

Originally Processed With FOIA(s):
2005-0336-F

FOIA Number:
2005-0336-F

FOIA MARKER

**This is not a textual record. This is used as an
administrative marker by the George Bush Presidential
Library Staff.**

Record Group/Collection: George H.W. Bush Presidential Records
Collection/Office of Origin: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: International Files

OA/ID Number: 62064
Folder ID Number: 62064-002

Folder Title:
International - Critical Technologies [1990]

Stack:

Row:

Section:

Shelf:

Position:

0

0

0

0

THE WHITE HOUSE
WASHINGTON

June 26, 1990

MEMORANDUM FOR CHARLES G. UNTERMEYER *Bromley*

FROM: D. ALLAN BROMLEY *D. Allan Bromley*

SUBJECT: THE NATIONAL CRITICAL TECHNOLOGIES PANEL

The FY90 Defense Authorization Act, amending the National Science and Technology Policy, Organization and Priorities Act of 1976 required OSTP to establish a National Critical Technologies Panel that in turn will produce its first report to the Congress by October 1, 1990 and biennially thereafter until the Panel expires on December 31, 2000.

The legislation authorizes a 13-person panel, 9 of whom are to be appointed by the OSTP Director (3 Federal officials--one of whom will be designated as chairman and 6 persons from the private sector and academia) and 4 by Defense, Energy, Commerce and NASA, respectively.

Our primary task is to merge and analyze the critical technology lists produced by Defense and Commerce to identify up to 30 "critical" product and process technologies, to report on their current status in the U.S. as compared to that in other countries and to formulate recommendations for Federal and state, private sector and academic actions and milestones where appropriate.

At Andy Card's suggestion I am enclosing herewith a copy of the pertinent legislation and the names of those whom I propose to appoint to the Panel. Those on the first page are already in government and those on the second page are from the private sector. All are extremely well known in the technology community and all have extensive prior service on Federal advisory panels.

Just to be sure, however, I would very much appreciate it if you would arrange for a quick check on these folk. It would be my intention to invite them formally to serve on the Panel unless I hear from you with a recommendation to the contrary by close of business Thursday, June 28.

Many thanks for your help.

Enclosures

cc Andrew Card
Deputy Chief of Staff to the President

(1) The contractor has negotiated a comprehensive subcontracting plan under the test program that includes the matters specified in section 8(d)(6) of the Small Business Act (15 U.S.C. 637(d)(6));

(2) such matters have been determined acceptable by the Secretary of the military department or head of a Defense Agency negotiating such comprehensive subcontracting plan; and

(3) the comprehensive subcontracting plan applies to the contract.

(d) **FAILURE TO MAKE A GOOD FAITH EFFORT TO COMPLY WITH A COMPANY-WIDE SUBCONTRACTING PLAN.**—A contractor that has negotiated a comprehensive subcontracting plan under the test program shall be subject to section 8(d)(4)(F) of the Small Business Act (15 U.S.C. 637(d)(4)(F)) regarding the assessment of liquidated damages for failure to make a good faith effort to comply with its company-wide plan and the goals specified in that plan.

(e) **TEST PROGRAM PERIOD.**—The test program authorized by subsection (a) shall begin on October 1, 1990, unless Congress adopts a resolution disapproving the test program. The test program shall terminate on September 30, 1993.

(f) **REPORT.**—(1) Not later than March 1, 1994, the Secretary of Defense shall submit a report on the results of the test program to the Committees on Armed Services and on Small Business of the Senate and the House of Representatives.

(2) Before submitting such report to the committees referred to in paragraph (1), the Secretary shall transmit the proposed report to the Administrator of the Small Business Administration. The report submitted to the committees shall include any comments and recommendations relating to the report that are transmitted to the Secretary by the Administrator before the date specified in such paragraph.

(g) **DEFINITIONS.**—As used in this section:

(1) The term "small business concern" shall have the same meaning as is provided in section 8(d)(3)(C) of the Small Business Act (15 U.S.C. 637(d)(3)(C)), and includes a small business concern owned and controlled by socially and economically disadvantaged individuals.

