.

- Federal Funding for R&D. Insure that there is adequate federal funding and prioritization for America's federal research and development activities in an era of severely constrained total budgets.

Major Policy Issues (cont'd.)

- Regulation related to genetically engineered organisms. Critical to the development of U.S. biotechnology industries are regulations which achieve a balance in ensuring that new products do not pose an unreasonable risk to public health and the environment while not unnecessarily encumbering researchers and industry. EPA and USDA have three proposed rules in draft; failure to complete rules under the existing executive branch framework may bring about legislative action.

- Global Climate Change. The current state of scientific knowledge is inadequate to serve as a basis for dealing with many significant issues.

- AIDS Epidemiology. A better understanding of the extent of the AIDS epidemic and the rates at which the AIDS virus (HIV) is spreading into subpopulations is required in order to better protect public health and to provide a basis for health policy.

CALENDAR OF MAJOR CHALLENGES AND OPPORTUNITIES

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Calendar of Major Challenges and Opportunities

- January 30-February 4. ASEAN S&T Week. Meeting of all ASEAN S&T ministers at an international conference and exhibit in which several U.S. agencies are participating. Director of OSTP to give keynote address and serve as head of U.S. delegation. (Several S&T negotiations in progress with ASEAN countries)

- Spring 1989. Opportunity to establish Presidential High Performance Computing Initiative, thereby implementing OSTP's High Performance Computing Strategy of November 1987.

- Fall 1989. U.S.-China Joint Commission Meeting in Washington, chaired by Director, OSTP and PRC Minister of Science and Technology.

- October 1989. Second meeting of the Joint High Level Committee as part of the U.S.-Japan Science and Technology Agreement.

- Ongoing renewal or renegotiation of numerous bilateral S&T agreements, including PRC, Korea, Turkey, Indonesia. Bilateral negotiations on intellectual property rights with India and Brazil.

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

(OSTP)

TRANSITION OFFFICE CONTACT
BRIEFING BOOK

OFFICE OF THE PRESIDENT-ELECT
WASHINGTON, D.C. 20270

To: Director of the Office of Science and Technology
Policy-designate

From: Brad Mitchell (OSTP Transition Office Contact Team Leader)

Date: 1-20-1989

This summary report provides a quick snapshot of the Office of Science and Technology Policy's organization and highlights key "open" issues you may face early in your tenure. Our TOC team was charged with studying the organization on your behalf, not policy options. This report is by no means the final word on OSTP. Severe time contraints limited our data collection and scope.

We wish to thank all of the OSTP personnel who provided input and help over the course of our study. We found OSTP personnel to be very cooperative.

I would be pleased to meet with you and brief you on the report at your convenience.

OSTP Transition Office Contact Team

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BRIEFING REPORT TO THE OSTP DIRECTOR-DESIGNATE

prepared by the
Transition Office Contact Team

January 20, 1989

LIST OF APPENDICES

Appendix A	National Science and Technology Policy, Organization, and Priorities Act of 1976.
Appendix B	Summary of OSTP Accomplishments in Fiscal Year 1988.
Appendix C	Personnel Summary.
Appendix D	White House Science Council Membership List and Charter.
Appendix E	Federal Coordinating Council of Science, Engineering and Technology (FCCSET).
Appendix F	Budget Summary Overview.

LIST OF PERSONS INTERVIEWED

Dr. William Graham
Director, Office of Science and Technology Policy

Dr. Thomas Rona
Associate Director, OSTP

Dr. R. Joseph Desutter
Military Assistant to the Director, OSTP

Dr. Robert Post
Special Assistant to the Director, OSTP

Mary Catherine English
Director of Public Affairs, OSTP

Michelle van Cleave
Assistant Director for National Security, OSTP

Dr. Beverly Berger
Assistant Director for Life Sciences, OSTP

Deborah Wince-Smith
Assistant Director for International Affairs, OSTP

Joseph Hezer
Deputy Associate Director for
Natural Resources, Energy and Science,
Office of Management and Budget

Noreen Noonan
Budget Analyst, OMB

Fred Bernthal
Assistant Secretary of State for Oceans,
International Environmental and Scientific Affairs
Department of State

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I. INTRODUCTION

Purpose

This report is intended to:

- Provide the new Director of the Office of Science and Technology Policy (OSTP) with a quick snap-shot of the OSTP. The report delineates OSTP's mission, organization and budget. A summary of President-elect Bush's campaign commitments and pledges are included, as well as a twelve month "key event calendar".

