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Folder Title:
Industrial Technology/HPCC/HPC Act of 1991: Presidential Signing Ceremony

Stack:	Row:	Section:	Shelf:	Position:
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Mary Smit

12/15/92

Here is a Presidential
file. I have created a
duplicated ~~test~~ file for our
Federal/agency files.

Thx.

Jelly

Document Originally
Attached to
Following Page

Off. of
Cabinet
Affairs

12/15/92

solicited
Dr. Wong's
assistance w/
Signing Ceremony

December 3, 1991

To: Alison Kutchins
From: Gene Wong EW

Here are my thoughts:

Major beneficiaries in the Boston area:

DEC
Thinking Machines
Kendall Square Research
Bolt Beranek and Newman (BBN)

Other companies benefitting:

Wang
IBM
InterMetrics
Near Net
SofTech

Non-Profits

Lincoln Lab.
Draper Lab.
MITRE
Open Software Foundation

Universities

MIT
Harvard
Boston U.
Worcester Polytechnic
Brown

Major figures who should be highly visible:

Ken Olson (CEO, DEC)
Sheryl Handler (CEO, TMC)
Chuck Vest (Pres. MIT)
Neil Rudenstine (Pres. Harvard)
Marvin Minsky (MIT)
Danny Hillis (TMC)

Other national figures in HPCC industry

Robert Allen (AT&T)

John Akers (IBM)

John Young (HP)

John Rollwagen (Cray Research)

Seymore Cray

David Packard

Robert Galvin (Motorola)

John Scully (Apple)

December 5, 1991

**To: Alison Kutchins
From: Eugene Wong**

Proposed List of Attendees at the HPCC Signing Ceremony

**Dr. D. Allan Bromley
Director Richard Darman
Secretary Richard Cheney
Secretary James Watkins
Admiral Richard Truly, Administrator, NASA
Dr. Walter Massey, Director, NSF**

**Both or neither of the following two:
Dr. Sheryl Handler, CEO, Thinking Machines Corp.
John Rollwagen, CEO. Cray Research**

**If neither of the above
John Akers, CEO IBM**

**Secretary Robert Mosbacher
Secretary Lamar Alexander
Secretary Louis Sullivan**

To: Alison Kutchins
From: Eugene Wong

Talking Points for the Signing Ceremony
S. 272, The High Performance Computing Act of 1991

National Pride

Computer technology and the industry that it spawned are purely creations of American genius and the American system. These were made possible by the unique qualities of American society: freedom, innovation, openness, pragmatism, and entrepreneurial spirit, a combination found nowhere else in the world. In these areas, the United States has always led and continues to lead the world.

Technologies of the 21st Century

Information technology -- comprising computers, communications, and electronics, -- is one of the transcendental technologies of our time, on which much of the wealth creation of the 21st century will be based. Most of these technologies were invented in America. We must ensure that they continue to contribute to the nation's needs.

The High Performance Computing and Communications Program

The High Performance Computing and Communications Program is a Presidential Initiative proposed by the Administration to Congress with the FY92 Budget. It is a result of several years of coordinated planning by four federal agencies: the Defense Advanced Research Projects Agency (DARPA), the Department of Energy, the National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF). The planning effort has been coordinated by the White House Office of Science and Technology Policy and the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET).

Serving the Nation's Needs

The Program represents a major federal investment not only in developing the technologies of advanced computing but also in their timely and widespread deployment to serve the nation's needs. For this reason, five federal agencies with major application needs for high performance computing have joined the Initiative. These are: the Department of Education, the Environmental Protection Agency, the National Library of Medicine, the National Oceanic and Atmospheric Administration, and the National Institute of Standards and Technology.

Catalyst for Private Sector Actions

The Initiative is a fine example of how government, academia, and industry can work together to ensure that federal investments catalyze private investments to create jobs and new opportunities for economic growth. The Initiative has drawn keen interest and enthusiastic support from all sectors of the computing community. Some of the largest computer companies in the nation have provided input and recommendations. Their recommendations will be carefully studied.

Congressional Support

For all these reasons, I welcome the bipartisan support of Congress for this important program. S. 272 represents a fine example of Congressional leadership in technology and reflects productive cooperation between Congress and the Administration. Administration initiative, Congressional support, and enthusiastic private sector response represent three legs of a platform on which this important program rests. The nation is well served in the process.

December 6, 1991

TO: ALISON KUTCHINS
FROM: EUGENE WONG

The following information is for your use.

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Daphne Scott

THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release:

Monday, December 9, 1991

FACT SHEET:
High Performance Computing and Communications

The President today signed S. 272, a bill which endorses and legislatively authorizes his initiative to expand the Nation's investment in improved computing technology and networking capacity in order to strengthen American productivity and competitiveness in a wide variety of commercial and industrial fields.

Overview: The President's Proposals for Research and Development

High performance computing and communications (HPCC) is one of several areas of applied research and development in which the President has dramatically increased Federal investment. This initiative was one of several contained in the President's proposed fiscal year 1992 research and development budget of \$76 billion, a record amount and an increase of 18% in total Federal R&D spending since he took office. The President's HPCC initiative will significantly advance U.S. scientific and technological progress, education, competitiveness, medical science, and other areas of science and technology dependent upon high-speed computing power.

In addition to the high performance computing initiative, the President's proposals for Fiscal Year 1992 included a 34% increase, to over \$900 million, in high-payoff energy-related technologies; a 15% increase in non-defense manufacturing R&D; a 15% increase for applied R&D at the Commerce Department's National Institute of Standards and Technology (NIST); and over \$13 billion for basic research.

The interagency process which resulted in the high performance computing initiative is described in more detail below. The President's proposals this year included similar cross-cutting initiatives in mathematics and science education (for which the President has requested a 32% increase in funds in the past two years), and global change research (for which funding has doubled--to \$1.2 billion--since the President took office).

In his Fiscal Year 1993 budget, the President will present multi-agency initiatives for increased Federal investment in applied R&D in materials science and biotechnology.

THE HIGH PERFORMANCE COMPUTING AND COMMUNICATIONS INITIATIVE

- The President's Budget for Fiscal Year 1992 requested \$669 million, a 30 percent increase, for a major new High Performance Computing and Communications initiative.
- An HPCC Research Strategy was developed by an interagency committee under the auspices of the Federal Coordinating Council for Science, Engineering and Technology. The proposed strategy was published in a supplement to the President's FY 1992 Budget, entitled "Grand Challenges: High Performance Computing and Communications."
- Goals: The Administration's strategy contained three broad goals:
 1. Extend U.S. technological leadership in high performance computing and computer communications.
 2. Provide wide dissemination and application of the technologies both to speed the pace of innovation and to serve the national economy, national security, education, and the global environment.
 3. Spur gains in U.S. productivity and industrial competitiveness by making high performance computing and networking technologies an integral part of the design and production process.
- Program Elements: The HPCC program Goals would be accomplished through four interdependent program elements:
 1. High Performance Computing Systems (HPCS)- develop the underlying technology required for scalable parallel computer systems capable of sustaining a thousand fold improvement in computing speed over today's computers, or one trillion operations per second. (25% of FY 1992 budget)
 2. Advanced Software Technology and Algorithms (ASTA) - develop generic software technology and algorithms which can be used to demonstrate prototype solutions to the "Grand Challenge" problems. A Grand Challenge is a fundamental problem in science and engineering with broad economic and scientific impact that could be advanced by applying high performance computing resources. (41% of FY 1992 budget)
 3. National Research and Education Network (NREN) - deploy an interim network by upgrading existing facilities, capacity, and bandwidth and conduct the research and

development effort that will culminate in prototype development of a gigabit per second capability at a number of selected research and educational institutions. (14% of FY 1992 budget)

4. Basic Research and Human Resources (BRHR) - support long term basic research, increase the number of students in computational science, and transfer technology for industrial Grand Challenge applications. (20% of FY 1992 budget)

● Grand Challenges in Science and Technology: The HPCC Initiative will develop the technology to enable new solutions to fundamental problems in science and technology. These "Grand Challenges" include:

1. Forecasting Severe Weather Events. HPCC will help develop the next generation of weather prediction models that will allow greatly improved forecasting.
2. Solving the Molecular Riddle of Cancer. HPCC will help develop the computer capability to find known cancer-causing DNA sequences (genes) in the millions of sequences in each living organism.
3. Predicting New Superconducting Materials. HPCC can provide the capability to understand the structure of these materials and thus explore the possibility of better ones.
4. Minimizing Air Pollution. HPCC will provide the capability to analyze the interaction of pollutants -- which will be crucial to evaluating and optimizing control measures and the attainment of Clean Air goals.
5. Designing Better Aircraft. HPCC will enable computer simulations of flight which are much less costly and faster and can simulate flight regimes inaccessible in wind tunnels, contributing directly to maintaining U.S. preeminence in aeronautics.
6. Improving Energy Conservation. HPCC will provide the capability to understand the chemical reactions associated with combustion and will result in better, more efficient, and less polluting combustion systems in the future. It will also allow modelling and understanding of the behavior of combustion gases and their greenhouse and other properties in the atmosphere.
7. Designing and Packaging New Computer Chips. HPCC will enable the design of 21st century computer chips incorporating up to 10 million transistors per chip, far

outstripping the capabilities of the 1-2 million transistor chips of today.

8. Understanding and Predicting Global Change. HPCC will provide the ability to analyze, store, and distribute global change data to scientists all over the world and will lead eventually to improved predictions of global change.
9. Developing High-Speed Data "Highways". The network research supported by HPCC will lead to networks with much higher speeds and with the ability to reach many more people. This has the potential to revolutionize the workplace and education in the 21st century.
- Everyday Applications: In addition to these Grand Challenges, the reach of HPCC can be expanded even further to make possible advances in other areas that can be of direct benefit to millions of Americans and people all over the world. These include:
 1. Better health care and medical services. Patients will be linked directly to doctors through computers; doctors and hospitals can confer over long distances; and surgeons will "practice" difficult operations through computer simulation.
 2. Lifelong learning. HPCC can provide individualized, high-quality education to American students at all levels. Students will have direct access to libraries around the nation and the world, enabling, for example, "video field trips" to Amazon rain forests and Saharan deserts; adults in the workforce will receive education and training tailored to their needs and on a flexible schedule.
 3. Improved services for senior citizens, the disabled and housebound. Senior citizens, the disabled and housebound will be able to have personal interaction with their friends and family in distant places, as well as with health care and service providers.
 4. Broad access to public and private databases, electronic mail and other resources. Farmers will have direct access to crop or weather forecasts; small business owners will bid on contracts electronically.

- Budget Estimates: The details of the President's FY 1992 Budget for High Performance Computing and Communications are shown in the following table:

Budget Authority (\$ millions)

	<u>1991 Actual</u>	<u>1992 President</u>	<u>1992 Enacted</u>
<u>TOTAL</u>	516	669	657
<u>By Program Component</u>			
High Performance Computing Systems	117	154	153
Advanced Software Technology and Algorithms	230	285	279
National Research and Education Network	65	95	93
Basic Research and Human Resources	104	135	132
<u>By Agency</u>			
Defense	183	232	232
National Science Foundation	169	213	201
Energy	65	93	92
National Aeronautics and Space Administration	58	72	72
Health and Human Services	36	41	41
National Oceanic and Atmospheric Administration	1	10	10
Environmental Protection Agency	1	5	5
National Institute of Standards and Technology	2	3	3

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THE WHITE HOUSE
Office of the Press Secretary

For Immediate Release

December 9, 1991

REMARKS BY THE PRESIDENT
IN SIGNING CEREMONY
FOR THE HIGH PERFORMANCE COMPUTING ACT OF 1991

The Roosevelt Room

1:31 P.M. EST

THE PRESIDENT: Let me just thank you all for coming today. And I'm pleased to sign into law the High Performance Computing Act of 1991. This will implement the far-reaching initiatives on information technologies proposed to Congress in my Fiscal Year 1992 budget earlier this year.

I'd like to thank Director Darman; my science advisor Dr. Bromley; Secretary Watkins and Secretary Mosbacher; Chairman Boskin and Dick Truly -- Administrator Truly, Roger Porter, Director Massey, who are with us today. And I'd like, also, to thank Secretaries Cheney and Alexander who couldn't be with us today. And Bill Reilly also missing, but all of them playing an instrumental part in all of this. And then all of the other members of the administration that helped develop this initiative and secure enactment of this historic bill.

The development of high performance computing and communications technology offers the potential to transform radically the way in which all Americans will work, learn and communicate in the future. It holds the promise of changing society as much as the other great inventions of the 20th century, including the telephone, air travel and radio and TV.

This program will help researchers meet the grand challenges in science -- to unlock the secrets of DNA, to forecast severe weather events and to discover new superconducting materials.

It is no surprise that America holds the lead in high performance information technology. Our greatest technological strides have been made possible by the unique qualities of American society: freedom, innovation, entrepreneurial spirit, a combination found nowhere else in the world. And this program will sustain and extend that leadership position.

The High Performance Computing Initiative is part of an overall strategy, advanced by this administration to enhance our competitiveness. My \$76-billion R&D budget proposal for this year included increased investment in both basic research and in additional key areas of applied research, such as material science, advance manufacturing, biotechnology and energy-related R&D.

In addition to these critical investments in R&D, we've been working to prepare America to compete in the next century by opening up foreign markets to U.S. export through a new GATT round and a North American Free Trade Agreement; proposing tax policies, such as making permanent that R&D tax credit, and reducing taxes on capital gains to promote long-term investment, and preparing our work force to compete through sharp increases in funding for math and science education and through our America 2000 broad reform initiative.

The initiative involves eight federal agencies, all of which would contribute to development of this new technology, and we

MORE

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share in its benefits. Private industry will work closely with federal agencies and labs in the planning, funding and management of this initiative to ensure that the fruits of this research program will be brought into the educational and commercial marketplaces just as soon as possible.

The High Performance Computing Initiative is an excellent example of the philosophy of this administration: to invest in the future, to create new jobs and new opportunities for sustained economic growth. It is also an excellent example of how government, industry and academia can work together to develop new and important technologies.

And so, once again, welcome. And with that, it gives me great pleasure now to sign this legislation which will benefit Americans today and on into the next century.

(The document is signed.)

END

1:35 P.M. EST