(2) The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall have the same meaning as is provided in section 8(d)(3)(C) of the Small Business Act (15 U.S.C. 637(d)(3)(C)).

PART E—DEFENSE INDUSTRIAL AND TECHNOLOGY BASE

SEC. 41. CRITICAL TECHNOLOGIES PLANNING

(a) **NATIONAL CRITICAL TECHNOLOGIES PANEL.**—(1) The National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6601 et seq.) is amended by adding at the end the following new title:

"TITLE VI—NATIONAL CRITICAL TECHNOLOGIES PANEL

"ESTABLISHMENT

"SEC. 601. The Director of the Office of Science and Technology Policy shall establish within that office a National Critical Technologies Panel (hereinafter in this title referred to as the "panel"). The panel shall prepare the biennial national critical technologies report required by section 603.

"MEMBERSHIP

"SEC. 602. (a) The panel shall consist of 13 members appointed from among persons who are experts in science and engineering as follows:

"(1) The Director of the Office of Science and Technology Policy shall appoint nine members, of whom—

"(A) three shall be Federal Government officials; and

"(B) six shall be appointed from persons in private industry and higher education.

"(3) The Secretary of Defense shall appoint one member, who shall be an official of the Department of Defense.

"(4) The Secretary of Energy shall appoint one member, who shall be an official of the Department of Energy.

"(5) The Secretary of Commerce shall appoint one member, who shall be an official of the Department of Commerce.

"(6) The Administrator of the National Aeronautics and Space Administration shall appoint one member, who shall be an official of that agency.

"(b)(1) Members appointed under subsection (a)(1)(B) shall serve for a term of two years.

"(2) Any vacancy in the membership of the panel shall be filled in the same manner as the original appointment.

"(c) The Director shall designate one of the members appointed under subsection (a)(1)(A) as chairman of the panel.

"BIENNIAL NATIONAL CRITICAL TECHNOLOGIES REPORT

"SEC. 603. (a) The panel shall submit to the President a biennial report on national critical technologies. Each such report shall identify those product technologies and process technologies that the panel considers to be national critical technologies. The number of the such technologies identified in any such report may not exceed 30. The reports shall be submitted not later than October 1 of even-numbered years.

"(b) For purposes of subsection (a), a product or process technology may be considered to be a national critical technology if the panel determines it to be a technology that it is essential for the United States to develop to further the long-term national security and economic prosperity of the United States.

"(c) Each such report shall include, with respect to each technology identified in the report, the following information:

"(1) The reasons for the panel's selection of that technology.

"(2) The state of the development of that technology in the United States and in other countries.

"(3) An estimate of the current and anticipated level of research and development effort in the United States, including anticipated milestones for specific accomplishments, by—

"(A) the Federal Government;

"(B) State and local governments;

"(C) private industry; and

"(D) colleges and universities.

"(d) Not later than 30 days after the date on which a report is submitted to the President under this section, the President shall transmit the report, together with any comments that the President considers appropriate, to Congress.

"ADMINISTRATION AND FUNDING OF PANEL

"SEC. 604. The Director of the Office of Science and Technology Policy shall provide administrative support for the panel. Funds for necessary expenses of the panel shall be provided for fiscal years after fiscal year 1990 from funds appropriated for that Office.

"EXPIRATION

"SEC. 605. The provisions of this title shall cease to be effective on December 31, 2000, and the panel shall terminate on that date.

(2) The Secretary of Defense shall reimburse the Director of the Office of Science and Technology Policy for the reasonable expenses, not to exceed \$500,000, incurred by the National Critical Technologies Panel during fiscal year 1990.

(b) **ANNUAL DEFENSE CRITICAL TECHNOLOGIES PLAN.**—(1) Chapter 148 of title 10, United States Code, is amended by adding at the end the following new section:

"§ 2508. Annual defense critical technologies plan

"(a) **ANNUAL PLAN.**—(1) The Secretary of Defense shall submit to the Committee on Armed Services of the Senate and House of Representatives an annual plan for developing the technologies considered by the Secretary of Defense and the Secretary of Energy to be the technologies most critical to ensuring the long-term qualitative superiority of United States weapon systems. The number of such technologies identified in any plan may not exceed 20. Each such plan shall be developed in consultation with the Secretary of Energy.