- Highlight key "open" issues which would probably be of interest to the incoming Director. Many of the issues highlighted were broached by OSTP personnel during interviews conducted by the TOC team. The TOC team's intent was to point out these issues to the new Director, rather than make policy judgements on their resolution.

Overview

The incoming Administration faces many challenges. The Administration's view on science and technology will have a large impact on the resolution of many of these challenges. Industrial and economic competitiveness will continue to be threatened by foreign advances made in science and technology. Science and technology has a significant impact on many dimensions of the national interest. Some examples are listed below.

- National Security: arms control, new weapons systems requirements, intelligence.

- Space: space station, civilian space programs.

- Environment: air quality, the ozone layer.

- Education: math and science education.

- Health: AIDS, disease prevention.

- Agriculture: remote sensing, biotechnology.

- Commercialization: superconductivity.

- Major government/industry initiatives: Sematech, the superconducting supercollider, the human genome program, the new aerospace transport.

Juxtaposing the need for advancement in science and technology

are the budget deficit, potential Gramm-Rudman reductions, and the international trade deficit.

These challenges place a premium on the Administration's ability to set priorities, weigh trade-offs, and insure increasing productivity of the government programs within the science and technology field. The key issue for the incoming Director and the President will be defining the role of the OSTP Director and OSTP itself. We discovered in our interviews with the Office of Management and Budget, other federal agencies, the Congress, and the scientific community that OSTP's role is not clearly defined. This is contrary to the view held by OSTP personnel. OSTP personnel believe their organization's mission is clearly defined. This problem could be mitigated by clearly stating OSTP's role, objectives and priorities and then monitoring the implementation of the organization.

II. THE BUSH PROGRAM: PLEDGES AND POLICIES

Overview

During the campaign, George Bush emphasized strengthening the U.S. science and technology capabilities. The areas of emphasis were:

- Establish the position of Assistant to the President for Science and Technology in the Executive Office of the President.
- Reinvigorate the Office of Science and Technology Policy (OSTP).
- Create a President's Council of Science and Technology Advisors, composed of leading scientists, engineers and distinguished executives from the private sector.
- Propose doubling the National Science Foundation's budget over the next five years. A key priority will be increased funding for retooling science and engineering labs at colleges and universities.
- Support making all federal R&D authorizations for 5 years and all federal R&D appropriations for 2 years.
- Support efforts of states to enhance math and science education by developing alternative certification programs.
- Support making the R&D tax credit permanent.
- Work to provide consistent economic incentives and regulatory reform to enhance the ability of American business to commercialize new ideas and new technologies.
- Concentrate federal support on basic research.
- Work with leaders of the American high-tech industries to develop a coherent and comprehensive high-tech trade policy.
- Encourage cooperation between government, laboratories and business.
- Encourage Partnerships for Progress--partnerships between business, universities and government to advance base building technologies.

- Protect intellectual property and see that American companies have just as much access to foreign research projects as foreign companies have to ours.

- Re-establish the National Space Council, chaired by the Vice President.

- Support the "Mission to Planet Earth."

- Develop and deploy SDI.

III. MISSION

Overview

The National Science and Technology Policy, Organization, and Priorities Act of 1976 (See Appendix A) created the Office of Science and Technology Policy (OSTP). According to the Act, the mission of the OSTP is to:

- o advise the President about Science and Technology (S&T) considerations involved in areas of national concern and the Federal Budget;
- o assist the President in providing general leadership and coordination of R&D programs of the Federal Government;
- o evaluate the scale, quality and effectiveness of the Federal effort in S&T.

The Act designates the position of OSTP Director to be appointed by the President with the advice and consent of the Senate. According to the Act, the Director is to work in close cooperation with the Office of Management and Budget, the National Science Board, the Council of Economic Advisors, and the federal agencies and departments. The Director also serves as the President's Science Advisor. The Director is required to coordinate with the OMB on the federal R&D budget. The Director is also responsible for providing Congress with a "Science and Technology Report and Outlook" every other year. The Director may also be called to testify before Congress. Examples of activities performed by the OSTP can be seen in the OSTP FY '88 Accomplishments Memo prepared by OSTP staff (See Appendix B). Although the original mission of the OSTP has not changed since its inception, the implementation of the mission has varied widely between successive administrations, reflecting the interests of a particular President.

