

MAY 11 1972

FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Minutes of Meeting - 17 March 1972

The meeting convened at 2:00 p.m. in room 208 of the Old Executive Office Building, Washington, D. C.

Attendance:

Members:

Dr. Edward E. David, Jr.	CHAIRMAN	OST
Dr. Lawrence A. Goldmuntz	Executive Secretary	OST
Dr. Ned D. Bayley		Agriculture
Mr. Harold B. Finger		HUD
Dr. Albert Hayward (for Dr. John S. Foster, Jr.)		DOD
Dr. Clarence A. Larson (for Dr. James R. Schlesinger)		AEC
Dr. Richard B. Marsten (for Dr. Merlin K. DuVal)		HEW
Dr. Homer Newell (for Dr. George M. Low)		NASA
Mr. Herman Pollack		State
Dr. Martin Prochnik (for Dr. William T. Pecora)		Interior
Dr. H. Guyford Stever		NSF
Mr. William K. Steber (for Dr. Robert H. Cannon, Jr.)		DOT
Dr. James H. Wakelin		DOC

Observers:

Mr. Walter R. Burkhart (for Mr. Martin B. Danziger)	Justice
Dr. David Challinor (for Dr. S. Dillon Ripley)	Smithsonian
Mr. John D. Darroch	CEA
Dr. Clarence (Terry) Davies (for Dr. Russell E. Train)	CEQ
Dr. Stanley M. Greenfield	EPA
Mr. Hugh F. Loweth (for Dr. Donald B. Rice)	OMB
Mr. Fred Warren (for Mr. John N. Nassikas)	FPC

Others:

Mr. Ellis L. Armstrong	Interior
Dr. Raymond L. Bisplinghoff	NSF
Mr. William Coupland	NASA
Dr. Spofford G. English	AEC
Dr. M. Frank Hersman	NSF
Mr. R. F. Hill	FPC
Mr. Carlyle E. Hystad	OMB
Mr. Edwin J. Istvan	NBS
Dr. Alan McAdams	CEA

NSF-NBS Technology Stimulation

Dr. James H. Wakelin, Jr. and Dr. Raymond L. Bisplinghoff presented an interim report on the NSF and NBS technology stimulation programs as they will be proposed to the Congress in support of the Administration's FY '73 budget request. Outlines of their talks are enclosed with these minutes.

Interim Report of Energy R&D Goals Committee

Mr. J. Frederick Weinhold presented an interim report on the FCST Energy R&D Goals Committee. Eleven panels have been established under the sponsorship of various federal agencies. A list of these panels is appended to these minutes. The work of the panels will be completed by 1 July 1972. An Office of Science and Technology overview panel is now being appointed. It is expected that they will complete their work by the end of the summer. The final report of the Energy R&D Goals Committee will be presented to the Federal Council at its 26 September 1972 meeting.

Sharing of U.S. -French Science Facilities

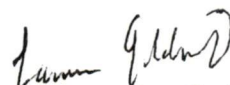
This item was postponed for a subsequent Federal Council meeting.

Committee on Intergovernmental Science Relations

There were some reservations with respect to the recommendations of the Committee as presented by Dr. S. Frank Hersman. It was agreed that individual agencies would submit their reservations to the Executive Secretary of the Federal Council and that they would be incorporated in the Committee's final recommendations before distribution. The modified recommendations are attached.

Interagency Committee on Excavation Technology

Commissioner Ellis L. Armstrong presented a brief review of the activities of the committee.


Lawrence A. Goldmuntz
Executive Secretary

Approved by the Chairman
on _____

Attachments - 2

1. List of Energy R&D Goals Committee Panels.
2. Modified Recommendations of CISR Report.

REFERENCES

- * National Science Foundation Management Plan for National R&D Assessment Program
Presentation to the FCST 17 Mar. 72 by Dr. Raymond L. Bisplinghoff, Deputy Director, NSF
- * National Bureau of Standards Experimental Technology Incentives Program
Talking paper and charts used in presentation to the FCST 17 Mar. 72 by Assistant Secretary of Commerce James H. Wakelin, Jr.
- ** Report of First Year Activities of the FCST Interagency Committee on Excavation Technology
Presentation to the FCST 17 Mar. 72 by Commissioner Ellis L. Armstrong, Bureau of Reclamation, Dept. of the Interior, and Chairman above committee.
- ** A Research Program for Rapid Underground Construction -- Stillwater Tunnel: A Practical Laboratory
August 1971 Dept. of Interior document.
- ** Tunnels -- Machine Excavation - Rate of Progress - Machine Data
Dept. of Interior Technical Report No. REC-ERC-72-9 dtd Feb. 1972.
- ** Development of Tunneling Methods and Controls
Ellis L. Armstrong presentation at 3-7 Feb. 1969 ASCE National Meeting on Water Resources Engineering, New Orleans (Oct. 70 reprint from Journal of the Construction Division, ASCE)
- ** Recommendations of the FCST Committee on Intergovernmental Science Relations
Presented to FCST 3/17/72 by Dr. M. Frank Hersman, NSF
- ** Federal/State Science Policy and Connecticut: A Futures Research Workshop
Report R-24 dtd Oct. 71 by Selwyn Enzer of Institute for the Future, Middletown, Conn. - distributed by Dr. Hersman
- ** Presidential Message to Congress on Science and Technology and Fact Sheet
White House Press releases dated 16 March 1972

* Distributed with minutes.

** Distributed at 17 Mar. 72 FCST meeting.

Energy R&D Goals Study

Technology Panels

<u>Panel</u>	<u>Executive Secretary</u>
1. Clean Fuels From Coal	Neal Cochran
2. Advanced Central Station Fossil Fueled Electric Power Systems	Neal Cochran
3. Oil and Gas Production	William L. Crentz
4. Nuclear Fusion	Robert Hirsch
5. Nuclear Breeder Strategy	Merrill Whitman
6. Total Energy - Urban Systems	Gerald Leighton
7. Synthetic Fuel Systems	Merrill Whitman
8. Electrical Systems	Francis F. Parry
9. Solar Energy	William R. Cherry
10. Transportation Energy Systems	A. C. Mailliaris
11. Geothermal Energy	Dick Fiske

4/17/72

April 17, 1972

Recommendations to the Report of the FCST Committee on
Intergovernmental Science Relations

The Committee recommends that:

Policy

1. The Federal government seek and incorporate the views of State and local governments in the formulation of those aspects of national science and technology policy related to State and local requirements and problems.
2. Federal agencies seek to identify science and technology applications of their Research and Development programs which could be useful to State and local governments.
3. The Federal government actively undertake to disseminate to State and local governments the scientific and technological knowledge which it develops related to the needs of these levels of government.
4. National science and technology programs incorporate the following functions:
 - A. Consultation with State and local government representatives in setting research priorities and allocating resources in areas related to State and local requirements and problems.
 - B. Strengthening the capacity of State and local governments to utilize and, where appropriate, to develop their own scientific and technological knowledge.
 - C. Improved mechanisms for the dissemination and use of scientific and technological knowledge at the State and local government level.

Operations

5. The Director, Office of Science and Technology, designate a lead Federal agency to assume the responsibility for implementing the policy recommendations of this report, utilizing policy guidance from the Federal Council for Science and Technology and appropriate representatives of State and local governments.

Identification of Federal R&D of Benefit to State and Local Governments

6. The Federal Council for Science and Technology in extension of the objectives of the Intergovernmental Cooperation Act of 1968, consider establishing a task force which (in cooperation with affected Federal agencies) can explore improved procedures and organizational arrangements for identifying those technology programs and projects which might be of interest to or meet the needs of State and local governments.
7. The task force undertake a comprehensive survey of State and local governments, in cooperation with State and local science and technology councils, agencies or professionals, to determine which problems they feel should receive priority in the application of science and technology to State and local needs. The task force should also assess how the impact of Federal grant-in-aid programs might be improved through requirements that State and local government units will use funds to obtain those services and commodities that embody "best practices" techniques or use of advanced technology. The Committee's preliminary survey efforts could be a starting point for this effort.

Consultation with State and Local Representatives

8. Federal agencies conduct periodic reviews of R&D activity in consultation with State and local governments to determine the need for revisions of Federal programs, or possibilities for prototype testing and applications in areas related to State and local requirements and problems.
9. The Office of Science and Technology in its annual series of Federal agency program reviews request, where appropriate, a showing of measures taken and planned to strengthen agency couplings with State and local governments.

Strengthening the S&T Capacity of State and Local Governments

10. The lead agency encourage and assist State and local governments to establish mechanisms for the development and coordination of science and technology programs. Among possible useful arrangements would be an Office of Science and Technology,

science advisory council to the Governor or mayor or an expansion of the activities of a State or city planning board or major department. In addition, State legislators and city councils should be assisted to develop similar staff capabilities or science advisory mechanisms.

11. The task force (see recommendation 6) assess the need for new or modified Federal programs to expand opportunities for State and local government employment of scientists and engineers. Particular attention should be given to the possibilities of employing displaced aerospace scientists and engineers and recent graduates in positions relevant to their training and experience in State and local governments.
12. The Federal Government:
 - A. Search out opportunities for intergovernmental exchange of scientific and technical personnel.
 - B. Maintain a scientific and technical manpower clearinghouse for State and local governments.
 - C. Support in-service training of State and local program managers to expand their awareness of opportunities for utilizing new scientific and technological developments.
 - D. Assist State and local governments under the provisions of the Intergovernmental Personnel Act of 1970 in achieving realistic position classifications and competitive salary structures for quality scientific and technical personnel.