"(2) In selecting the technologies to be included in the plan for any year, the Secretary of Defense and the Secretary of Energy shall consider both product technologies and process technologies, including the technologies identified in the most recent biennial report submitted to the President by the National Critical Technologies Panel under title VI of the National Science and Technology Policy, Organization, and Priorities Act of 1976.

"(3) Each such plan shall cover the 15 fiscal years following the year in which the plan is submitted.

"(4) Such plan shall be submitted not later than March 15 of each year and shall be submitted in both classified and unclassified form.

"(b) **PRIORITIES AND FUNDING.**—Each plan submitted under subsection (a) shall—

"(1) designate priorities for development of the technologies identified in the plan; and

"(2) specify the funding requirements of the Department of Defense, the Department of Energy, and other appropriate departments and agencies of the Federal Government for the development of the technologies identified in the plan for the five fiscal years following the year in which the plan is submitted.

"(c) **CONTENT OF PLAN.**—Each plan submitted under subsection (a) shall include, with respect to each technology identified in the plan, the following:

"(1) The reasons for the selection of that technology, including—

"(A) a discussion of the consideration given to the most recent biennial report submitted to the President under title VI of the National Science and Technology Policy, Organization, and Priorities Act of 1976; and

"(B) the relationship of the technology to the overall science and technology program of the Department of Defense and the long-term funding strategy associated with that program.

"(2) A designation of the lead organization within the Department of Defense or the Department of Energy responsible for the development of the technology.

"(3) A summary description of the lead organization's plan for the development of the technology, including the milestone goals.

"(4) The amounts contained in the budgets of the Department of Defense, the Department of Energy, and other departments and agencies for the support of the development of such technology for—

"(A) the five preceding fiscal years; and

"(B) the fiscal year beginning in the year in which the plan is submitted; and

"(C) each fiscal year thereafter for which the Secretary of Defense, with respect to the Department of Defense, and the Secretary of Energy, with respect to the Department of Energy, has prepared a budget.

GOVERNMENT OFFICIALS

Mr. Arnold D. Aldrich
Associate Administrator
Office of Aeronautics, Exploration & Technology
National Aeronautics and Space Administration
600 Independence Avenue S.W.
Washington, D.C. 20546

Known as: Arnie
Phone: (202) 453-2693

Fax: (202) 755-3283
Secretary: Gaile Eastman

Dr. Frederick M. Bernthal
Deputy Director
National Science Foundation
1800 G Street, N.W.
Washington, D.C. 20550

Known as: Fred
Phone: (202) 357-9427
Fax:
Secretary:

Dr. James F. Decker
Director for Office of Energy Research (Acting)
Department of Energy ER-1
1000 Independence Avenue S.W.
Washington, D.C. 20585

Known as: Jim
Phone: (202) 586-5434
Fax: (202) 586-4102
Secretary: Barbara Chambers

Dr. Charles Herzfeld
Director, Defense Research & Engineering
Department of Defense
Room 3E 1014
Pentagon
Washington, D.C. 20301-3100

Known as: Charlie
Phone: (202) 697-5776
Fax: (202) 693-7167

Secretary: Maggie Souleyret

Dr. Ruth Kirchstein
Director
National Institute of General Medical Sciences
5333 Westbard Ave
Westwood Building Room 926
Bethesda, Maryland 20892

Known as: Ruth
Phone: (301) 496-7891
Fax:

Secretary:

Dr. William Phillips
Associate Director for Industrial Technology
Office of Science and Technology Policy
Executive Office of the President
Washington, D.C. 20506

Known as: Bill
Phone: (202) 395-3125

Fax: (202) 395-3719

Dr. Robert White
Undersecretary for Technology
U.S. Department of Commerce
Room 4822
14th and Constitution Avenue N.W.
Washington, D.C. 20230

Known as: Bob
Phone: (202) 377-1575
Fax:

Secretary:

PRIVATE SECTOR AND HIGHER EDUCATION

Dr. Robert W. Lucky
Executive Director of Research
Communications Sciences Division
ATT Bell Laboratories
Crawfords Corner Road
Room 4E 605
Holmdel, New Jersey 07733-1988

Known as: Bob
Phone: (201) 949-4477

Fax: (201) 949-5353

Secretary: Marlene Gannon

Dr. Richard Messinger
Vice President, Research & Development
and Chief Technical Officer
Cincinnati Milacron, Inc.
4701 Marburg Avenue
Cincinnati, Ohio 45209

Known as: Dick

Phone: (513) 841-8881
Fax: (513) 841-8584
Secretary: Lori Chowning

Prof. Alex Rich
Sedgewich Professor of Biophysics
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Known as: Alex
Phone: (617) 253-4715
Fax: (617) 253-8699
Secretary: Alice Colby

Dr. Charles V. Shank
Director
Lawrence Berkeley Laboratory
Building 50A Room 4133
1 Cyclotron Road
Berkeley, California 94720

Known as: Chuck
Phone: (415) 486-5111
Fax: (415) 486-6720

Secretary: Mrs. Mardel Carnahan

Dr. Albert R. C. Westwood
Vice President, Science
Martin Marietta Corporation
6801 Rockledge Drive
Bethesda, Maryland 20817

Known as: Bert
Phone: (301) 897-6626
Fax: (301) 897-6800
Secretary: Mona Moore

Mr. James Worsham
Chairman
GPA Asia Pacific
Pacific Corporate Towers
222 N. Sepulveda
El Segundo, CA 90245
(213) 322-2210

Known as: Jim
Phone: (213) 322-2577

Fax: Diane DeSilva
Secretary:

THE WHITE HOUSE

WASHINGTON

June 21, 1990

MEMORANDUM FOR JOHN H. SUNUNU

FROM: D. ALLAN BROMLEY

Quian

SUBJECT: THE NATIONAL CRITICAL TECHNOLOGIES PANEL

The FY90 Defense Authorization Act, amending the National Science and Technology Policy, Organization and Priorities Act of 1976 required OSTP to establish a National Critical Technologies Panel that in turn will produce its first report to the Congress by October 1, 1990 and biennially thereafter until the Panel expires on December 31, 2000.

The legislation authorizes a 13-person panel, 9 of whom are to be appointed by the OSTP Director (3 federal officials--one of whom will be designated as chairman and 6 persons from the private sector and academia) and 4 by Defense, Energy, Commerce and NASA respectively.

Our primary task is to merge and analyze the critical technology lists produced by Defense and Commerce to identify up to 30 "critical" product and process technologies, to report on their current status in the U.S. as compared to that in other countries and to formulate recommendations for Federal and state, private sector and academic actions and milestones where appropriate.

The Panel is to be supported administratively by OSTP and in FY90 is to be reimbursed by DOD for related expenses up to \$500,000; in subsequent years the funding is to come from OSTP appropriations although no such provision is in our current FY91 budget request.

Bureaucratic obstacles associated with establishing any new Federal Advisory Committee have already resulted in substantial delay in getting this work underway but if we can move expeditiously, we can still meet the Congressional deadline for the first report.

I am now, subject to completion of conflict of interest reviews, in a position to appoint the 9 members to be named by OSTP and the four agencies involved are similarly prepared to move forward. We have assembled what I believe to be an excellent list of broadly qualified potential panel members.

If I follow normal White House procedures and clear these panel members through Chase Untermeyer's and Boyden Gray's offices I am informed that the process will take at least 10 weeks.

This leaves me with an unhappy set of options:

- a) Follow normal procedure and miss the statutory due date for our report.**
- b) Appoint the panel as authorized by the legislation and comply with the statutory requirement but at the cost of by-passing the normal procedures.**

The problem is exacerbated by the fact that OSTP in recent years had established an unfortunate reputation for missing due dates for Congressionally mandated reports and I have thus far managed to get all those required by OSTP since my arrival to the Congress on time. I would hate to miss this coming October 1 date for the Critical Technologies Report by a large amount and thus revive the old reputation.