Open Issues

As mentioned in the Introduction, the major issue facing the new Director of the OSTP is what role the Director and the organization are going to play within the Administration. This issue can be broken down into two components: the definition of the role and the effectiveness of the role. The OSTP mission statement of "advise... assist... and evaluate..." can have a wide range of interpretations. The Director and the OSTP can essentially play different roles which range from science advisor to honest broker to policy developer. These roles are not mutually exclusive.

1. Science Advisor: provides advice to the President on science and technology matters; is a resource on demand to the President working on science and technology projects as specified by the President.

2. Honest Broker: insures that all issues/decisions dealing with science and technology that require a Presidential decision have been properly researched and thoroughly evaluated. Ensuring that policy options get a fair hearing.

3. Policy Developer: participates in the formulation of policy involving science and technology;

The interpretation of the Director's role and OSTP during the Reagan Administration seemed to place emphasis on the role of Science Advisor.

The relationship between the Director and the President is critical to the effectiveness of OSTP. The Director and the President must quickly define the mix and priority of the roles that the Director and the OSTP will have. The Director must then design his organization to match the agreed upon role. The Congressional Act defines the minimum requirements for the OSTP. What takes place beyond that depends on the President. The President may choose to reinforce the Director's role by elevating the position to "Assistant to the President" as proposed by George Bush during the campaign, or by formally requiring other parts of the Administration to coordinate activities with the OSTP. Both could be effective in enhancing the role of the OSTP.

IV. ORGANIZATION

Overview

According to the legislation, the OSTP has a Director who may have up to four Presidentially appointed Associate Directors. Currently there are 22 people on the OSTP staff (See Exhibit I and Appendix C). Nine are permanent employees (of which 6 are secretaries or assistants) and the other thirteen are detailees from other agencies such as the DoD, OMB, the National Science Foundation, etc. The structure of the organization reflects the needs and wishes of the current Director. Reporting to the Director is the Deputy Director. Three Assistant Directors report to the Deputy Director. The Assistant Directors are responsible for National Security, International Affairs, and Life Sciences. The White House Science Council also reports to the Director (See Appendix D). The new Director will have the flexibility to structure the organization in any way which will support the goals and objectives of OSTP and the President.

Interagency Relationships

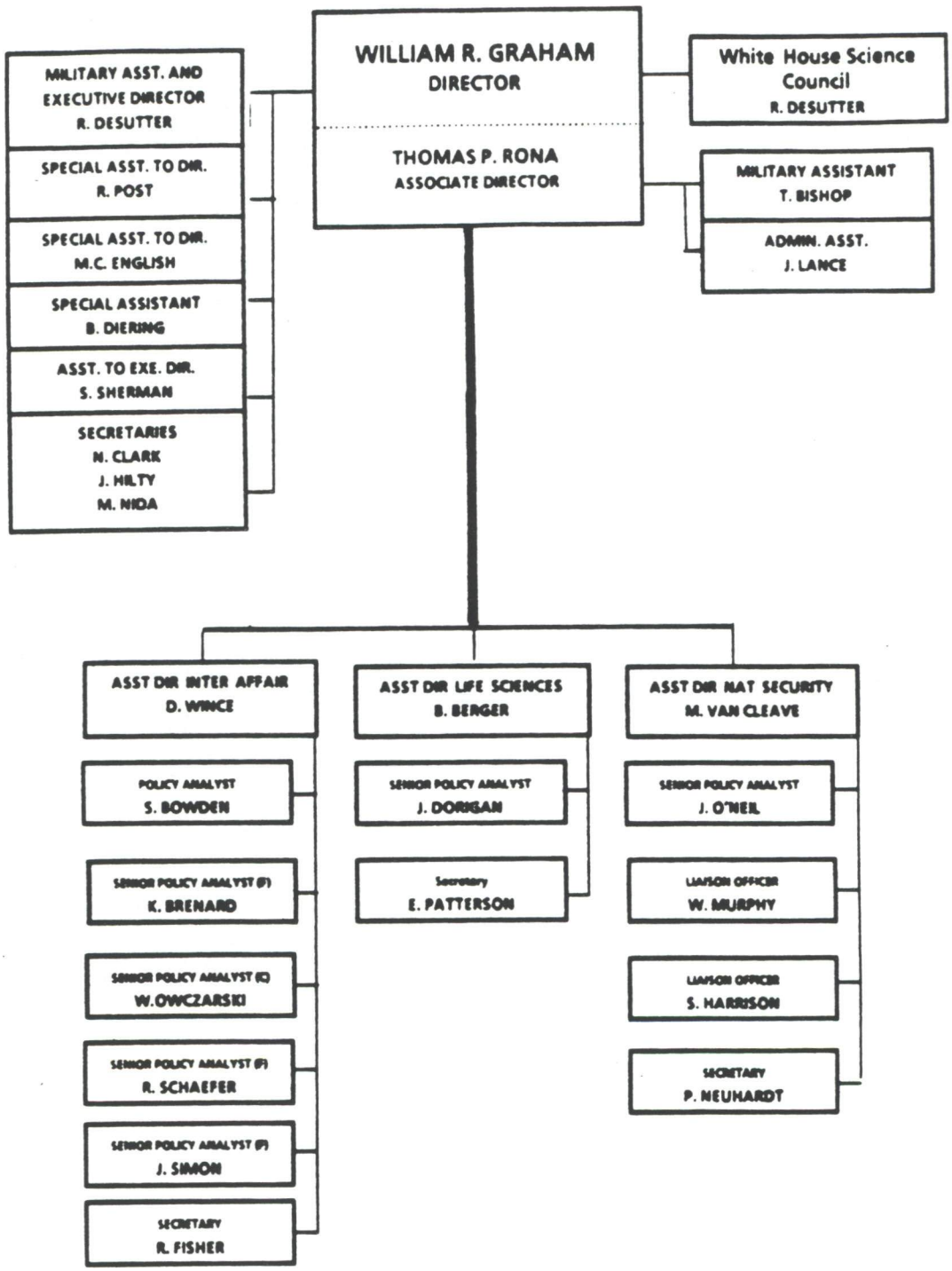
The OSTP works through different operating mechanisms (See Appendix E). One mechanism is a group of interagency coordinating committees called the Federal Coordinating Council of Science Engineering and Technology (FCCSET). They include:

- FCCSET Committee on International Science, Engineering, and Technology;
- Committee on Life Sciences;
- Committee on Earth Sciences;
- Biotechnology Science Coordinating Committee;
- FCCSET Committee on Computer Research and Applications;
- FCCSET Committee on Materials.

A second mechanism used by the OSTP is participation in other interagency groups such as:

- Arms Control Experts Group;
- Interagency Group on Supercomputers;
- Trade Policy Review Group;
- President's Committee on the Naitonal Medal of Science;

OFFICE OF SCIENCE AND TECHNOLOGY POLICY
EXECUTIVE OFFICE OF THE PRESIDENT



- o Interagency Committee for Federal Laboratory Technology Transfer;
- o Joint Telecommunications Research Board;

Congress

OSTP funding is dependent on four Congressional Committees:

- o Senate Commerce, Science and Space Committee;
- o Senate Appropriations Committee;
- o House Science, Space and Technology Committee;
- o House Appropriations Committee;

A more detailed description of the Congressional Committees may be found in Section VII of this report.

Open Issues

The organizational structure must be directly related to the defined role and mission of the OSTP. The organizational issues will center around the level and type of staffing of the new organization. With only nine permanent staff members, the OSTP seems to be at a subcritical level. The new Director must decide the appropriate number of personnel and the right combination of permanent staff and detailees. The Director must also determine how much work should be done in house, and how much should be done by detailees or by other agencies. The type of people brought on board should be competent in their areas of expertise as well as of reasonably high stature in order to bring credibility to their jobs and the OSTP. (Much of OSTP's work is to act as a catalyst without much authority.)

The physical location of OSTP's office space is also an issue. The Director of OSTP has an office in the Old Executive Office Building, but the major portion of the OSTP organization is housed in the New Executive Office Building across the street. This arrangement seems to impair communication and organizational dynamics.

V. BUDGET

The FY '90 OSTP Budget submission to OMB was approximately $2.9 million (See Appendix F). OMB cut the budget back to $2.0 million (a 25 percent raise over a very low FY '89 Budget). The budget primarily covers the salaries for permanent employees, half of the salaries for the detailees, and office space for all of the above. OSTP was looking to raise the FTE headcount by 9.

Traditionally, Congress has been tough on the OSTP's budget. The new Director should determine the necessary level of funding for the OSTP, and use finesse when working with Congress in order to obtain it.

VI. CONGRESSIONAL AFFAIRS

Overview

OSTP obtains its funding through the Authorizing and Appropriating Committees of the Congress.

Of the four committees responsible for OSTP funding (Senate Commerce, Science and Transportation, Senate Appropriations, House Science, Space and Technology and House Appropriations) three have new Chairmen at the Subcommittee level and one has lost a Ranking Minority Member on the full Committee level (Cong. Manuel Lujan, House Science, Space and Technology Committee - retired). The Subcommittees, Chairmen, key members and staff are:

- o Senate Commerce, Space and Transportation Committee - Science, Technology and Space Subcommittee, Chaired by Sen. Albert Gore* (D-TN).
  - Gore's (D-TN) staff person is Martin (Marty) Kress (224-9360), who is regarded as one of the top authorities on the hill for space issues. Marty was Hollings' person for the full Committee and also is assigned to the Subcommittee.
  - Tiger Joyce (224-9360) is Sen. Pressler's (R-SD) staffer on the Minority side. He is new to the Subcommittee.
- o Senate Appropriations Committee - HUD, Independent Agencies Subcommittee, Chaired by Sen. Barbara Mikulski* (D-MD).
  - Sen. Barbara Mikulski's (D-MD) designated staff director is Kevin Kelly (224-7210). Kevin is new to the Subcommittee from Sen. Mikulski's personal office.
  - Senator Jake Garn (R-UT) is the Ranking Minority member of that Subcommittee and his staff person is Stephen Kohashi (224-7253). Stephen has been there for many years, and is very highly regarded.
- o House Science, Space and Technology Committee. Cong. Roe (D-NJ) is the Chairman of the full Committee and Cong. Walker (R-PA) will take over the ranking minority seat from the retired Cong. Lujan (R-NM).

* New Subcommittee Chairmen

Cong. Nelson (D-FL) is still the Chairman of the Subcommittee on Space Science and Applications and Congressman Walker (R-PA) is the ranking minority member.

- Roe's (D-NJ) staff person for the full Committee is Bob Ketcham (225-1774) who is a former Fuqua staff member.

- Cong. Nelson's (D-FL) staff person on the Subcommittee on Space, Science and Applications is Dr. Bill Smith (225-8102).

- Cong. Walker's (R-PA) staff person for the full Committee and Subcommittee on Space, Science and Applications is Dave Clement (225-8152).

Cong. Dave McCurdy (D-OK) is the Chairman of the Subcommittee on Transportation, Aviation and Materials and Congressman Lewis (R-FL) will remain the ranking minority member.

- The Majority staff person under Chairman McCurdy (D-OK) on the Transportation, Aviation and Materials Subcommittee is Tony Taylor (225-8105).

- The Minority staff on the Transportation, Aviation and Materials Subcommittee is Maryann Bach (225-8123), who works for Cong. Lewis (R-FL).

o House Appropriations - HUD, Independent Agencies, Chaired by Cong. Bob Traxler* (D-MI).

- Traxler (D-MI) will be keeping Dick Mallow (225-3241), the current staffer (working formerly for Boland).

- Jeff Lawrence (225-4135) is Cong. Bill Green's (R-NY) Minority staff person.

<u>Other Legislative Offices</u>

o Office of Technology Assessment: The mission of the Office of Technology Assessment (OTA) is to be a non-partisan, independent evaluator of technology issues; responding and reporting to the Congress. Its work is very highly regarded both on and off the hill.

* New Subcommittee Chairmen

VII. CALENDAR

Overview

The OSTP offered the following events as something the new Director should be aware of:

- January 30 - February 4, 1989: ASEAN S&T Week. Meeting of all ASEAN S&T ministers at an international conference and exhibit in which several U.S. agencies are participating. Director of OSTP to give keynote address and serve as head of U.S. delegation. (Several S&T negotiations in progress with ASEAN contries.)

- February 1, 1989: Report due by the Advisory Council on Federal Participation in SEMATECH.

- February 15, 1989: Annual Revision to the Five-Year Outlook and the Science and Technology Report.

- February 23, 1989: Report due to the President and Congress by the National Commission on Superconductivity.

- Spring 1989: Opportunity to establish Presidential High Performance Computing Initiative, thereby implementing OSTP's High Performance Computing Strategy of November 1987.

- Fall 1989: U.S. - China Joint Commission Meeting in Washington, chaired by the Director, OSTP and PRC Minister of Science and Technology.

- September 31, 1989: Report due by the National Advisory Committee on Semiconductors.

- October 1989: Second meeting of the Joint High Level Committee as part of the U.S. - Japan Science and Technology Agreement.

- Ongoing renewal or renegotiation of numerous bilateral S&T agreements, including PRC, Korea, Turkey and Indonesia. Bilateral negotiations on intellectual property rights with India and Brazil.