Creation of Mechanisms to Improve Science and Technology Dissemination

13. Funds be provided to support joint Federal-State-Local public technology research projects with potential for widespread applications in State and local governments. These projects could involve one or more State and local government units with the research performed in-house or contracted out. Consideration should be given to the creation of State-sponsored regional research institutes to provide larger scale efforts and avoid unnecessary duplication of effort.

14. New institutional arrangements be created between academic institutions and State and local governments, such as the Urban Observatory Program of HUD and the Office of Education of HEW, to deal with the application of science and technology to State and local problems.
15. Federal laboratories be made available, where appropriate, for use by State and local agencies on a reimbursable basis, or in some instances, using specifically identified Federal funds for State and local projects where authorized and appropriate.
16. The lead agency in cooperation with the Office of Science and Technology study the benefits and costs of a Federal centralized data bank on science and technology projects, both in government and private industry, and the establishment of an information service to State and local governments.

NATIONAL SCIENCE FOUNDATION

MANAGEMENT PLAN FOR NATIONAL R&D ASSESSMENT PROGRAM

presentation made by
Dr. Raymond L. Bisplinghoff, Deputy Director
National Science Foundation

at the
17 March 1972 meeting of the

Federal Council for Science and Technology

MANAGEMENT PLAN FOR NATIONAL R&D ASSESSMENT PROGRAM

- A. OVERALL PROGRAM MANAGED AT THE BEGINNING FROM DIRECTOR'S OFFICE BY DEPUTY DIRECTOR.
- B. THE PROGRAM WILL BE PERFORMED BY A GROUP OF ANALYSTS ON THE NSF STAFF AND THROUGH CLOSELY MONITORED GRANTS AND CONTRACTS WITH UNIVERSITIES AND OTHER APPROPRIATE INSTITUTIONS.
- C. PROPOSALS FOR GRANTS AND CONTRACTS WILL BE RECEIVED ON BOTH A SOLICITED AND UNSOLICITED BASIS. GUIDELINES AND CRITERIA FOR UNSOLICITED GRANTS WILL BE ISSUED DESCRIBING THE PROGRAM.
- D. PROPOSALS FOR GRANTS WILL BE EVALUATED BY NSF STAFF WORKING WITH AN OUTSIDE PANEL FOR ADVICE ON OVERALL BALANCE OF THE PROGRAM.
- E. INDIVIDUAL PROPOSALS WILL BE SUBJECT TO PEER GROUP REVIEW. FINAL CHOICE OF APPROVALS WILL BE MADE BY NSF.

THE GOAL OF THE NATIONAL SCIENCE FOUNDATION EXPERIMENTAL R&D INCENTIVES PROGRAM IS TO EXPERIMENT WITH INCENTIVES FOR INCREASING NON-FEDERAL INVESTMENTS IN R&D AND FOR INCREASING THE EFFICIENCY AND SPEED OF CONVERSION OF R&D TO NEW OR IMPROVED PRODUCTS, PROCESSES, AND SERVICES WHICH CONTRIBUTE TO IMPROVEMENTS IN THE QUALITY OF LIFE, EMPLOYMENT OPPORTUNITIES, ECONOMIC GROWTH, PRODUCTIVITY, AND FOREIGN TRADE BALANCE.

FLOW OF INNOVATIONS

The flow of innovations may be described in terms of interaction of three sectors of society:

- (1) The R&D centers, consisting of universities, research institutes, governmental and industrial laboratories, and R&D companies. Within the R&D centers, we can identify three resources: dormant technology, new innovations, and human resources.
- (2) The industrial and service sectors, consisting of private manufacturing, private services, and public services. These sectors are characterized by the products, processes and services they offer, the industry, and the degree to which technology is employed.
- (3) The markets, domestic and foreign, consisting of consumers, government, and industry. The markets may be well-defined, diffuse or non-existent.

PROGRAM DESIGN

Experimental R&D Incentives Program

Underlying the design of the Experimental R&D Incentives Program is a set of assumptions:

1. There exists the potential for spawning new innovations in the civilian sector by coupling more effectively R&D resources to needs of the private and public sectors, and industrial resources to the needs of the consumer.
2. Many such potential developments are in the best interests of the Nation and the participants, and some fraction of this potential is presently going untapped.
3. The Federal Government can provide incentives which will catalyze the realization of some of this potential in a manner which is cost-effective and socially beneficial from the national viewpoint.

MANAGEMENT PLAN FOR NATIONAL EXPERIMENTAL R&D INCENTIVES PROGRAM

- A. Overall program managed at the beginning from Director's office by Deputy Director.
- B. The R&D Experimental Incentives Program will be directed by a program office using the staffs of the several NSF directorates for program management.
 - (a) An Advisory Board, made up of representatives of universities, industry, State and local government, labor unions, industrial associations and professional societies will be formed.
 - (b) An Important Notice will be issued describing the program in terms of guidelines and inviting proposals for experiments.
 - (c) Proposals for experiments will be evaluated by NSF staff working with the Advisory Board and with an NSF-NBS coordinating committee.
 - (d) Program implementation will be supervised by NSF staff. Internal NSF coordination will be assured by NSF committee chaired by Deputy Director.
 - (e) Each experiment will be evaluated:
 - (1) According to a plan which is built into the original proposal.
 - (2) Independently by an NSF group which will include the R&D Assessment Program staff.

EXPERIMENTAL PLAN INVOLVES THREE CONSIDERATIONS

First, the problem areas within which the experiments will be performed will involve the potential for both social and private benefits. They will include the public service, private service, and manufacturing sectors.

Second, each experiment will identify one or more blockages in the innovation process and test Federal incentives for overcoming them.

Third, each experiment will require evaluation to determine the degree to which the incentive mechanisms succeed. The evaluation process will be continuous, that is, it will be carried out not only at the conclusion but also during the course of the experiment. Although lessons will be learned early in many experiments, some will need to be carried on for periods of five or more years before useful results will be obtained.



ELEMENTS OF INCENTIVE EXPERIMENTS

FOUR ELEMENTS

(1) EXPERIMENTAL VARIABLES

INDEPENDENT VARIABLES, I_i

- { I_i }-
- INSTITUTIONAL COMBINATIONS
 - INSTITUTIONAL COUPLING
 - PEOPLE TRANSFER
 - EDUCATION INVOLVEMENT
 - NON-FEDERAL FUNDING
 - SOCIAL FACTORS
 - PROBLEM AREA

DEPENDENT VARIABLES, D_i

- { D_i }-
- RESIDUAL NON-FEDERAL RESOURCES
 - NEW OR IMPROVED PRODUCTS, PROCESSES
 - SERVICES
 - EMPLOYMENT OPPORTUNITIES
 - PRODUCTIVITY
 - FOREIGN TRADE
 - SOCIAL RETURNS
 - PRIVATE RETURNS

(2) HYPOTHESES, H_i

$$D_i = F_{ij}(H_j) \quad , \quad H_i = G_{ij}(I_j)$$

(3) EXPERIMENTS TO TEST HYPOTHESES

(4) EVALUATION OF EXPERIMENTS

TENTATIVE GUIDELINES FOR EXPERIMENTS

- o Each experiment should identify the product, process, service, or other end sought.
- o Each experiment should have a high potential for testing a clearly stated and important hypothesis related to blockages in the innovation process together with Federal incentives for overcoming them.
- o Each experiment will contain a significant commitment of non-Federal resources.
- o Each experiment should specify the degree of private and public investment over the life of the experiment.
- o Participating institutions must agree to make data available to NSF for purposes of evaluation.
- o Experiments and results will be public, subject to protection of rights to the use of patentable inventions in appropriate instances.
- o Each applicant must demonstrate that:
 - The experiment is in the public interest.
 - There is a clear need for public investment.
- o Each experiment will generally involve more than one class of institution (e.g., industry--non-profit research institutes--university--government) and in each experiment, at least one of the participating partners should:
 - Have a demonstrated research capacity.
 - Represent the potential institutional users of the product, process, or service.

EVALUATION OF EXPERIMENTS

Although the criteria may vary, it is expected that the following will be common to most evaluations:

- o What specific blockages in the innovation process were identified and tested by the experiment?
- o What incentives were identified and how effective were they in overcoming the blockages?
- o How is the efficacy of the incentives affected by type, size, and geographic location of the institutions?
- o Did any new or improved products, processes, patent disclosures, or services result from the experiment and what benefits were realized as a result?
- o Did any new companies, institutions, or institutional arrangements result from the experiment?
- o Were the institutional relations formed strong enough to have a high potential for permanency?
- o What specific Federal policies and programs were recommended to overcome the blockages that were identified?

- o Each experiment must have a specific evaluation component built in at the beginning; some degree of success or failure of the incentive mechanism must be determinable at the close of the experiment.

EXPERIMENTAL RESEARCH & DEVELOPMENT INCENTIVES PROGRAM (FY 1973) \$22,000,000

Cooperative Research & Development Incentives \$11,000,000

<u>Project</u>	<u>Estimated Number of Awards</u>	<u>Approximate* Level of Awards</u>	<u>Total</u>
Program Definition	80	\$50,000	\$4,000,000
Cooperative Incentives Projects	13	\$250,000	\$6,500,000
Short-Term Studies	10	\$50,000	\$500,000

Research & Development in the Service Sector \$7,000,000

<u>Project</u>	<u>Estimated Number of Awards</u>	<u>Approximate* Level of Awards</u>	<u>Total</u>
Technology Diffusion	20	\$100,000	\$4,000,000
Market Aggregation	8	\$125,000	\$1,000,000
State and Local Government Innovation Projects	10	\$100,000	\$2,000,000

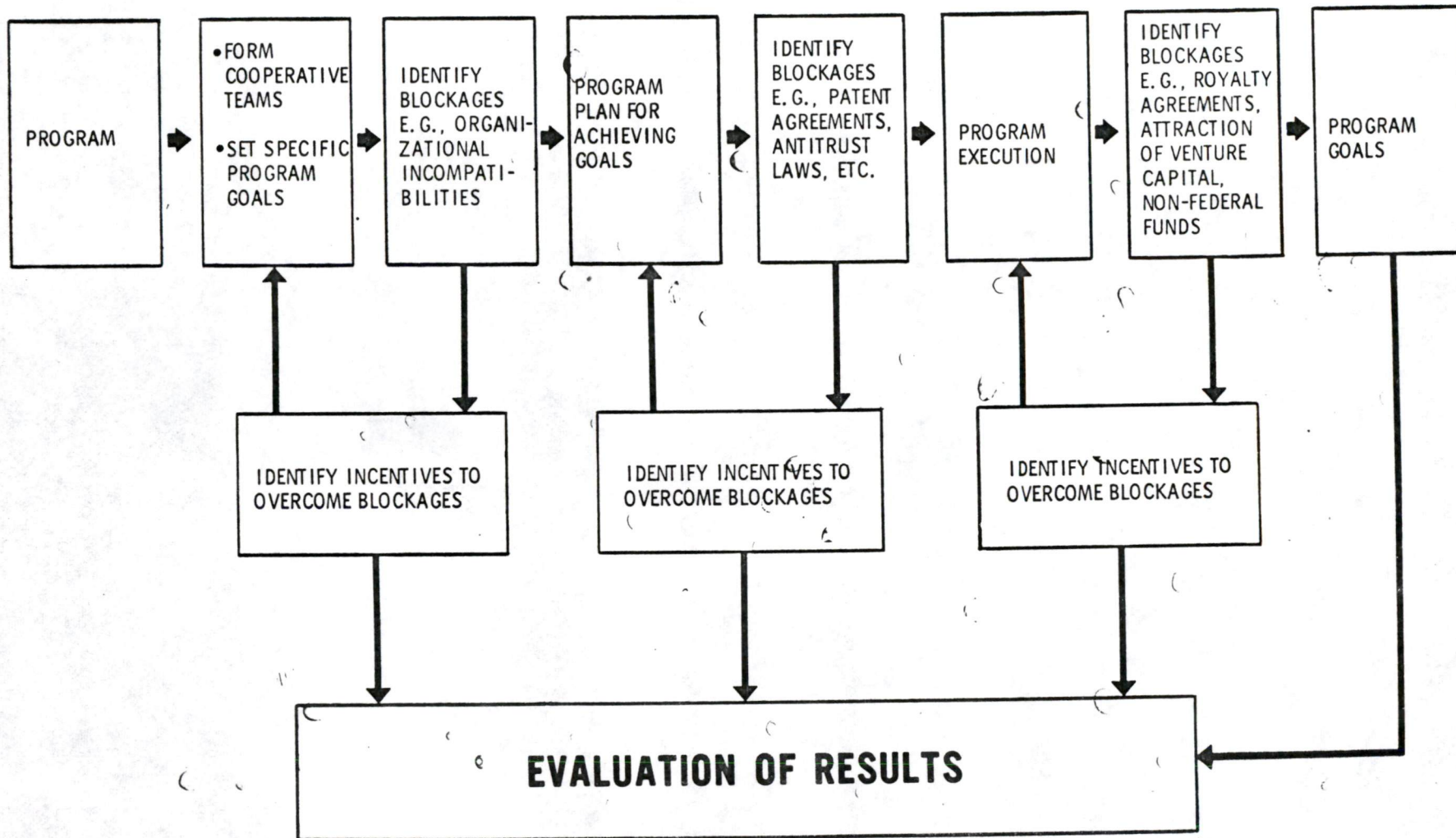
Human Resources for Technology Innovation \$4,000,000

<u>Project</u>	<u>Estimated Number of Awards</u>	<u>Approximate* Level of Awards</u>	<u>Total</u>
Education and Personnel Interchange	60	--	\$3,000,000
Enhanced Job Satisfaction	8	\$125,000	\$1,000,000

*Levels shown are approximate annual figures with step funding over a three-year period in some cases.

NATIONAL R&D ASSESSMENT PROGRAM GOAL

THE GOAL OF THIS NEW PROGRAM IS TO ACHIEVE A FULLER UNDERSTANDING OF THE RELATIONSHIP BETWEEN THE R&D AND THE INNOVATION PROCESS AND HOW THIS UNDERSTANDING MAY CONTRIBUTE TO THE ACHIEVEMENT OF NATIONAL GOALS AND OBJECTIVES--IMPROVEMENTS IN THE QUALITY OF LIFE, EMPLOYMENT OPPORTUNITIES, ECONOMIC GROWTH, PRODUCTIVITY AND FOREIGN TRADE BALANCE.



Program Element Dependent Variables	COOPERATIVE R&D INCENTIVES			R&D IN SERVICE SECTOR			HUMAN RESOURCES FOR TECHNOLOGY INNOVATION	
	Program Definition	Cooperative Incentives	Short-Term Studies	Technology Diffusion Projects	Market Aggregation Projects	State & Local Government	Personnel Inter-changes	Enhanced Job Satisfaction
1. Increase in non-Federal R&D expenditures		X		X	X	X	X	
2. Increased Productivity		X		X	X	X	X	X
3. New and improved products, processes and services which are commercially viable	X	X			X	X	X	
4. Jobs generated, jobs preserved		X			X	X		
5. Social benefits		X		X	X	X	X	X
6. Increased supply of new technological entrepreneurs, technologically based new enterprises		X		X	X		X	X
7. New exports		X						
8. Institutional changes		X		X	X	X		X
9. Improved quality of products, processes, services		X		X	X	X	X	X

Program Elements \ Blockages	Information	Technical*		Market	Human Resources	Managerial	Legal, Social, Legislative, Regulatory	Other, e.g., Geographical, Foreign Competition
		Institutional	Incubation					
<u>COOPERATIVE RESEARCH INITIATIVES</u>								
\$11 Million								
1. Program Definition Goals \$4 Million	X	X						
2. Cooperative Incentives Program \$6.5 Million			X					
3. Short-Term Studies \$0.5 Million								X
<u>R&D IN SERVICE SECTOR</u>								
1. Technology Diffusion \$4 Million						X		
2. Market Aggregation \$1 Million				X				
3. State and Local Government Innovation Programs \$2 Million		X						
<u>HUMAN RESOURCES FOR TECHNOLOGICAL INNOVATION</u>								
1. Personnel Interchange \$3 Million	X							
2. Enhanced Job Satisfaction \$1 Million					X			

Talking Paper for Use by

Asst. Secretary James H. Wakelin, Jr.

at Meeting of

The Federal Council for Science & Technology

17 March 1972

Experimental Technology Development
and
Application Incentives

During FY 1973, the National Bureau of Standards is requesting funds for a new program directed towards focusing scientific research and technology on solving our domestic problems, increasing our productivity and improving our competitive position in international trade. This request which is for 14.4 million dollars is in response to responsibilities assigned by the President in the 1973 Budget as part of a \$40 million program shared with the National Science Foundation.

This proposed NBS program will investigate--by actual experience in cooperation with the private sector--the usefulness of a variety of incentives and mechanisms to stimulate the generation and application of private research and development in ways that will make our economy more competitive, improve its productivity, and provide new technological solutions to national problems. As the program proceeds, we expect it to result in some very useful science and engineering. But the primary result will be better understanding of the market environment for research and innovation and new experience with ways in which industry can seize the opportunities afforded by our national investment in science and technology. It should be emphasized that decisions relating to the implementation of the mechanisms and incentives studied in this program are outside the province of the National Bureau of Standards.

Although this program represents a new collaborative approach with industry, NBS has had a long history of experience in interacting with industrial organizations. This is exemplified by the Bureau's participation in private sector and international standardization committees, the industrial research associate program which helps to stimulate R & D in industry, and the interaction with evaluation panel members.

A principal feature of the proposed Experimental Technology Incentives Program is its reliance on the initiatives of the private sector in identifying mechanisms and experiments that should be undertaken.

Experiments will be sought in which contributions from private industry and other benefiting institutions will be comparable to or exceed the Federal contribution during the lifetime of the experiment. Industry's willingness to invest will be the best assurance that the opportunity has realistic commercial application. Other important considerations that will be employed in designing experiments for this program are that any Federal funds put into these experiments will stimulate new activities and/or additional private investment. Preference will be given to experiments in which there is evidence that more effective transfer of research and development to applications can be achieved. Arrangements for experiments will include appropriate mechanisms which recognize proprietary interests. The public interest, to the extent that Federal funds are involved, will be properly reflected in

the arrangements, and research and technology developed under this program will be made fully available to all appropriate parties. As the possible experiments are defined, we expect to provide an opportunity for public review and comment, thereby ensuring that the experiments are soundly conceived and that any questions about the impact of any given project on the competitive position of companies within an industry are raised and resolved in advance.

The NBS program, which for convenience we refer to as the NBS Experimental Technology Incentives Program, contemplates the following Program Elements.

- I. Identifying and Addressing Industry-Wide Technical Opportunities -- Since many opportunities for technical advance arise from industry-wide problems, cooperation with technical groups representing major industry associations, as well as with individual companies, to identify new solutions to such problems, appears useful and appropriate.

- II. Aggregation of Research and Development Capability -- This contemplates mechanisms to encourage joint ventures, perhaps through industrial or research associations, to undertake particular developments within an industry which is composed of producers individually so numerous as to create a highly splintered R&D effort directed towards industry-wide needs.

- III. Assistance to Inventors and Small Innovative Firms -- In consultation with the National Inventors Council, whose secretariat is at NBS, the National Commission on Productivity, and with the Small Business Administration, the program contemplates the evaluation of existing assistance programs for inventors and the development of experiments /demonstrating new forms of assistance to inventors and small firms.
- IV. Experiments Dealing with the Transfer of Government-Held Technology -- Facilitated by the Government's new patent policies, we look to evaluating new arrangements under which Government patents now in force might be licensed to companies in ways which will provide adequate incentives to insure their vigorous exploitation. Experiments involving formal joint programs of research between Government R&D laboratories and private R&D laboratories are anticipated as part of this program as one of the mechanisms to be evaluated for enhancing technology transfer.
- V. Government Procurement as an R&D Incentive -- Industry and Government cooperation in the development of performance specifications which extend the state of the art, while at the same time providing a market base for new products, can serve to stimulate development within the private sector.

VI. Stimulating Technology Through Market Aggregation --

Standardization activities and, in particular, the R&D on which they are based, are generally underfunded in industry. Yet by virtue of their impact on quality control, compatibility and interchangeability, and product performance, they often have major impact on the competitiveness and productivity of an industry. Working through nationally recognized standardization bodies, this program will examine new arrangements to enhance industry participation in such activities. Additionally, the development of common purchase specifications for use by diverse local service institutions, may provide significantly expanded market potentials against which industry can respond with new innovative developments.

VII. Evaluation of Advanced Technologies to Enhance

Productivity -- Many scientific and engineering advances hold the promise of enhancing productivity within the commercial, industrial, and service sectors of our economy. The program contemplates various mechanisms such as studies, symposia, demonstration tests, and adaptive research carried on in cooperation with private sector participants representative of both contributors to and users of such technologies, in order to assess the potential of such advances, and to foster their development.

In effect, each of these Program Elements corresponds to the class of incentives or mechanisms which would be the subject of study within an experiment.

A fundamental feature of the NBS program is the reliance we are placing on the initiatives from the private sector in identifying mechanisms and experiments that should be undertaken. We in government do not have all the answers. We believe that the profit motive is still the best incentive for private sector R&D. Thus, we will look for cost-sharing programs, where the commitment of the company or industry gives confidence that the technology will find its way to the marketplace, and that something of permanent value for the country can result.

In order to assure ourselves of the willingness of the private sector to participate on a cooperative basis in experiments looking to investigate the usefulness of various incentive mechanisms, we have, over the past few weeks, consulted with over 500 leaders representing private companies, trade associations, research organizations (both non-profit and for-profit), professional societies, associations of local governments, and universities and colleges. We have contacted the members of the Inventors Council and the members of our Evaluation Panels which oversee the work of the major units of NBS. In each case we have requested responses in the following three general areas:

- (a) What is the overall reaction to the broad aspects of the proposed program?

- (b) Would there be a willingness to participate in the program on some sort of a matching funds basis?
- (c) If so, are there particular experiments that might be suggested as meaningful?

We have been gratified by the universally favorable response to the overall concept of the proposed program, the willingness of industrial groups to join together cooperatively for this purpose, and to squarely meet such a program on some kind of a "matching funds" participation basis.

More than 80 potential experiments have already been suggested to be conducted under the program in order to learn more about incentive mechanisms. These suggestions have one thing in common: they all look to some specific and identifiable technology around which the experiment is structured, and which serve as the vehicle for the experiment. These range from new technologies requiring R&D perfection or adaptation for use in the commercial marketplace, to existing technologies which require not so much R&D as entrepreneurship to reach the commercial marketplace. Clearly, not all of these suggestions are of equal technical or commercial merit. Nor is it likely that all would be equally effective in providing understanding of the mechanism which is the subject of the experiment. Nonetheless, even at this early date, it is evident that at least half of these suggestions merit further exploration as potential experiment proposals for the program.

Some of the results of this informal "Feasibility Review" are highlighted in the following charts:

Chart 1. List of Types of Experiments

Chart 2. Distribution of Experiments

Chart 3. Applications for the Technology from Proposed Experiments

Chart 4. Funding Sources

Chart 5. Cost of Experiments by Type

Chart 6. Cost Distribution for Experiments

Chart 7. Duration of Experiments

This Feasibility Review provides a good deal of confidence in the soundness of the overall concept, as well as an indication of the probable structuring and fund allocations which will be called for within the program.

It is important to emphasize that in the program we do not intend to stimulate research as an end in itself but as a means to understanding the mechanisms which can stimulate research and commercial exploitation of technology. It should be clear that no one expects this program of experiments to make a short-term impact on the U.S. economy as a whole. The results of the experiments would have to be evaluated, along with the NSF program and the experience of other agencies in order to

determine future strategies for enhancing our national R&D capability and putting it to work for public benefit.

I would like now, to talk informally to the coordination of NSF and NBS activities for the conduct of the program. Dr. Bisplinghoff and I have had our staffs working toward the development of a simple statement which would serve to formalize these arrangements. ~~(Copy Attached)~~

- Informal Discussion Proceeds -

Copy of CHARTS ATTACHED.

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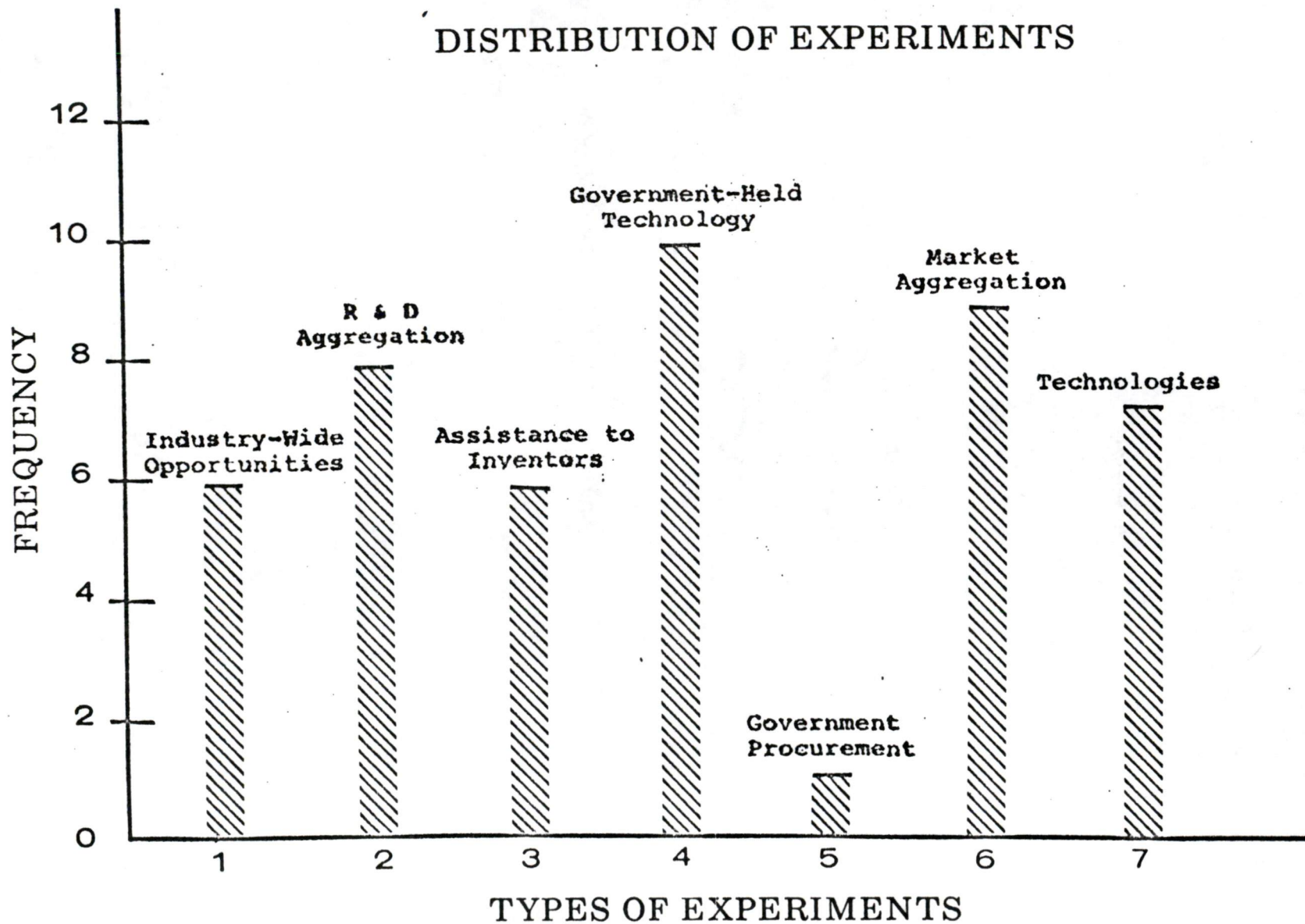
NBS EXPERIMENTAL TECHNOLOGY INCENTIVES PROGRAM

TYPES OF EXPERIMENTS

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NBS EXPERIMENTAL TECHNOLOGY INCENTIVES PROGRAM

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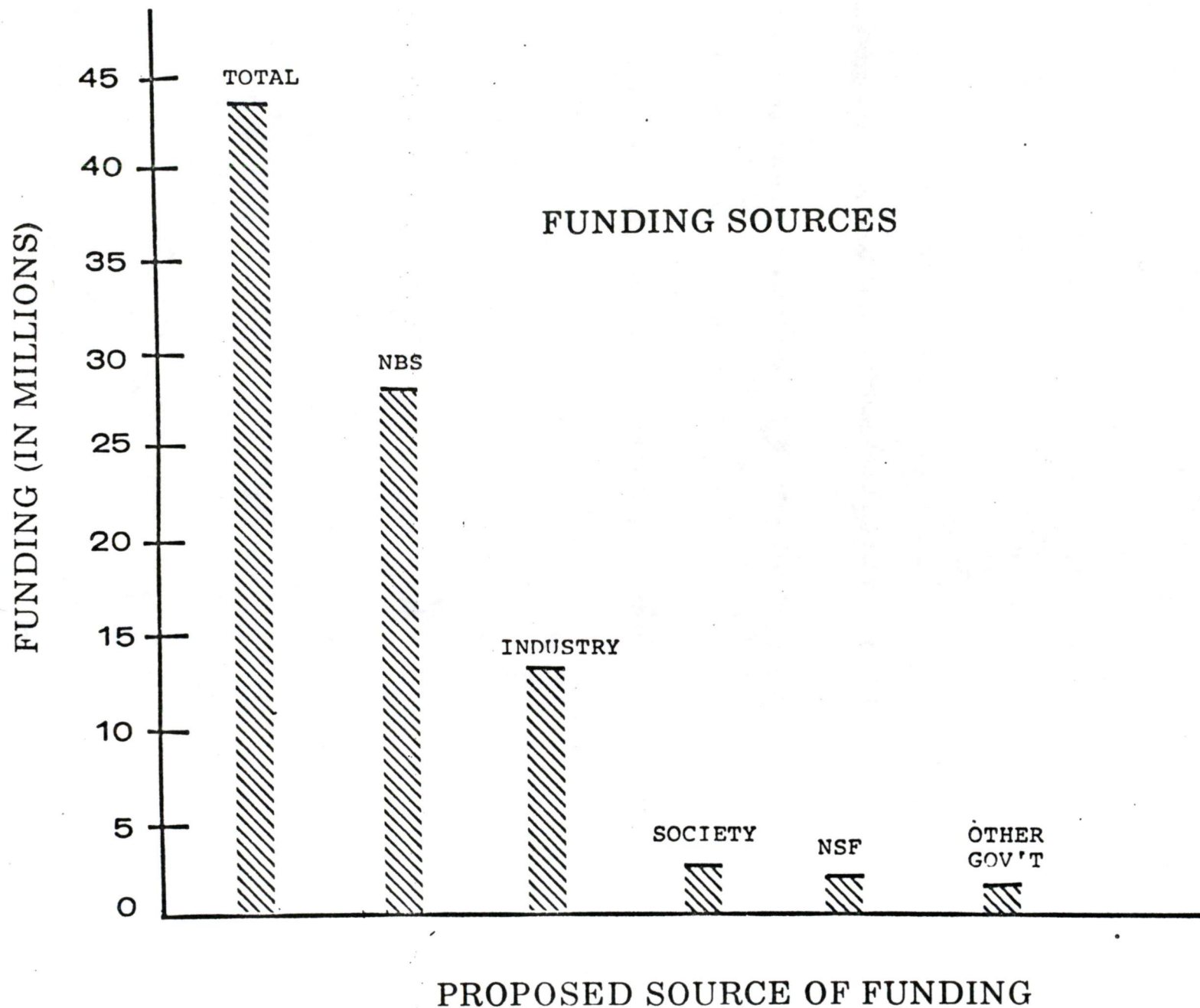


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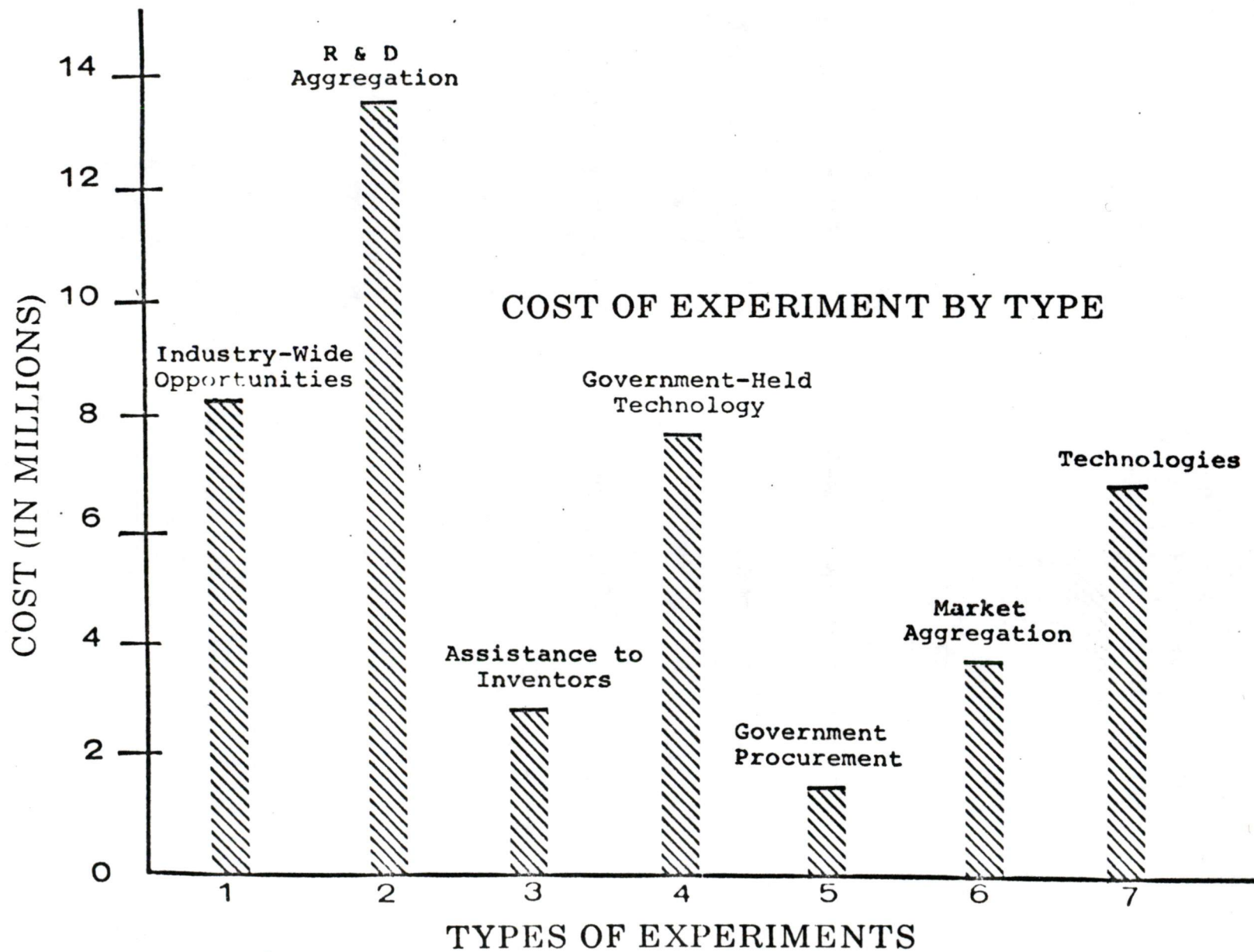
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NBS EXPERIMENTAL TECHNOLOGY INCENTIVES PROGRAM

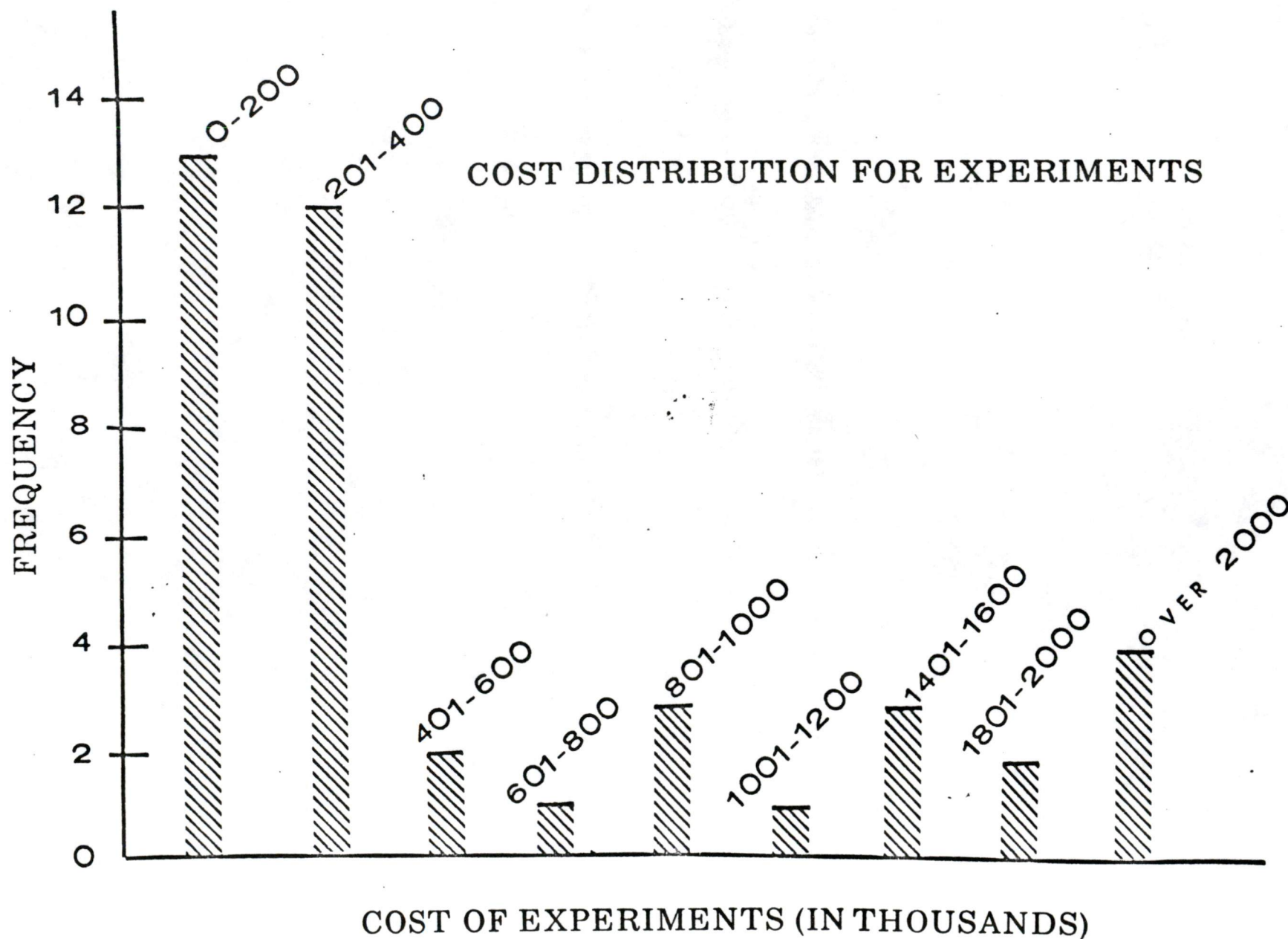


NBS EXPERIMENTAL TECHNOLOGY INCENTIVES PROGRAM

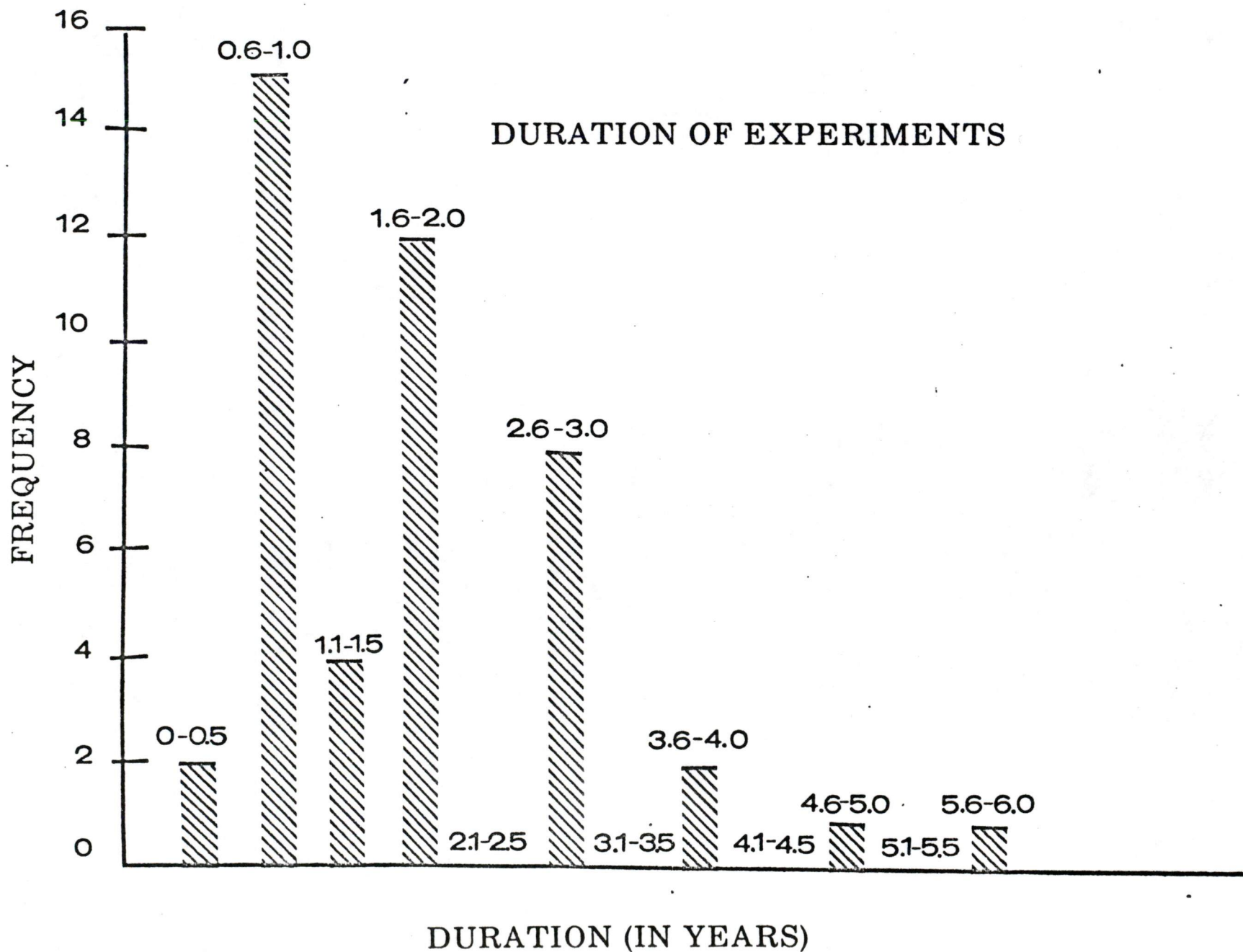


NBS EXPERIMENTAL TECHNOLOGY INCENTIVES PROGRAM

COST DISTRIBUTION FOR EXPERIMENTS



NBS EXPERIMENTAL TECHNOLOGY INCENTIVES PROGRAM



FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Minutes of Meeting - 25 April 1972

The meeting convened at 2:00 p.m. in room 4203 of the New Executive Office Building, Washington, D.C.

Attendance:

Members:

Dr. Edward E. David, Jr.	CHAIRMAN	OST
Dr. Lawrence A. Goldmuntz	Executive Secretary	OST
Dr. Raymond L. Bisplinghoff (for Dr. H. Guyford Stever)		NSF
Dr. Theodore Byerly (for Dr. Ned D. Bayley)		Agriculture
Dr. Gus D. Dorough (for Dr. John S. Foster, Jr.)		DOD
Dr. Donald E. Finley (for Dr. Robert H. Cannon, Jr.)		DOT
Mr. Bert Greenglass (for Mr. Harold B. Finger)		HUD
Dr. Clarence A. Larson (for Dr. James R. Schlesinger)		AEC
Dr. Robert Q. Marston (for Dr. Merlin K. DuVal)		HEW
Dr. Homer Newell (for Dr. George M. Low)		NASA
Dr. William T. Pecora		Interior
Mr. Herman Pollack		State
Dr. James H. Wakelin		DOC

Observers:

Dr. David Challinor (for Dr. S. Dillon Ripley)	Smithsonian
Mr. John D. Darroch	CEA
Dr. Lyndon E. Lee, Jr.	VA
Dr. Richard Linster (for Mr. Martin B. Danziger)	Justice
Mr. Hugh F. Loweth (Acting)	OMB
Dr. Lee M. Talbot (for Dr. Russell E. Train)	CEQ
Mr. A. C. Trakowski (for Dr. Stanley M. Greenfield)	EPA

Others:

Mr. Roland A. Anderson	AEC
Dr. Ellis L. Armstrong	Interior
Mr. Richard A. Carpenter	Library of Congress
Mr. William Coupland	NASA
Mr. James Denny	DOC
Mr. William T. Knox	DOC
Mr. O. A. Neumann	DOC
Professor S. Fred Singer	U. of Va.

Establishment of an Office of Technology Assessment

Mr. Richard A. Carpenter of the Congressional Research Service, Library of Congress, provided an assessment of congressional interest in technology assessment. He said the proposed Office of Technology Assessment (S. 23302 / H. 10243) is a reaction to bad or non-optimum decisions that have caused public reaction against institutions, government, business and technology, with attendant loss of credibility. These bills increase the ability of Congress to respond to this public pressure independently of the Executive Branch, enable it to interact in a more informed way with the Executive Branch, and to expand the information base and increase public information. Mr. Carpenter related this legislation to the tradition of full disclosure to the public that goes back to the Securities Act of 1933 and the Freedom of Information Act.

It was Mr. Carpenter's impression that the Office of Technology Assessment, properly implemented, would help both the Congress and the Executive Branch.

Recent and Prospective U.S. Patent Policy Changes

This item was postponed until the next meeting of the Federal Council.

Limits to Growth - Review and Discussion on Federal Options

Professor S. Fred Singer gave a brief review of "The Limits to Growth" (a report for The Club of Rome's Project on the Predicament of Mankind, by Meadows, Randers and Behrens). Following his review, it was decided that an ad hoc committee of the Federal Council would report back to the Chairman as to the desirability and feasibility of establishing an interagency mechanism for quality control of large-scale simulation projects undertaken with Federal Government support.

This committee will consist of:

Dr. William T. Pecora
Under Secretary of the Interior

Dr. Robert Q. Marston
Director, National Institutes of Health

Dr. Raymond L. Bisplinghoff
Deputy Director, National Science Foundation

Professor S. Fred Singer
Department of Environmental Sciences
University of Virginia

Dr. David Luenberger
Technical Assistant, Office of Science and Technology
Executive Office of the President

Dr. Lawrence A. Goldmuntz
Assistant Director (Civilian Technology)
Office of Science and Technology
Executive Office of the President



Lawrence A. Goldmuntz
Executive Secretary

Approved by the Chairman

on _____

FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY
EXECUTIVE OFFICE BUILDING
WASHINGTON, D.C. 20506
15 May 1972


MEMORANDUM FOR

Members and Observers
Federal Council for Science and Technology

Subject: Agenda for 26 May 1972 FCST Meeting

The Federal Council for Science and Technology will meet on Friday, 26 May 1972, at 2:00 p.m., in Room 208 of the Old Executive Office Building, Washington, D.C. The following items will be taken up at this meeting:

- Item 1 Recent and Prospective U.S. Patent Policy Changes
Dr. James H. Wakelin, Jr., Chairman
Mr. Roland A. Anderson, Vice Chairman
FCST Committee on Government Patent Policy
- Item 2 Approval of the Final Report of the Ad Hoc Interagency
Committee on Excavation Technology
Dr. Ellis L. Armstrong, Chairman
- Item 3 Policy for Government Participation and Contribution to
Annual Meeting of American Association for the Advance-
ment of Science in Wash., D.C., December 1972
Dr. Robert Q. Marston, M.D., NIH
- Item 4 Establishment of Ad Hoc Committee on Large-Scale
Simulation
Dr. Lawrence A. Goldmuntz
- Item 5 Sharing of U.S. - French Science Facilities
Dr. Allen Astin; Mr. Herman Pollack


Lawrence A. Goldmuntz
Executive Secretary

PRESENTATION BY
JAMES H. WAKELIN, JR.
ASSISTANT SECRETARY OF COMMERCE
FOR SCIENCE AND TECHNOLOGY
BEFORE THE
FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY
MAY 26, 1972

RECENT AND PROSPECTIVE CHANGES IN
U.S. GOVERNMENT PATENT POLICY

I. Recent Presidential Directives

President Nixon, on two recent occasions, has provided us with additional guidance, and has expressed his increased interest in the area of government patent policy. The first instance was on August 23, 1971, by revising and reissuing the Presidential Statement of Government Patent Policy, originally issued in 1963. I might add, parenthetically, that the revisions made to the Policy Statement were basically those which were recommended by the Committee on Government Patent Policy and approved by this Council.

The second expression of interest and guidance was included in the President's March 16 message to Congress on science and technology. In this message, the President called for ". . . a strong new effort to marshall science and technology in the work

of strengthening our economy and improving the quality of our life. . . ." As part of this effort, the President stated his belief that the Government has a responsibility to transfer the results of its research and development efforts to wider commercial use within the private sector of our economy. One of several methods suggested for accomplishing this result was by new application of the Government's patent policies. In addition to mentioning the revision of the Statement of Government Patent Policy in August of 1971, the President directed his Science Advisor, Dr. David, and Secretary Peterson to develop plans for new, systematic efforts "to promote actively the licensing of government-owned patents and to obtain domestic and foreign patent protection . . ." for technology owned by the Government.

Happily, I can say that substantial progress has already been made toward implementing these recent Presidential directives, although a great deal of additional planning and program development are still required. I believe that credit for the progress to date is attributable to each of the agencies around this table through the efforts of your representatives on the Committee on Government Patent Policy and its subcommittees, and their cooperation with the Department of Commerce.

II. 1971 Presidential Statement on Government Patent Policy

Referring again to the August 1971 Nixon Statement on Government Patent Policy, I believe the changes made in the previous Policy Statement can be placed into three general categories:

First, those designed to generally eliminate ambiguities in the original Policy Statement, and to more clearly define the scope of rights acquired by both the Government and its contractors;

Second, those designed to increase the Government's flexibility in allocating rights between the Government and its contractors; and

Third, and most important to our discussions here this afternoon, are those designed to increase commercial utilization of government-owned inventions through exclusive and nonexclusive licensing.

The basic change designed to increase commercial utilization is found in Section 2 of the Policy Statement where, for the first time, official sanction has been given by the Executive Branch of the Government to licensing government-owned inventions on an exclusive, as well as nonexclusive, basis.

Section 2 also directs the General Services Administration to issue government-wide regulations governing the Government's licensing program.

III. GSA Patent Licensing Regulations

Prior to the issuance of President Nixon's Patent Policy Statement in August of last year, GSA had offered to work with the Committee in utilizing their property regulation mechanism for issuing government-wide licensing regulations. After GSA was designated as having this responsibility in the Nixon Policy Statement, they circulated for government and industrial comment proposed regulations which had been previously drafted by the Committee on Government Patent Policy. At the request of GSA, the comments were received and reviewed by our Patent Management Subcommittee, and a modified set of regulations was proposed. The Executive Subcommittee reviewed the regulations as modified, and the full Committee gave consideration to the regulations last Monday.

Stated briefly, the regulations will provide that:

--- Normally, government-owned patents and applications will first be available for nonexclusive licensing to all interested parties. If commercial utilization

can be achieved in this manner, exclusive rights are not required and will not be granted;

--- Exclusive licenses can be granted if:

- (a) Nonexclusive availability has not promoted commercial use within one year from publication of availability, or within six months after a patent has issued, or
- (b) If the agency initially determines that exclusive rights will be needed to commercialize the invention;

This determination need not be made, however, if either of the previously mentioned time periods lapse without use occurring, and in that case, the determination of need for exclusive rights will be presumed;

- Published notice will be required before exclusive licenses will be granted, giving third parties an opportunity to comment;
- Licenses will stipulate the duration of the license, and for exclusive rights, the duration must be for less than the remaining term of the patent;

- Licenses shall require the licensee to bring the invention into commercial use;
- Licenses may be granted for all, or less than all, fields of use, and throughout the United States or any lesser geographical portion thereof;
- Exclusive licensees shall be required to expend specific sums of money, or take other specific action, in efforts to achieve commercial utilization; and
- Normally, royalties shall not be charged from U.S. companies for nonexclusive licenses, but may be for exclusive licenses if the agency desires to do so.

The basic concept underlying these regulations is to help achieve commercial use of that government technology covered by government-owned patents with the least possible restrictions on free public availability. Where incentives of exclusive rights are needed to obtain commercial use, however, they may be granted.

During Monday's Committee meeting, a final version of the regulations was approved by all members except for the member from the Department of Justice. There are a few language

revisions we have yet to work out, and I will review these with the Justice member. Thereafter, in response to GSA's request, I intend to forward these proposed regulations, as representing the Committee's recommendations, to GSA for approval by the Administrator of General Services and for issuance in their property and management regulatory system.

Issuance of these licensing regulations by GSA will accomplish the first step in developing a licensing program set forth in the President's August 1971 Policy Statement. These regulations will also provide us with the mechanism whereby we can increase our efforts to transfer government technology to the private sector through patent licensing as directed by the President.

IV. Promotion of Government Licensing

Steps have also been taken to promote the licensing program that will be established by the GSA regulations. Our Patent Management Subcommittee, working in cooperation with Commerce's National Technical Information Service, has suggested a four-phase program for advertising the availability of government-owned patents and applications for licensing, and for more active promotion of those inventions believed to have the highest commercial potential.

A. Phases I and II

Under the first two phases of the recommended program, and hopefully beginning with the next fiscal year, a listing of each designated government-owned patent issued by the Patent Office and each designated application filed in the Patent Office by the agencies will be:

- Published as available for licensing in the Federal Register, and
- Republished in the Official Gazette of the Patent Office.

In addition, each of these patents and applications, in abstract form, will be added to the NTIS data base, along with the government technical reports. This will mean that:

- Requested computer searches for government reports in specified fields of technology will also produce government-owned patents and applications available for licensing;
- The NTIS abstract journals will contain information regarding these patents and applications; and
- NTIS can provide, on an annual basis, a listing of the new patents and applications added to the Government's licensing program.

We are presently in the process of attempting to implement these first two phases, which we consider to be the bare minimum necessary to promote our licensing program. Since 1969, NASA has been providing NTIS with copies of their patent applications, with abstracts, which have been routinely included in the several NTIS abstract journals. To date, sales have amounted to about 300 copies of NASA's applications.

What the first two phases will accomplish is to expand this to the patents and patent applications of all government agencies. Implementation will depend upon the cooperation of DOD and AEC, which now have working agreements with NTIS in regard to their technical reports. We will need for these two agencies to supply us with information on their patents as they issue and on their applications as they are filed. If this type of arrangement can be made, and our initial indication is that it can, then NTIS will, on its own, add the same type of information for the patents and applications of all other government agencies. I hope that the members of this Council from DOD and AEC will lend their support for accomplishing this program.

I might note, however, that this plan will cover only those patents and applications that are issued or filed after the beginning of this next fiscal year, and does not include

the backlog of the some 20,000 patents that the Government now owns. We also have plans to produce a single publication that would provide at least some information on the majority of the Government's present patent portfolio. For this purpose, we will be using the remaining funds which were designated to support the Committee's Harbridge House contract to underwrite the cost of such a publication. Additionally, NTIS will be developing a proposal for publishing a catalog of as many of the Government's presently owned patents which appear to have commercial use as we can within this funding limitation. I believe that these activities represent substantial progress toward implementing the President's directive to Dr. David and the Department of Commerce to develop a program for actively promoting the licensing of government-owned patents. As I stated, however, we consider these efforts to be the minimal requirements for any type of program.

B. Phases III and IV

The last two phases recommended by our Patent Management Subcommittee suggest considerably increased promotional activities for those patents and applications which the agencies believe have the highest commercial potential. These recommendations include developing technical briefs of the type now

prepared and distributed by NASA and AEC under their Technology Utilization Program, the preparation of technical support packages, and for actually contacting interested segments of industry where this appears to be desirable.

These recommendations require more substantial implementation and funding by the individual agencies producing the technology, with centralized assistance being provided by the Department of Commerce. Within the Department of Commerce, we are taking our cue from NASA and AEC, with the endorsement of the Committee on Government Patent Policy. NTIS plans to produce illustrated, specially edited descriptions of selected government applications and patents. These will be called "Patent Tech Briefs" which will be promoted directly through both government and private channels.

This four-phase program was approved by the Committee, and will be forwarded to this Council for final approval. I would hope that the endorsement of such a program by the Federal Council will encourage other agencies to develop similar programs, either independently or in cooperation with the Department of Commerce.

V. Protection of Government-Developed Technology

The President, in his March 16 message to Congress, additionally requested Dr. David and the Secretary of Commerce to develop new plans and efforts to obtain domestic and foreign patent protection for government-owned technology in order to promote its transfer into the civilian economy. From my vantage point, it appears that most of the agencies having R&D programs adequately protect this technology within the United States, as approximately 2,000 patent applications are filed annually by the Government. I would suggest, however, that in view of our new and concentrated efforts toward increased commercial utilization, each of the agencies could give added emphasis to considering commercial potential (as opposed to possible use in the agency's own program) as a criterion for selecting technology to be patented. Additionally, it would seem that inasmuch as we will be depending upon our patent protection to promote commercial use, added care must be taken to assure that the broadest possible protection is obtained by these patents.

The present agency programs for protecting U.S. technology abroad, however, are much more limited in size and purpose. The Atomic Energy Commission has had a rather extensive program for protecting their technology abroad for several years, and

NASA has, in the recent past, initiated a similar type of program. The Department of Defense also owns a sizable number of foreign patents, but, to date, these are limited to weapons systems rather than to technology capable of commercial use. It is in this area that I believe the leadership of the Federal Council and the Department of Commerce is most important.

The Department of Commerce has attempted to take the initiative in this area in the past, but we have not been very successful. For example, Executive Order 9865, issued in 1947, placed in the Department of Commerce centralized responsibilities for protecting U.S. technology abroad, but our efforts were hampered by the lack of sufficient authorities and funding. At the suggestion of the Committee on Government Patent Policy, and with approval by this Council, the Department attempted to remedy both the problems of authority and funding through legislation, which to date has also not been successful.

In the Department of Commerce, we are giving considerable attention to the variety of methods and programs which could be adopted to more adequately protect U.S. owned technology abroad, and thus prevent its free use by competitors of U.S.

industry. I believe that in order to accomplish this task, we will need the cooperation of the R&D sponsoring agencies. At present, our plans are not firm, although I suspect that we will be attempting an immediate program under the present authorities and funding that exist and may, in the future, make recommendations for additional authorities and funding that may be needed to produce a more aggressive program.

VI. Related Committee Activities

I would like to take a few more minutes to review with you the other activities in the area of government patent policy that are presently being undertaken by our Committee.

A. Federal Procurement Regulations

First, and perhaps most important, is the present assistance that we are providing the General Services Administration in drafting an amendment to the Federal Procurement Regulations governing the patent clauses to be included in government contracts. The basic purpose for this effort is an attempt to reduce the present proliferation of clause language that now exists.

This effort, of course, cannot and will not modify in any regard the policy set forth in the Presidential Memorandum and

Statement of Government Patent Policy, but will tend to provide more uniformity in its application. Additionally, care is being taken to preserve in this regulation the flexibility that exists in the Presidential Patent Policy to maintain our ability to utilize the incentives of patent rights in our overall efforts to transfer government-developed technology into commercial use.

In order to expedite the issuance of these regulations, GSA requested that the present draft, recommended by the Implementation Subcommittee, be forwarded to GSA for publication as proposed regulations on which industry and the government agencies can comment. As we did with the licensing regulations, the comments received by GSA on the procurement regulations will be provided to the Committee so that we will have an opportunity to suggest modifications which appear to be appropriate. This procedure was approved by our Executive Subcommittee, and GSA has circulated the proposal to the agencies and industry for comment on May 9.

B. Background Patent Rights

We have two other subcommittees which are directing their efforts to particularly difficult questions in regard to government patent policy. The first is attempting to arrive at a more

uniform government-wide policy in relation to the rights that the Government should attempt to acquire to a contractor's privately developed background patents. As you know, industry is particularly concerned over policies in this regard, and yet in certain types of contracting situations, where we are attempting to develop end items for public use, such rights may be necessary in order to allow more than one organization to have the right to produce the item which is developed by the Government. As you can estimate, this policy issue is very involved and consists of many conflicts in attempting to recognize the equities of our contractors and, at the same time, protect the public interest. In any event, we are going to see what progress we can make in this area.

C. University Patent Policy

The second subcommittee is wrestling with a similarly complex issue, and that is to define the particular patent policies that should be applicable to educational and nonprofit institutions. This type of organization normally does not have the means at its disposal to commercialize the results of government research themselves, and quite often their research is basic in nature and considerable additional development work

is required. Here again, we are faced with a myriad of conflicting issues, but we hope we can recommend some logical approaches.

D. Data Collection and Analysis

The Committee's Data Collection and Analysis Subcommittee has completed its processing and analysis of the most recent data collected on the agencies' patent operations, and this report will soon be forwarded to you.

E. Employee-Inventor Subcommittee

And, finally, the Committee is in the process of establishing a new subcommittee which will be reexamining the present federal policies regarding the inventions of government employees, which were established in 1950 by Executive Order 10096.

VII. Summary

I know that I have covered a substantial amount of material, but I wanted to cover at least briefly most of the major items on which we are working, and particularly in regard to implementing the two recent Presidential directives in the area of utilizing government patent policies to promote the transfer of government technology into commercial use. I would be happy to

answer any questions that you may have, and in particular, to receive any recommendations or suggestions that would help us in these efforts.

FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Minutes of Meeting - 26 May 1972

The meeting convened on Friday, 26 May 1972 at 2:00 p.m. in Room 208 of the Old Executive Building, Washington, D. C.

Attendance:

Members:

Dr. Edward E. David, Jr.	CHAIRMAN	OST
Dr. Lawrence A. Goldmuntz	Executive Secretary	OST
Dr. Gus D. Dorough (for Dr. John S. Foster)		DOD
Mr. Harold B. Finger		HUD
Dr. Clarence A. Larson (for Dr. James R. Schlesinger)		AEC
Dr. Robert Q. Marston (for Dr. Merlin K. DuVal)		HEW
Dr. Homer Newell (for Dr. George M. Low)		NASA
Mr. Herman Pollack		State
Dr. Martin Prochnik (for Dr. William T. Pecora)		Interior
Dr. N. P. Ralston (for Dr. Ned D. Bayley)		Agriculture
Dr. H. Guyford Stever		NSF
Dr. James H. Wakelin		DOC

Observers:

Dr. David Challinor (for Dr. S. Dillon Ripley)	Smithsonian
Dr. Clarence (Terry) Davis (for Dr. Russell M. Train)	CEQ
Dr. Stanley M. Greenfield	EPA
Dr. Richard Hill (for Mr. John N. Nassikas)	FPC
Mr. Hugh F. Loweth (Acting)	OMB

Others:

Mr. Roland A. Anderson	AEC
Dr. Allen Astin	State
Mr. Gerald Barney	CEQ
Mr. William R. Coupland	NASA
Mr. James S. Coleman	AEC
Mr. James Denny	DOC
Dr. Peter House	EPA
Mr. O. A. Neumann	DOC

Recent and Prospective U.S. Patent Policy Changes

Dr. James H. Wakelin, Jr., Chairman, FCST Committee on Government Patent Policy, presented a report on the recent and prospective U.S. patent policy changes. A copy of his remarks is forwarded with these minutes.

Dr. David asked the Federal Council if there were any reservations to the proposed U.S. patent policy changes. There were none.

Annual Report of the FCST Ad Hoc Interagency Committee on Excavation Technology (ICET)

The first annual report of the Ad Hoc Interagency Committee on Excavation Technology was approved for publication.

American Association for the Advancement of Science (AAAS)

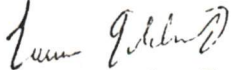
The request for agency participation in the annual meeting of the AAAS, which will take place in Washington, D.C. 26-31 December 1972, was relayed to the Federal Council by Dr. Marston. Some agencies were already committed to helping the AAAS and others will respond as appropriate.

Ad Hoc FCST Interagency Committee on Large-Scale Forecasting Models

A proposal for the establishment of an Ad Hoc FCST Interagency Committee on Large-Scale Forecasting Models was approved. It was emphasized that in accordance with the proposed terms of reference, it is not the intent that all forecasting activity within agencies would be coordinated by this committee. It is expected that each agency would continue to develop forecast projects that are relevant to its responsibility. This committee will focus primarily on forecasting that might potentially involve major aspects of more than one agency.

Sharing U.S. -French Science Facilities

Dr. Allen Astin provided an inventory of U.S. and French Science Facilities which will be distributed by members of the Federal Council to individual laboratory managers so as to stimulate the joint use of these facilities.


Lawrence A. Goldmuntz
Executive Secretary

Approved by the Chairman

on 6/2/72
EED

REFERENCES

(DRAFT) Annual Report of the FCST Interagency Committee on Excavation
Technology (ICET) - 1971

Proposal for an Interagency Committee on Forecasting Models

Recent and Prospective Changes in U. S. Government Patent Policy
Presentation to the FCST by James H. Wakelin, Jr.

Inventory of U.S. and French Facilities Available for Sharing

Nominations for Presidential Prizes for Innovation outlined by President
Nixon in his Message on Science and Technology

OST Press Release dated 25 May 1972 asking for nominations.