I need your advice. Do I follow option

_____ a)

or

_____ b)

as outlined above.

I enclose the pertinent section of the legislation and the suggested membership of the Panel herewith.

Enclosures

*2 days to full
me that I have
problem.*

(1) the contractor has negotiated a comprehensive subcontracting plan under the test program that includes the matters specified in section 8(d)(6) of the Small Business Act (15 U.S.C. 637(d)(6));

(2) such matters have been determined acceptable by the Secretary of the military department or head of a Defense Agency negotiating such comprehensive subcontracting plan; and

(3) the comprehensive subcontracting plan applies to the contract.

(d) **FAILURE TO MAKE A GOOD FAITH EFFORT TO COMPLY WITH A COMPANY-WIDE SUBCONTRACTING PLAN.**—A contractor that has negotiated a comprehensive subcontracting plan under the test program shall be subject to section 8(d)(4)(F) of the Small Business Act (15 U.S.C. 637(d)(4)(F)) regarding the assessment of liquidated damages for failure to make a good faith effort to comply with its company-wide plan and the goals specified in that plan.

(e) **TEST PROGRAM PERIOD.**—The test program authorized by subsection (a) shall begin on October 1, 1990, unless Congress adopts a resolution disapproving the test program. The test program shall terminate on September 30, 1993.

(f) **REPORT.**—(1) Not later than March 1, 1994, the Secretary of Defense shall submit a report on the results of the test program to the Committees on Armed Services and on Small Business of the Senate and the House of Representatives.

(2) Before submitting such report to the committees referred to in paragraph (1), the Secretary shall transmit the proposed report to the Administrator of the Small Business Administration. The report submitted to the committees shall include any comments and recommendations relating to the report that are transmitted to the Secretary by the Administrator before the date specified in such paragraph.

(g) **DEFINITIONS.**—As used in this section:

(1) The term "small business concern" shall have the same meaning as is provided in section 8(d)(3)(C) of the Small Business Act (15 U.S.C. 637(d)(3)(C)), and includes a small business concern owned and controlled by socially and economically disadvantaged individuals.

(2) The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall have the same meaning as is provided in section 8(d)(3)(C) of the Small Business Act (15 U.S.C. 637(d)(3)(C)).

PART E—DEFENSE INDUSTRIAL AND TECHNOLOGY BASE

SEC. 61. CRITICAL TECHNOLOGIES PLANNING

(a) **NATIONAL CRITICAL TECHNOLOGIES PANEL.**—(1) The National Science and Technology Policy, Organization, and Priorities Act of 1976 (42 U.S.C. 6601 et seq.) is amended by adding at the end the following new title:

"TITLE VI—NATIONAL CRITICAL TECHNOLOGIES PANEL

"ESTABLISHMENT

"Sec. 601. The Director of the Office of Science and Technology Policy shall establish within that office a National Critical Technologies Panel (hereinafter in this title referred to as the 'panel'). The panel shall prepare the biennial national critical technologies report required by section 603.

"MEMBERSHIP

"Sec. 602. (a) The panel shall consist of 13 members appointed from among persons who are experts in science and engineering as follows:

"(1) The Director of the Office of Science and Technology Policy shall appoint nine members, of whom—

"(A) three shall be Federal Government officials; and

"(B) six shall be appointed from persons in private industry and higher education.

"(3) The Secretary of Defense shall appoint one member, who shall be an official of the Department of Defense.

"(4) The Secretary of Energy shall appoint one member, who shall be an official of the Department of Energy.

"(5) The Secretary of Commerce shall appoint one member, who shall be an official of the Department of Commerce.

"(6) The Administrator of the National Aeronautics and Space Administration shall appoint one member, who shall be an official of that agency.

"(b)(1) Members appointed under subsection (a)(1)(B) shall serve for a term of two years.

"(2) Any vacancy in the membership of the panel shall be filled in the same manner as the original appointment.

