

Bogsch, a strong advocate of U.S. accession, revealed that he was attending the meeting to find out whether American interest groups truly want the U.S. to join the Berne convention, which is administered by WIPO. Though willing to work for U.S. membership, he does not want to waste his time if the requisite support from the private sector is lacking.

Bogsch then told the group that Berne membership would benefit U.S. copyright owners both domestically and internationally. In this country, it would become more difficult for future generations to lower the level of protection. Copyrights would also be strengthened abroad, Bogsch maintained, since the U.S. would wield its substantial influence on behalf of private property rights and free expression.

Significant differences between U.S. law and the Convention's terms really relate only to formalities, Bogsch said. Other points of inconsistency could be resolved through further negotiations. Moreover, Bogsch stated, the absence of statutory "moral rights" in U.S. law should not prevent adherence to the Convention. There are several other member countries, he pointed out, whose laws contain little or no statutory recognition of moral rights.

Bogsch noted that he has proposed that U.S. membership be accomplished through the passage of a "protocol" permitting this country to require copyright formalities which do not conform to the ones in the Berne Convention. He maintains that by passing such a protocol, current members would not be giving up anything which they did not give up long ago by adhering to the Universal Copyright Convention.

After Bogsch's presentation, representatives of various copyright interest groups were asked to give their views about U.S. adherence. The responses included promises of "active support" for efforts to bring about accession, as well as cautious expressions of neutrality. However, a clear majority of the representatives appeared to be in favor of U.S. membership.

At the conclusion of the meeting, Bogsch indicated that he would also go to the West Coast to get additional views from the private sector regarding possible U.S. membership in the Convention. (Ed. Note: An article entitled "The United States Copyright System and the Berne Convention" is abstracted elsewhere in this issue.)

- 0 -

HEARINGS SCHEDULED FOR LATER THIS MONTH ON "NATIONAL TECHNOLOGY INNOVATION ACT"

Convinced that "[i]f innovation is not encouraged, the economy will stagnate, inflation will continue, and improved employment opportunities will not be forthcoming," Senator Adlai Stevenson (D-Ill.), on May 24th, introduced S.1250, the "National Technology Innovation Act of 1979." The bill will be the subject of hearings before the Subcommittee on Science, Technology, and Space on June 21st and 27th.

Although not intended as a comprehensive legislative remedy for what many see as a U.S. "technology slump," S.1250 represents, in Stevenson's view, "a sound beginning and complements other measures to stimulate technological innovation." The bill would improve the ability of universities and industry to collaborate in generating new ideas, and would improve the Government's capability to identify specific problems and opportunities in order to advance socially and economically important technologies.

The new bill and Stevenson's introductory remarks, which were published in the May 24th issue of the Congressional Record (page S6715), appear in text at page E-1.

- 0 -

INTRODUCTORY REMARKS AND TEXT OF S. 1250

By Mr. STEVENSON (for himself, Mr. CANNON, Mr. HOLLINGS, Mr. INOUE, Mr. FORD, Mr. RIEGLE, Mr. MOYNEHAN, and Mr. SCHMITT):

S. 1250. A bill to promote U.S. technological innovation for the achievement of national economic, environmental, and social goals, and for other purposes; to the Committee on Commerce, Science, and Transportation.

NATIONAL TECHNOLOGY INNOVATION ACT OF 1979

• Mr. STEVENSON. Mr. President, last year the U.S. merchandise trade deficit reached \$28.5 billion. The dollar declined. Productivity gains ground to a virtual halt. By no coincidence the Nation continued to suffer from inflation and unemployment.

Today there is scarcely an industrial sector which does not face vigorous competition from abroad. In three decades the Japanese and the Europeans have recovered from World War II to challenge our dominance even in those industries where we had no peers—electronics, communications, and aviation. Japan is taking steps to surpass us in integrated circuits and computers, the highest of high technologies. The French, Germans, and Japanese are making rapid strides in satellite communication systems, while the United States has yet to show the imagination to exploit fully the Space Shuttle it will launch next year. Now the industrialized nations face a wave of competition from developing countries combining low labor and resource costs with high technology and priorities that rank social benefits behind development and exports.

Some of our officials take comfort in the fact that our output per man hour remains the highest in the world, and our productivity gains in manufacturing exceed those in mining, construction and retailing. That is cold comfort. In the early 1960's, the U.S. ranked among the world's leaders in manufacturing productivity growth with an average of 4 percent per year. But in the following decade, our growth rate dropped 45 percent, and we ended up in last place among the 11 major industrialized countries—trailing even Britain.

According to some comparisons of productivity, Japan surpassed the United States as early as 1973; and there is evidence that West Germany and others have done the same. We have ignored the warning that our competitors are moving ahead rapidly with advanced computer-aided manufacturing and design technologies, one of the keys to future productivity growth. With export as well as domestic markets in mind, the Japanese are developing a highly automated manufacturing "cell" for a variety of applications, while our modest technical advances are highly concentrated in defense and space-related industries.

In this century, the development of new products, services, and industrial processes based on advances in knowledge has contributed more than anything else to the Nation's productivity

and trade performance. America's development and economic prosperity was fueled by cheap labor and money, abundant fuel and raw materials, as well as our much touted Yankee ingenuity. The country exploited its assets to achieve a predominance that was unchallenged and, for a time, seemingly unchallengeable. All that is changed. Cheap labor, fuels, materials, and money are gone and foreign competition is growing. Technology and industrial innovation thus become even more critical to our continued social and economic prosperity.

What do we find in the area of technological innovation?

High risk ventures that lead to new markets and new industries have been discouraged. Industry is shifting investment from fundamental research and innovation to minor product and process development. Business executives are planning for the next year's profit and loss statement and neglecting the next decade's.

Small, high technology companies have introduced a disproportionate share of new products and manufacturing techniques. A decade ago hundreds of venture companies each year entered the stock market with new issues. In 1977 there were but 46. At the same time, as private sector support for innovation has declined, Federal Government expenditures for R. & D. have dropped more than 16 percent over the last decade.

These trends do not signal our loss of technological leadership across the board. But they are a warning. If innovation is not encouraged, the economy will stagnate, inflation will continue, and improved employment opportunities will not be forthcoming.

This is still a rich and resourceful country, but its spirit of adventure and invention may be drying up. Nations fail when that happens. If the United States is to prosper, restore its authority in the world and rise to high endeavors, it must maintain a preeminent capacity to push ahead the frontiers of knowledge and apply the results wisely. It has the intellectual capacity to advance science and technology. It has the financial resources for productive investment. It has the entrepreneurial and marketing skills for aggressive trading. But the will may be sapped by the orthodoxies of economics and politics, inadequate financial incentives, excessive regulation, adversarial relationships, and all the pressures to cope with the immediate at the expense of posterity.

The White House has initiated a domestic policy review of industrial innovation. The Secretary of Commerce and her Assistant Secretary for Science and Technology have convened a score of task forces to study innovation and influences ranging from tax and regulatory policy to patent administration and information services. They will send recommendations to the President shortly. While we will be very interested in the administration recommendations, we cannot depend on this review alone to provide answers.

Two years ago the Committee on Commerce, Science, and Transportation and the Subcommittee on Science, Technology, and Space began a review of American industrial technology. The review continues. Our findings are tentative.

We cannot quantify or describe in any rigorous way the state of U.S. industrial technology and innovation, but evidence of these disturbing trends and the perceptions of many of our industrial and government experts suggest that the matter is too significant to ignore. One must consider a number of measures and approaches. No single measure will do the job. Moreover, in accepting the need to take measures to stimulate industrial technology and innovation, one cannot be certain that particular measures will be appropriate to all technologies or industrial sectors, or achieve exactly the intended stimulus to innovation. The important matter is that we begin, that we move from paper studies to a determined effort to revive technological innovation in the United States.

Today I am introducing for myself and Senators CANNON, HOLLINGS, INOUE, FORD, RIEGLE, MOYNEHAN, and SCHMITT S. 1250, the National Technology Innovation Act. It is a first step. It is not intended as a comprehensive legislative remedy, rather as a modest, initial effort. Additional efforts are necessary; some have been proposed, others are in need of drafting. These additional efforts fall in such areas as trade, patent, tax, regulatory, Federal procurement and antitrust policies.

The National Technology Innovation Act is a sound beginning and complements other measures to stimulate technological innovation. It would help in two essential ways. First, it would improve the ability of universities and industry to collaborate in generating new technological ideas that could reach the market; and second, it would improve the U.S. Government's capability to identify specific sectoral problems and opportunities to advance socially and economically important technologies.

To insure prompt consideration of this bill, I am scheduling hearings before the Subcommittee on Science, Technology, and Space for June 21 and 27, 1979. Hearings on the administration proposals in the area of industrial innovation will be scheduled as soon as they become available. Through these and other efforts, the Congress, in cooperation with the administration, the private sector, labor and the affected public, can once again have confidence that the United States will maintain unquestioned leadership in industrial technology and innovation.

Mr. President, I ask that the text of the National Technology Innovation Act be printed in the RECORD.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 1250

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this

Act may be cited as the "National Technology Innovation Act of 1979".

SEC. 2. FINDINGS.

The Congress finds and declares that:

- (1) Technology and industrial innovation are central to the economic, environmental, and social well-being of citizens of the United States.
- (2) Technology and industrial innovation offer an improved standard of living, increased public and private sector productivity, creation of new industries and employment opportunities, improved public services and enhanced competitiveness of United States products in world markets.
- (3) Many new discoveries and advances in science occur in universities and Government laboratories, while the application of this new knowledge to commercial and useful public purposes depends largely upon actions by business and labor.
- (4) Industrial innovation in the United States may be lagging when compared to historical patterns and other industrialized nations.
- (5) Increased industrial innovation would reduce trade deficits, stabilize the dollar, increase productivity gains, increase employment and stabilize prices.
- (6) Government antitrust, economic, trade, patent, procurement, regulatory, research and development, and tax policies have significant impacts upon industrial innovation and development of technology, but there is insufficient knowledge of their effects in particular sectors of the economy.
- (7) No national policy exists to enhance technological innovation for commercial and public purposes.

SEC. 3. PURPOSE.

It is the purpose of the Congress in this Act to enhance technological innovation for the improvement of the economic, environmental and social well-being of the United States.

SEC. 4. DEFINITIONS.

As used in this Act, unless the context otherwise requires, the term—

- (1) "Office" means the Office of Industrial Technology established under section 5 of this Act.
- (2) "Secretary" means the Secretary of Commerce.
- (3) "Director" means the Director of the Office of Industrial Technology, appointed pursuant to section 5 of this Act.
- (4) "Centers" means the Centers for Industrial Technology established under section 6 of this Act.
- (5) "Nonprofit institution" means an organization owned and operated exclusively for scientific or educational purposes, no part of the net earnings of which inures to the benefit of any private shareholder or individual.
- (6) "Panel" means the Industrial Technology Review Panel established pursuant to section 9.

SEC. 5. COMMERCE AND TECHNOLOGY INNOVATION.

- (a) **IN GENERAL.**—The Secretary shall establish and maintain an Office of Industrial Technology in accordance with the provisions, findings, and purposes of this Act.
- (b) **DIRECTORS.**—The President shall appoint, by and with the advice and consent of the Senate, a Director of the Office, who shall be compensated at the rate provided for level V of the Executive Schedule in section 5316 of title V, United States Code.
- (c) **DUTIES.**—In addition to any other duty prescribed by law or assigned by the Secretary, the Director, on a continuing basis, shall—
 - (1) determine the relationships of technological developments and international technology transfers to the output, employment, productivity, and world trade performance of United States and foreign industrial sectors;
 - (2) determine the influence of economic,

labor and other conditions, industrial structure and management, and government policies on technological developments in particular industrial sectors worldwide;

- (3) identify technological needs, problems, and opportunities within and across industrial sectors that if addressed could make a significant contribution to the economy of the United States;
 - (4) assess whether the capital, technical and other resources being allocated to domestic industrial sectors which are likely to generate new technologies are adequate to meet private and social demands for goods and services and to promote productivity and economic growth;
 - (5) propose and support policy studies and experiments, in cooperation with other Federal agencies, to determine the effectiveness of these measures;
 - (6) recommend through the Secretary to the President and Congress government measures with the potential of advancing United States technological innovation and exploiting innovations of foreign origin; and
 - (7) assist in the preparation of the report required under section (d) and publish the results of policy studies and experiments.
- (d) **REPORT.**—The Secretary shall prepare and submit to the President and Congress, within 3 years after the date of enactment of this Act, a report on the progress, findings, and conclusions of activities conducted pursuant to sections 5 and 6 of this Act and recommendations for possible modifications thereof.

SEC. 6. CENTERS FOR INDUSTRIAL TECHNOLOGY

(a) **ESTABLISHMENT.**—The Director shall provide assistance for the establishment of Centers for Industrial Technology. Such Centers shall be affiliated with any university, nonprofit institution, or group thereof that applies for and is awarded a grant or enters into a cooperative agreement under this section. The objective of the Centers is to enhance technological innovation through—

- (1) the participation of individuals from industry and universities in cooperative technology innovation activities;
- (2) the development of the generic research base important for technological advance and innovative activity in which individual firms have little incentive to invest, but which may have significant economic importance, such as manufacturing technology;
- (3) the conduct of research that contributes to the scientific basis of health, safety, and environmental regulations for the purposes of improving regulatory actions and minimizing costs of duplicative research;
- (4) the education and training of individuals in technology innovation;
- (5) the improvement of mechanisms in the dissemination of scientific, engineering, and technical information from universities to industry;
- (6) the utilization of the capability and expertise, where appropriate, that exists in Federal laboratories; and
- (7) the development of continuing financial support from industry and universities through, among other means, fees, licenses, and royalties.

(b) **ACTIVITIES.**—The activities of the Centers shall include, but need not be limited to—

- (1) research supportive of technology and industrial innovation including cooperative industry-university basic and applied research;
- (2) assistance in the evaluation and development of technological ideas supportive of industrial innovation and new business ventures;
- (3) technological assistance and advisory services to industry; and
- (4) curriculum development and instruction in invention, entrepreneurship, and industrial innovation.

Each Center need not undertake all of the activities under this subsection.

(c) **REQUIREMENTS.**—Prior to establishing a Center, the Director shall find that—

- (1) consideration has been given to the potential contribution to productivity, employment, and economic competitiveness of the United States of the activities proposed under the Center;
 - (2) a high likelihood exists of continuing participation, advice, financial support, and other contributions from the private sector;
 - (3) the host university or nonprofit institution has a plan for the management and evaluation of the activities proposed within the particular Center, including consideration of means to place the Center, to the maximum extent feasible, on a self-sustaining basis; and
 - (4) suitable consideration has been given to the university's or nonprofit institution's capabilities and geographical location.
- (d) **PLANNING GRANTS.**—The Director is authorized to make available nonrenewable planning grants to universities or nonprofit institutions for the purpose of developing a plan required under subsection (c) (3).
- (e) **RESEARCH AND DEVELOPMENT UTILIZATION.**—To promote technology innovation and commercialization of research and development efforts, each Center has the option of acquiring title to any invention conceived or made under the auspices of the Center that was supported at least in part by Federal funds: *Provided, That*—

- (1) said option shall be exercised at the time of disclosure of invention or within such time thereafter as may be provided in the grant or cooperative agreement;
- (2) the Center intends to promote the commercialization of the invention and file a United States patent application;
- (3) licensing be on a nonexclusive basis except where commercialization or industrial support for the project is not likely to be achieved without an exclusive license;
- (4) exclusive licenses shall require reasonable and continuous effort by the licensee to advance the invention to the market and be limited to the time necessary to allow for recoupment of investment by the licensee;
- (5) royalties be used for educational or research activities of the Center;
- (6) the Center make periodic reports to the Director, and the Director may treat information contained in such reports as privileged and confidential technical, commercial, and financial information and not subject to disclosures under the Freedom of Information Act; and
- (7) any Federal department or agency shall have the royalty-free right to practice, or have practiced on its behalf, the invention for governmental purposes.

The Secretary shall obtain title to any invention for which this option is not exercised.

SEC. 7. GRANTS AND COOPERATIVE AGREEMENTS

(a) **IN GENERAL.**—The Director may make grants and enter into cooperative agreements according to the provisions of this section in order to assist any activity established under section 6 of this Act. The total amount of any such grant or cooperative agreement may not exceed 75 percent of the total cost of the program or project involved.

(b) **ELIGIBILITY AND PROCEDURE.**—Any person or institution may apply to the Director for a grant or cooperative agreement available under this section. Application shall be made in such form and manner, and with such content and other submissions, as the Director shall prescribe. The Director shall act upon each such application within 6 months after the date on which all required information is received.

(c) **TERMS AND CONDITIONS.**—

- (1) Any grant made, or cooperative agreement entered into, under this section shall be subject to the limitations and provisions set forth in paragraphs (2) and (3) of this subsection, and to such other terms, conditions, and requirements as the Director deems necessary or appropriate.
- (2) No payment under any grant or co-

operative agreement under this section may be applied to the purchase or rental of any land, or the purchase, rental, construction, preservation, or repair of any building.

(3) Any person who receives or utilizes any proceeds of any grant made or cooperative agreement entered into under this section shall keep such records as the Director shall by regulation prescribe as being necessary and appropriate to facilitate effective audit and evaluation, including records which fully disclose the amount and disposition by such recipient of such proceeds, the total cost of the program or project in connection with which such proceeds were used, and the amount, if any, of such costs which was provided through other sources. Such records shall be maintained for at least 3 years after the completion of such a program or project. The Secretary, Director, and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access, for the purpose of audit and evaluation, to any books, documents, papers, and records of receipts which, in the opinion of the Secretary, Director, or the Comptroller General, may be related or pertinent to such grants and contracts.

SEC. 8. ADMINISTRATIVE ARRANGEMENTS.

(a) **COORDINATION.**—The Director shall, on a continuing basis, seek the advice and cooperation of departments and agencies whose missions contribute to or are affected by the programs established under this Act, including the development of an agenda for research and policy experimentation. These departments and agencies shall include but not be limited to the Departments of Defense, Energy, Health, Education, and Welfare, Housing and Urban Development, the Environmental Protection Agency, National Aeronautics and Space Administration, National Science Foundation, Small Business Administration, Council of Economic Advisers, Council on Environmental Quality, and Office of Science and Technology Policy.

(b) **AUTHORIZATION.**—The Secretary is authorized to receive moneys from other departments or agencies to support activities of the Centers established under section 6 and for the support of policy research and experiments. A major portion of the policy research and experiments shall be conducted under grants and contracts.

SEC. 9 INDUSTRIAL TECHNOLOGY REVIEW PANEL.

(a) **ESTABLISHMENT.**—There shall be established an independent committee to be known as the Industrial Technology Review Panel.

(b) **DUTIES.**—The Panel shall take such steps as may be necessary to review annually the activities of the Office and advise the Secretary and the Director with respect to—

- (1) the formulation and conduct of activities under section 5 of this title;
- (2) the designation and operation of Centers and their programs under section 6 of this Act;
- (3) the preparation of the report required under section 5(d); and
- (4) such other matters as the Secretary or Director refers to the Panel for review and advice.

The Director shall make available to the Panel such information, personnel, and administrative services and assistance as it may reasonably require to carry out its duties.

(c) **MEMBERSHIP, TERMS, AND POWERS.**—

(1) The Panel shall consist of 15 voting members who shall be appointed by the Secretary. The Director shall serve as a nonvoting member of the Panel. The members of the Panel shall be individuals who, by reason of knowledge, experience, or training are especially qualified in one or more of the disciplines and fields dealing with technology, labor, and industrial innovation or who are affected by technological innovation. The majority of the members of the Panel shall be individuals from industry and business.

- (2) The term of office of a voting member

of the Panel shall be 3 years, except that of the original appointees, 5 shall be appointed for a term of 1 year, 5 shall be appointed for a term of 2 years, and 5 shall be appointed for a term of 3 years.

(3) Any individual appointed to fill a vacancy occurring before the expiration of the term for which his or her predecessor was appointed shall be appointed only for the remainder of such term. No individual may be appointed as a voting member after serving more than 2 full terms as such a member.

(4) The Panel shall select a voting member to serve as the Chairperson and another voting member to serve as the Vice Chairperson. The Vice Chairperson shall perform the functions of the Chairperson in the absence or incapacity of the Chairperson.

(5) Voting members of the Panel shall receive compensation at a daily rate for GS-18 of the General Schedule under section 5332 of title V, United States Code, when actually engaged in the performance of duties for such Panel, and be reimbursed for actual and reasonable expenses incurred in the performance of such duties.

SEC. 10. AUTHORIZATION OF APPROPRIATIONS

(a) There is authorized to be appropriated to the Secretary for purposes of carrying out section 6, not to exceed \$40,000,000 for the fiscal year ending September 30, 1980, \$50,000,000 for the fiscal year ending September 30, 1981, and \$60,000,000 for each of the fiscal years ending September 30, 1982, 1983, and 1984.

(b) In addition to authorizations of appropriations under subsection (a), there is authorized to be appropriated for purposes of carrying out the provisions of this Act, not to exceed \$10,000,000 for each of the fiscal years ending September 30, 1980, 1981, 1982, 1983, and 1984.

(c) Such sums as may be appropriated under subsections (a) and (b) shall remain available until expended. ©

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