"(c) The Director shall designate one of the members appointed under subsection (a)(1)(A) as chairman of the panel.

"BIENNIAL NATIONAL CRITICAL TECHNOLOGIES REPORT

"Sec. 603. (a) The panel shall submit to the President a biennial report on national critical technologies. Each such report shall identify those product technologies and process technologies that the panel considers to be national critical technologies. The number of the such technologies identified in any such report may not exceed 30. The reports shall be submitted not later than October 1 of even-numbered years.

"(b) For purposes of subsection (a), a product or process technology may be considered to be a national critical technology if the panel determines it to be a technology that it is essential for the United States to develop to further the long-term national security and economic prosperity of the United States.

"(c) Each such report shall include, with respect to each technology identified in the report, the following information:

"(1) The reasons for the panel's selection of that technology.

"(2) The state of the development of that technology in the United States and in other countries.

"(3) An estimate of the current and anticipated level of research and development effort in the United States, including anticipated milestones for specific accomplishments, by—

"(A) the Federal Government;

"(B) State and local governments;

"(C) private industry; and

"(D) colleges and universities.

"(d) Not later than 30 days after the date on which a report is submitted to the President under this section, the President shall transmit the report, together with any comments that the President considers appropriate, to Congress.

"ADMINISTRATION AND FUNDING OF PANEL

"Sec. 604. The Director of the Office of Science and Technology Policy shall provide administrative support for the panel. Funds for necessary expenses of the panel shall be provided for fiscal years after fiscal year 1990 from funds appropriated for that Office.

"EXPIRATION

"Sec. 605. The provisions of this title shall cease to be effective on December 31, 2000, and the panel shall terminate on that date."

(2) The Secretary of Defense shall reimburse the Director of the Office of Science and Technology Policy for the reasonable expenses, not to exceed \$500,000, incurred by the National Critical Technologies Panel during fiscal year 1990.

(b) **ANNUAL DEFENSE CRITICAL TECHNOLOGIES PLAN.**—(1) Chapter 148 of title 10, United States Code, is amended by adding at the end the following new section:

"§ 2508. Annual defense critical technologies plan

"(a) **ANNUAL PLAN.**—(1) The Secretary of Defense shall submit to the Committees on Armed Services of the Senate and House of Representatives an annual plan for developing the technologies considered by the Secretary of Defense and the Secretary of Energy to be the technologies most critical to ensuring the long-term qualitative superiority of United States weapon systems. The number of such technologies identified in any plan may not exceed 20. Each such plan shall be developed in consultation with the Secretary of Energy.

"(2) In selecting the technologies to be included in the plan for any year, the Secretary of Defense and the Secretary of Energy shall consider both product technologies and process technologies, including the technologies identified in the most recent biennial report submitted to the President by the National Critical Technologies Panel under title VI of the National Science and Technology Policy, Organization, and Priorities Act of 1976.

"(3) Each such plan shall cover the 15 fiscal years following the year in which the plan is submitted.

"(4) Such plan shall be submitted not later than March 15 of each year and shall be submitted in both classified and unclassified form.

"(b) **PRIORITIES AND FUNDING.**—Each plan submitted under subsection (a) shall—

"(1) designate priorities for development of the technologies identified in the plan; and

"(2) specify the funding requirements of the Department of Defense, the Department of Energy, and other appropriate departments and agencies of the Federal Government for the development of the technologies identified in the plan for the five fiscal years following the year in which the plan is submitted.

"(c) **CONTENT OF PLAN.**—Each plan submitted under subsection (a) shall include, with respect to each technology identified in the plan, the following:

"(1) The reasons for the selection of that technology, including—

"(A) a discussion of the consideration given to the most recent biennial report submitted to the President under title VI of the National Science and Technology Policy, Organization, and Priorities Act of 1976; and

"(B) the relationship of the technology to the overall science and technology program of the Department of Defense and the long-term funding strategy associated with that program.

"(2) A designation of the lead organization within the Department of Defense or the Department of Energy responsible for the development of the technology.

"(3) A summary description of the lead organization's plan for the development of the technology, including the milestone goals.

"(4) The amounts contained in the budgets of the Department of Defense, the Department of Energy, and other departments and agencies for the support of the development of such technology for—

"(A) the five preceding fiscal years; and

"(B) the fiscal year beginning in the year in which the plan is submitted; and

"(C) each fiscal year thereafter for which the Secretary of Defense, with respect to the Department of Defense, and the Secretary of Energy, with respect to the Department of Energy, has prepared a budget.

GOVERNMENT OFFICIALS

Mr. Arnold D. Aldrich
Associate Administrator
Office of Aeronautics, Exploration & Technology
National Aeronautics and Space Administration
600 Independence Avenue S.W.
Washington, D.C. 20546

Known as: Arnie
Phone: (202) 453-2693
Fax: (202) 755-3283
Secretary: Gaile Eastman

Dr. Frederick M. Bernthal
Deputy Director
National Science Foundation
1800 G Street, N.W.
Washington, D.C. 20550

Known as: Fred
Phone: (202) 357-9427
Fax:
Secretary:

Dr. James F. Decker
Director for Office of Energy Research (Acting)
Department of Energy ER-1
1000 Independence Avenue S.W.
Washington, D.C. 20585

Known as: Jim
Phone: (202) 586-5434
Fax: (202) 586-4102
Secretary: Barbara Chambers

Dr. Charles Herzfeld
Director, Defense Research & Engineering
Department of Defense
Room 3E 1014
Pentagon
Washington, D.C. 20301-3100

Known as: Charlie
Phone: (202) 697-5776
Fax: (202) 693-7167
Secretary: Maggie Souleyret

Dr. Ruth Kirchstein
Director
National Institute of General Medical Sciences
5333 Westbard Ave
Westwood Building Room 926
Bethesda, Maryland 20892

Known as: Ruth
Phone: (301) 496-7891
Fax:
Secretary:

Dr. William Phillips
Associate Director for Industrial Technology
Office of Science and Technology Policy
Executive Office of the President
Washington, D.C. 20506

Known as: Bill
Phone: (202) 395-3125
Fax: (202) 395-3719

Dr. Robert White
Undersecretary for Technology
U.S. Department of Commerce
Room 4822
14th and Constitution Avenue N.W.
Washington, D.C. 20230

Known as: Bob
Phone: (202) 377-1575
Fax:
Secretary:

PRIVATE SECTOR AND HIGHER EDUCATION

Dr. Robert W. Lucky
Executive Director of Research
Communications Sciences Division
ATT Bell Laboratories
Crawfords Corner Road
Room 4E 605
Holmdel, New Jersey 07733-1988

Known as: Bob
Phone: (201) 949-4477
Fax: (201) 949-5353
Secretary: Marlene Gannon

Dr. Richard Messinger
Vice President, Research & Development
and Chief Technical Officer
Cincinnati Milacron, Inc.
4701 Marburg Avenue
Cincinnati, Ohio 45209

Known as: Dick
Phone: (513) 841-8881
Fax: (513) 841-8584
Secretary: Lori Chowning

Prof. Alex Rich
Sedgewich Professor of Biophysics
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Known as: Alex
Phone: (617) 253-4715
Fax: (617) 253-8699
Secretary: Alice Colby

Dr. Charles V. Shank
Director
Lawrence Berkeley Laboratory
Building 50A Room 4133
1 Cyclotron Road
Berkeley, California 94720

Known as: Chuck
Phone: (415) 486-5111
Fax: (415) 486-6720
Secretary: Mrs. Mardel Carnahan

Dr. Albert R. C. Westwood
Vice President, Science
Martin Marietta Corporation
6801 Rockledge Drive
Bethesda, Maryland 20817

Known as: Bert
Phone: (301) 897-6626
Fax: (301) 897-6800
Secretary: Mona Moore

Mr. James Worsham
Chairman
GPA Asia Pacific
Pacific Corporate Towers
222 N. Sepulveda
El Segundo, CA 90245
(213) 322-2210

Known as: Jim
Phone: (213) 322-2577
Fax: Diane DeSilva
Secretary: