a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. CRAINSTON. I announce that the Senator from Massachusetts (Mr. Kennedy), and the Senator from Louisiana (Mr. Lowe), are necessarily absent.

Mr. BAKER. I announce that the Senator from Alaska (Mr. Stevens), and the Senator from Wyoming (Mr. Wallop), are necessarily absent.

Mr. JAVITS. Further announce that, if present and voting, the Senator from Alaska (Mr. Stevens), and the Senator from Wyoming (Mr. Wallop), would each vote "nay."

The PRESIDING OFFICER. Are there any other Senators in the Chamber who desire to vote?

The result was announced—yeas 57, nays 39, as follows:

[Roll Call Vote No. 83 Ex.]

YEAS—57

Baucus        Enon            Moynihan
Bayh          Ford            Muskie
Bellomy        Glenn            Nunn
Biden         Gravel           Packwood
Boren          Hart            Pell
Bradley        Hatfield         Percy
Bumpers        Huddleston       Proxmire
Burick         Inouye           Randolph
Byrd, Robert C. Jackson       Ribicoff
Cannon         Jarvis           Riley
Chafee         Leahy            Sarbanes
Chiles         Levin            Sasser
Chobby         Libby            Stafford
Crandon        Magnuson         Stevenson
Culver         Mathias           Stewart
Denneth         Magnuson         Talmadge
DeConcini      McCollan        Teague
Durkin         Melcher           Weicker
Engelow         Metzenbaum       Williams

NAYS—39

Armstrong       Hayakawa         Pryor
Baker           Hedin            Roth
Bellomy          Heinz           Schmitt
Boschwitz       Helms            Schweiker
Byrd            Hollings         Simpson
Harry F., Jr.    Humphrey         Stone
Cranston        Johnson          Thomas
Dole            Kuehnelt         Tower
Domenic         Laskal           Warner
Durenberger      Lugar           Young
Gann            Marcucci         Zirkind
Goldwater       Morgan
Hatch

NOT VOTING—4

Kennedy         Stevens          Wallop
Nelson

So the nomination was confirmed.

Mr. ROBERT C. BYRD, Mr. President, I move to reconsider the vote by which the nomination was confirmed.

Mr. WILLIAMS. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. WILLIAMS. Mr. President, I ask unanimous consent that the President be notified of the confirmation of the nomination.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. ROBERT C. BYRD. Mr. President, the Senate has just voted to confirm the nomination of William A. Lubbers to be General Counsel of the National Labor Relations Board. Discussion of the nomination began 1 week ago on April 16 and throughout the lengthy debate, Senator Williams, chairman of the Committee on Labor and Human Resources, managed this nomination with great dedication, perseverance and patience.

During the course of the debate, Senator Williams was required to respond to a number of arguments against the confirmation of Mr. Lubbers. His responses were always to the point and complete. I want to take this opportunity to commend him for his efforts and cooperation throughout the debate on this nomination.

LEGISLATIVE SESSION

The PRESIDING OFFICER. Under the previous order, the Senate will now return to legislative session.

UNIVERSITY AND SMALL BUSINESS PATENT PROCEDURES ACT

That measure was laid before the Senate on February 5, and was set aside on February 6, under a unanimous-consent agreement that the Senate return to its consideration on or after February 18.

The PRESIDING OFFICER. Under the previous order, the Senate will resume consideration of S. 414, which will be stated by title.

The assistant legislative clerk read as follows:

A bill (S. 414) to amend title 35 of the United States Code, to establish a uniform Federal patent procedure for small businesses and nonprofit organizations, to create a consistent policy and procedure concerning patentability of inventions made with Federal assistance, and for other purposes.

The Senate proceeded to consider the bill.

Mr. ROBERT C. BYRD, Mr. President, there will be rollcall vote on final passage of this measure. I ask for the yeas and nays on final passage.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

Mr. ROBERT C. BYRD, Mr. President, may we have some indication as to when that rollcall vote will occur?

Mr. LONG. Mr. President, I am making a point of order. The Senate will have control over 15 minutes of the time. I ask unanimous consent that the vote be taken at 10 or 12 minutes.

Mr. ROBERT C. BYRD. Mr. President, I ask unanimous consent that the vote occur on the bill at 3:30 p.m., today or before the time is yielded back.

Mr. LONG. I wish 15 minutes.

Mr. ROBERT C. BYRD. And Mr. Long will have control over 15 minutes of the time.

Mr. DOLE. Mr. President, I am manager on this side and will split the remainder.

Mr. ROBERT C. BYRD All right. The other 25 minutes are to be equally divided between Mr. Bayh and Mr. Dole.

Mr. BIDEN. And vote at 3:30.

Mr. DOLE. We have 30 minutes and the vote to occur at 3:30 if the time is all taken.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. LONG. Mr. President, may we have order?

The PRESIDING OFFICER. If the Senator will suspend momentarily until the Senate comes to order, the Senate will please be in order.

AMENDMENT NO. 1652

(Purpose: To amend section 200 relating to the policies and objectives of the National Aeronautics and Space Administration, the Office of Coal Research and Development, the Department of Agriculture, the Department of Commerce, the Department of Labor, and the Department of Transportation and the Veterans Administration. In addition, what came to be known as the Long amendment is an integral part of this legislation.)
Motor Vehicle Safety Act, the Helium Act Amendment of 1960; the Solid Waste Disposal Act; the Disarmament Act; and the Saline Water Act; the Solar Energy Act, and the Atomic Energy Act. The purpose was to insure that no research would be contracted for, sponsored, cosponsored, or authorized under authority of a particular piece of legislation unless all information, uses, products, processes, patents, and other developments resulting from such research will be available to the general public. Only a few years ago, the late Senator Hart, Senator Nunn and I convinced the Senate that such a provision should be included in the Energy Research and Development Act.

**Proposed Legislation**

It is dismaying, therefore, to find that S. 414 provides for contractors, in this case small business firms, universities and nonprofit organizations, to receive gifts of ownership of taxpayer-financed research, and according to S. 414's chief sponsor, this is to be only a first step. The Congress and the public should not be fooled. The Senator from Indiana in his Federal Government Operating Expenses appropriation page 8090 of the Record admits "Passage of S. 414 will be a good first step." An enthusiastic sponsor of this proposal, Senator Nunn's remarks in the Senate on the appropriation of February 6, 1989, appearing on page S1039, that although he is sympathetic to expansion of this giveaway to large businesses, "any expanded coverage of S. 414 will result in it being killed in the House."

S. 414 applies not only to those areas uncovered by legislation but it also seeks to weaken and ultimately repeal every provision of the Atomic Energy Act. It aims at the repeal of the provisions of the National Aeronautics and Space Act.

It aims at the repeal of the provisions of the Department of Agriculture, of TVA, of Department of Interior, in the National Science Foundation, Disarmament of the National Aeronautics and Space Administration of the National Aeronautics and Space Act, and Consumer Product Safety Act and every other piece of legislation enacted by Congress to protect the public.

In addition—and this is especially startling—once the monopoly is given to the contractor, the public will be unable to find out what has happened to the results of the research it pays for.

Federal agencies are authorized to withhold from disclosure to the public information disclosed in any written communication in which the Federal Government owns or may own a right, title, or interest (including a nonexclusive license) for a reasonable time in order for a patent application to be filed. Furthermore, federal agencies shall not be required to release copies of any document written in the course of federal investigation, filed with the United States Patent and Trademark Office or with any foreign patent office.

If it amounts to this: Not only will the contractor get the 17 year monopoly of the patent but the public can not even find out what has been discovered with its money for many years. It takes an average of 3 1/2 years to secure a patent. This means that new scientific and technological information could well be suppressed for a long time.

**Implications of Proposed Legislation**

In the United States, patents have traditionally been held out as an incentive "to promote the progress of science and the useful arts" to encourage private persons, willing to assume the necessary risks to earn the stipulated reward. They were never intended to reward persons who perform research at someone else's expense as part of a riskless venture. Therefore, as Prof. Wassily Leontief, a Nobel laureate, points out, to allow contractors to retain patents on research financed by and performed for the Government "is no more reasonable or economically sound than to bestow on contractors who build a road financed by public funds, the right to collect tolls from cars that will eventually use it" or the right to close down the road altogether.

Extensive hearings held by the Small Business Committee's Monopoly Subcommittee while I was its chairman and then under Senator Nunn's chairman ship, revealed in February 1979, that the provisions of S. 414 and similar bills are deleterious to the public interest. Witnesses at these hearings, which started as far back as December 1989, included distinguished economists, a Deputy Attorney General of the United States, an Assistant Attorney General in charge of the Antitrust Division of the Justice Department, two chairmen of the Federal Trade Commission and former staff members of the Council of Economic Advisors.

Without any exceptions these witnesses testified that when a private company finances its own research and development, it takes a risk and deserves exclusive right to the fruits of that risk. Government research and development contracts, however, are essentially cost-plus with an assured market—the U.S. Government. There is, thus, absolutely no reason why any taxpayer should be forced to subsidize a private monopoly and have to pay twice: First for the research and development and then through monopoly prices. When a contractor hires an employee or an agent to do research for him, the standard common law rule is that the contractor gets the invention. Surely the Government should not be any less a right.

In addition to the problems of equity, economic growth and increased productivity require the most rapid dissemination of scientific and technical knowledge. Allowing private firms to file private patents would do just the opposite.

If a policymaking technological advance available to all without charge were adopted and maintained for a considerable period of time and if things being equal, it would make a positive contribution to the efficiency of the economic system and the rate of growth, according to Dr. Wassily Leontief, to whom I previously referred the developer of the input-output techniques and analysis, testified in 1963 that a Government-wide policy whereby the public would be freely available to all would increase the productivity of labor and capital, and estimated that the difference between research sponsored by the public and that sponsored by the private contractor to retain title) and open patent policies should account for one half of 1 percent in a 4-5 percent growth rate of the average productivity of labor. If the private contractors promote commercialization of Government-financed inventions and that the available evidence shows just the opposite. They also stated that even if an exceptional circumstance arises and no specific example could be found—that would justify a waiver of the Government's rights, it should never be done unless the invention has been identified and a study made of the impact of the waiver on the public interest. In addition, such proposals as "march in rights" would be ineffective and never protect the public against misuse.

At the same hearing in December 1977, Stanley M. Clark, chief patent counsel of the Firestone Tire and Rubber Co., said that:

I believe in free enterprise and in a competitive system. But the proposal that the Government spend large sums of money for research and development and then hand the patents stemming from such research over to the private contractors is not consistent with free enterprise.

Some have told you and will tell you that unless the research contractors are given title to the inventions for which an Government expense, the contractors will not market Government research and development contracts. Don't you believe it.

This is a spokesman for a very large company speaking. Continuing.

They want those Government funds and the rewards and advantages that come with such contracts and they won't turn them down. What they get, in many instances, can be very rewarding even without the patents; and in any event there are no risks involved; the bill will amount as a part of all of those.

This bill (S. 414) does not deal with patent problems at all; it is not concerned with the mechanics of securing a patent or the administration of the Patent Office. It involves simply the disposal of public funds by a million at present—and it is dismaying to find that the same old claims—discredited years ago—to justify the giving away of the public's rights are still being made today.

S. 414 would wipe out every law on the books which reserves for the public the right to have the research it pays for, at the expense of billions of dollars.
It would hamper the rapid dissemination of scientific and technological information and hence will retard economic growth and increased productivity.

This bill sets an unfortunate precedent and other bills which are sure to follow, would promote monopoly and concentration of economic and political power.

This proposed legislation is one of the most radical, far-reaching giveaways that I have seen in the many years that I have been a Member of the U.S. Senate. I urge the Senate will vote against this bill.

Mr. DOLE. Mr. President, as we resume debate on S. 414, the University and Small Business Patent Procedures Act, I would like to review some of the points that have been made during previous discussions of this legislation.

In support of this bill Senator Nunn referred to the Department of Defense and the National Aeronautics and Space Administration as examples of two Government agencies that had effective, responsible patent policies. Th:is bill sets an unfortunate precedent and other bills which are sure to follow, would promote monopoly and concentration of economic and political power.

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risky venture which industry is unwilling to undertake without some incentive to justify this risk. Patents represent this incentive.

When Government agencies insist on taking away patent rights, this incentive is destroyed. The result has been that many promising inventions are left to gather dust on the shelves of our agencies, because private industry will not develop and market them without patent rights.

It was interesting to the Senator from Indiana as we held the hearings, to note the tremendous role that small businesses and universities play in developing new ideas. In fact, if one looks back from the end of World War II to the present date, a majority of all the new creative ideas have been made by either small businesses or universities. We also find small businesses providing most of the new jobs.

So we are talking about a factor in our economic health that cannot be ignored. I was impressed, as we held the hearings, in actually talking to small business presidents, and to hear them testify about whether they would be willing to get involved in the Government-supported research.

The fact of the matter is there is a decreasing number of high technology small businesses, that are willing to get involved in Government research.

If you look at the situation of Government research going to small businesses, it is going down. It may be well and good for a representative of a large corporation to try to represent what small businesses will do as far as Government research is concerned. But if you look at the research, the fact is that the percentage of research money going from Government to small businesses is less than 4 percent. Small businesses do not want to get involved with the Government because they do not know whether they are going to get ownership of the inventions they make. They do not know whether there is going to be any profit at the end of the line. And they are deeply concerned about the ability of Government to go in and gain access and make public the background rights that they had before they even accepted the Government research.

So I must suggest that the record will show that small businesses have been kept out of Government research and that we are really cutting off a vast storehouse of innovation which is uniquely available in many of our small businesses and our university campuses.

Nowhere is this problem more disturbing than in the biomedical research programs. Many people have been concerned because of the refusal of agencies to allow universities and small businesses sufficient rights to bring new drugs and medical instruments to the marketplace.

For example, the Department of Health, Education, and Welfare routinely takes up to 15 months even to decide who should own patent rights to innovations made under its research. During this period, these inventions are in limbo because no one knows who will finally own it. Many companies give up and simply look for other inventions because of this type of delay.

I ask unanimous consent that those specific examples be printed in the Record.

There being no objection, the examples were ordered to be printed in the Record, as follows:

<table>
<thead>
<tr>
<th>Sponsoring Institute (NIH)</th>
<th>Date sent to General Counsel</th>
<th>Inventor and University</th>
<th>Invention</th>
</tr>
</thead>
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<tr>
<td>National Heart, Lung and Blood Institute (NHLBI)</td>
<td>Oct. 6, 1977</td>
<td>Reness-Kumar</td>
<td>University of Arizona</td>
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<tr>
<td>National Institute of General Medical Sciences (NIGMS)</td>
<td>Dec. 20, 1977</td>
<td>Powers</td>
<td>Georgia Institute of Technology</td>
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<td>National Heart, Lung and Blood Institute (NHLBI)</td>
<td>Nov. 1, 1977</td>
<td>Fox</td>
<td>Columbia University</td>
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<tr>
<td>National Institute of Arthritis, Metabolism, and Digestive Diseases (NIAMD)</td>
<td>Feb. 10, 1978</td>
<td>Mathony</td>
<td>University of Colorado</td>
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<td>National Institute of Arthritis, Metabolism, and Digestive Diseases (NIAMD)</td>
<td>Apr. 5, 1978</td>
<td>Walker</td>
<td>NIH employee</td>
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<td>Apr. 7, 1978</td>
<td>Apple</td>
<td>Formica University of California</td>
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<td>Spiegel</td>
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<td>Apr. 29, 1978</td>
<td>Marshall-Rabkinowitz</td>
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<td>Tocchetti</td>
<td>Columbia University</td>
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<td>May 14, 1978</td>
<td>Montalvo-Goldberg</td>
<td>Gulf South Research Institute</td>
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<td>Lesch-Epstein</td>
<td>University of Vermont</td>
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<td>Kocur-Knight</td>
<td>University of Arizona</td>
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<td>June 29, 1978</td>
<td>Gray</td>
<td>Institute of Technology</td>
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<tr>
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<td>July 17, 1978</td>
<td>Gottesman</td>
<td>University of Madrid</td>
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<td>National Institute of Neurological Disorders and Stroke (NINDS)</td>
<td>June 15, 1978</td>
<td>Lauber</td>
<td>University of Pennsylvania</td>
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</table>

Mr. BAYH. Mr. President, I might point out, for example, a new burn ointment and a promising diagnostic test for cancer which can detect whether a given patient will have an adverse reaction to certain kinds of chemotherapy agents without having to go through that traumatic experience of hair loss and convulsions and some of the unfortunate reactions to those drugs that are used to fight cancer.

It is also interesting to note that the Government owned the rights to penicillin and tried to make it available to private industry for 11 years without patent rights—11 years. During this long period, there were no takers. It had not been for the emergency conditions caused by World War II, in which the Government actually got into the business of developing penicillin itself, it is likely that penicillin would still be there with the 28,000 other patents that are just collecting dust and people would not be benefiting from that tremendous lifesaving discovery.

The Senate Judiciary Committee held hearings on this bill. Indeed, the Senate Small Business Committee has recently looked into this and has reached the same conclusion.

I would like to suggest that the chairman of the Small Business Committee,
Senator Nelson, is a supporter of this particular measure and, although he was called away on official business elsewhere, I would like to have the record show that had he been here he would have voted for it.

The committee heard many examples of the need for this. I would like to point out that the Comptroller General of the United States, Mr. Elmer B. Staats, testified forcefully in favor of S. 414 because of his concern that the law was not protective of the United States, then they have a right to do it. We are not denying that right in S. 414. What we are saying is that the Comptroller General makes the assessment that they do not intend to develop this idea, then let a small business or let a university have a chance to develop it and make it available to the people of the country in the marketplace.

The present burden of this patent policy confusion is placed primarily on universities—which are presently conducting 70 percent of the basic research in the country—and on small businesses. Because inventions made by these contractors are coming from basic research funded by the federal government, the agencies are rarely justified in assuming that the invention is available for use by the public. Because inventions made by these contractors are coming from basic research funded by the federal government, the agencies are rarely justified in assuming that the invention is available for use by the public. If the agency can insist on retaining patent rights, the commercial potential of the invention can be impaired. The fee is to be so onerous since President Kennedy's Memorandum and State of Government Patent Policy is still the law.

I would like to point out that the bill which is presently before the Senate says that if the Government feels that a patent was not made or that it is not worth developing a patent, it will be able to get a free ride from this bill. This concept has been endorsed by President Carter in his innovation speech of October 31, 1979, supported by the President's Domestic Policy Review on Innovation and Productivity. Mr. P. Ewing, Deputy Assistant Attorney General, Antitrust Division in his testimony to the House Committee on Science and Technology, is supported by the Comptroller General of the United States, Mr. Elmer G. Staats, is supported by recent White House Conference on Small Business, the National Small Business Association, the University Park, and University Patent Administrators, and with the exception of Adm. Hyman Rickover by every witness who appeared—our own committee to this general rule. If the funding agreement is deemed it necessary to safeguard the consent of the agency involved, and the Comptroller General would be charged with the duty of reporting to the Judiciary Committee, or the House Science and Technology Committee has advocated revising the present policies because of their ineffectiveness. It is for these reasons that I urge my colleagues to join me in supporting S. 414.

Mr. President, I ask unanimous consent that Senator Nelson's statement be printed in the Record at page 8741.

The PRESIDING OFFICER. Without objection, it is so ordered.

STATEMENT BY SENATOR NELSON

I support S. 414. After careful consideration of this legislation and the arguments that have been made for and against it, it is my conclusion that the public interest would be served by its passage by the Senate and its enactment into law.

Before reviewing the contents of this bill, it would be useful to sketch out some of the underlying reform of federal patent ownership policy that is urgently necessary. It is universally conceded that the United States has experienced unprecedented innovation and productivity crisis, which, in turn, is increasing our disastrous rate of inflation. The number of new and feasible inventions has gone down steadily since 1971. In 1979, almost 40 percent of the 55,418 patents issued by the United States Patent and Trademark Office, the last year for which we have data, was produced by citizens of foreign countries. We invest less in research and development in constant dollars than we did in the last quarter of the century, 23 years ago. Today, only 1.1 percent of our gross national product is spent on research and development. The economic position of the United States is not being made by the private sector. Today, the United States is a small percentage of the world's research and development activity, and the United States is not well placed to compete in the marketplace where the public can benefit from them.

S. 414 also includes a payback requirement that university research in the public interest be reimbursed by the Government from the profits that a successful invention makes. No one is getting a free ride from this bill. This concept has been endorsed by President Carter in his innovation speech of October 31, 1979, supported by the President's Domestic Policy Review on Innovation and Productivity, Mr. P. Ewing, Deputy Assistant Attorney General, Antitrust Division in his testimony to the House Committee on Science and Technology, is supported by the Comptroller General of the United States, Mr. Elmer G. Staats, is supported by recent White House Conference on Small Business, the National Small Business Association, the University Park, and University Patent Administrators, and with the exception of Adm. Hyman Rickover by every witness who appeared—our own committee to this general rule. If the funding agreement is deemed it necessary to safeguard the consent of the agency involved, and the Comptroller General would be charged with the duty of reporting to the Judiciary Committee, or the House Science and Technology Committee has advocated revising the present policies because of their ineffectiveness. It is for these reasons that I urge my colleagues to join me in supporting S. 414.

Mr. President, I ask unanimous consent that Senator Nelson's statement be printed in the Record at page 8741.

The PRESIDING OFFICER. Without objection, it is so ordered.

STATEMENT BY SENATOR NELSON

I support S. 414. After careful consideration of this legislation and the arguments that have been made for and against it, it is my conclusion that the public interest would be served by its passage by the Senate and its enactment into law.

Before reviewing the contents of this bill, it would be useful to sketch out some of the underlying reform of federal patent ownership policy that is urgently necessary. It is universally conceded that the United States has experienced unprecedented innovation and productivity crisis, which, in turn, is increasing our disastrous rate of inflation. The number of new and feasible inventions has gone down steadily since 1971. In 1979, almost 40 percent of the 55,418 patents issued by the United States Patent and Trademark Office, the last year for which we have data, was produced by citizens of foreign countries. We invest less in research and development in constant dollars than we did in the last quarter of the century, 23 years ago. Today, only 1.1 percent of our gross national product is spent on research and development. The economic position of the United States is not being made by the private sector. Today, the United States is a small percentage of the world's research and development activity, and the United States is not well placed to compete in the marketplace where the public can benefit from them.

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The bill contains meaningful "payback" requirements. Government-wide rights to inventions would be the �exclusive right;� for the federal government to reduce the administrative burden because they would be exercisable only in specified situations, such as when the agency contracting for the invention has not taken effective steps to achieve practical application of the invention.

"Studies have shown that 8,000 inventions disclosed annually to the Government, only a handful attained commercial importance. It would be hoped that an assessment of the economic advantages of determinations of rights in inventions would bring about an improvement of this record."

Third, it is argued that the granting of title and exclusive licensing rights to private contractors would accelerate the rate of commercialization of inventions.

Fourth, it is maintained that there are potential dangers to small business that the bill confers a benefit on small business, and it is not reasonable to oppose the bill because of the theoretical potential danger to small business. Further, the Senate has adopted S. 1679, which was sponsored by Senator George W. Smathers, which provides that the average annual increase in federal research and development contracts made with government support and ending in federal research and development programs is the large-scale participation of the small business community. A distressingly low percentage of federal research and development contracts are awarded to small companies. In fact, according to the Comptroller General, only 3 percent of all federal R & D contracts go to small businesses. The small business community has heard from a number of small business people who have said that the present government policies and practices result in small business making little or no profit on their inventions. The small business people say that they are forced to license them out to competitors, and they are penalized. Thus, the bill confers a benefit on small business, and it is not reasonable to oppose the bill because of the theoretical potential danger to small business. The bill confers a benefit on small business, and it is not reasonable to oppose the bill because of the theoretical potential danger to small business.

The granting of a patent or of an exclusive license does not mean that anyone will license to large business competitors. It is argued that if a small business were to possess patents or exclusive licenses, it might be an attractive takeover target. Further, it is maintained that small businesses might not be able to resist patent infringement by larger firms because of the high legal costs involved.

With all due respect to those who make these arguments, the arguments do not strike me as being very strong. Small business people overwhelmingly support this bill and are willing to take their chances with potential corporate raiders and patent infringers.

The bill confers a benefit on small business, and it is not reasonable to oppose the bill because of the theoretical potential danger to small business.

I must conclude that the granting of title and exclusive licensing rights to private contractors would accelerate the rate of commercialization of inventions. I would like to quote President John F. Kennedy's favorite saying: "A rising tide lifts all boats."
work leading to freely available patents because this would compromise their proprietary rights, some of the most capable performers will not undertake the government work for which they are best suited. Because of the strength of these considerations, most agencies have the authority in some circumstances to provide exclusive rights. But because of the difficulty of balancing competing considerations, this issue has been unsettled for over 30 years, and, I believe, the present statutory provision will allow a negative effect on the commercialization of technologies developed with federal support.

Such belief has fully and succinctly presented the issue before us, and I agree with the findings.

The bill has been endorsed by Mr. Ky F. Ewing, Deputy Assistant General, Anti-Trust Division. In testimony before the House Committee on Science and Technology, as noted above, it is supported by the Comptroller General of the United States, Elmer House Committee on Science and Technology. There being no objection, the synopsis is ordered to be printed, and I am pleased to support it.

The PRESIDING OFFICER. The Sen.
ator from Kansas has 12 minutes remaining and the Senator from Louisiana has 1½ minutes remaining. Who yields time?

Mr. BAYH. Mr. President, I ask unanimous consent to have printed in the RECORD a synopsis of Admiral Rickover, who has been very active on this subject down through the years.

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

SYNOPSIS OF ADMIRAL RICKOVER'S VIEWS ON GOVERNMENT PATENT POLICY

1. In recent years, Members of Congress have introduced various bills which, contrary to all that the existing statutes would give the contractors the exclusive rights to inventions arising under their contracts with the U.S. Government. In support of these bills, the patent lobby, with the strength of the patent lobby, has been very active, and the Government has granted its contractors such rights. Companies will not have sufficient financial incentive to develop and market the ideas that grow out of Government-funded research.

2. Admiral Rickover has had more than a half century's experience in engineering technology and contracting. For many years he has strongly opposed bills which would give contractors exclusive rights to inventions developed at Government expense. He believes that inventions that have equal market potential should be made available to all who develop inventions at private expense.

3. In support of his views, Admiral Rickover makes four points:

a. In the vast majority of cases, patent considerations neither attract companies to Government work nor keep them from it. Contractors seek Government work because it generates profit; it helps support their basic science and technology, and they obtain valuable know-how from performing the work. The idea that the Government should support companies without giving away patent rights is simply rhetoric by the patent lobby.

b. The technology growing out of most Government R&D efforts is not reflected by the patents generated, but is in the form of data, know-how, concepts, and design features which, although of great technical importance, generally are not patentable.

c. Truly good ideas arising under Government contracts should be adopted and used elsewhere without having to grant someone monopoly patent rights. Nuclear technology growing out of this kind of work should be treated as public domain, in which Government contractors have not been given exclusive rights to inventions developed at Government expense.

d. By generally claiming the rights to inventions their employees develop on the job, industry endorses a principle that patent rights should belong to the employer. But when the Government is the employer, and the contract is paid for with public funds, the patent lobby wants to reverse this principle.

e. Large corporations would benefit most from a government patent policy because the vast majority of Government research and development funds is spent in contracts with large corporations.

f. It would be wrong to give a company a 17-year monopoly to some technological breakthrough, in the energy area, for example, that was paid for with public funds.

4. Based on this first-hand experience encompassing many years, Admiral Rickover contends that the dissemination of technology and the public good are both served when the Federal Government retains the unrestricted right to use inventions developed at public expense and the public retains the unrestricted right to use them. Because of a problem of some times conflicting with patient matters, he recommends that Congress enact legislation which would ensure that each citizen of this country would use inventions developed at Government expense.

Mr. BAYH. Mr. President, I ask unanimous consent that the Senator from Indiana be permitted to use 2 minutes of the time of the Senator from Kansas, who is a co-sponsor of this legislation.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BAYH. The Senator from Kansas has been an avid supporter of this legislation. I want to compliment him, as well as our other sponsors, for their assistance.

I have great sympathy with the thrust of the arguments of the Senator from Louisiana. I would just like to point out two of the factors in this bill that have not been contained in other provisions which go to the question of the Government being fleeced and the taxpayers losing the dollars that they have invested.

Let me just briefly state the case:

First of all, I do not see how the taxpayers benefit at all if money they spent in research results in ideas just dust. The people have to get the idea commercialized and made available to those who develop new products before the taxpayers get any return on their investment.

The second point—and I think this is a point that needs to be considered, and I think it goes to the concerns expressed by the distinguished gentleman, Admiral Rickover, who I have great faith and respect for. I just disagree with his logic on this point.

We have a formula in this bill that says when a small business or a university takes advantage of the provisions of S. 414, begins to market an idea, and they obtain a formula in which the money is repaid to the agencies.

So, in the final analysis, the taxpayer will not be out the cost of the research and they also will have the benefit of the product.

I have my good friend from Kansas is here. He can express these ideas much better on his time than I can.

Mr. BAYH. Mr. President, I send an amendment to the desk and ask for its immediate consideration.

The PRESIDING OFFICER. The Senator from Kansas has 10 minutes remaining.

UP AMENDMENT NO. 1049

(Purpose: To exempt from the provisions of the bill the Tennessee Valley Authority)

Mr. BAYH. Mr. President, I withdraw my amendment so that Senator BAYH may offer his amendment.

Mr. LONG. Mr. President, I withdraw my amendment so that Senator BAYH may offer his amendment.

The PRESIDING OFFICER. The Senator from Louisiana has withdrawn his amendment. The clerk will state the amendment of the Senator from Indiana.

The legislative clerk reads as follows:

Mr. DOLE. Mr. President, the Senator from Indiana has correctly described the amendment.

Mr. President, I rise in support of the amendment that has been offered by Senator BAYH.

This amendment addresses the built-in characteristics of the Tennessee Valley Authority. Indeed, while S. 414 was never intended to apply to the TVA, which does not make use of Federal appropriations in funding their research and development, the bill's definition of funding agreements which reads as "any agreement entered into between * * *" (page 27, lines 3 and 4), was
The Tennessee Valley Authority, while not making up a large part of the total Federal budget, however, uses Federal funds for in-house research by employees, for which the TVA has its own regulations. They expressed concern that section 206 of the bill would authorize the General Services Administration to promulgate regulations which might result in the TVA having to comply with GAO regulations.

Mr. President, this amendment would affirm the fact that S. 414 does not affect the present status of the Tennessee Valley Authority, and that the TVA will continue to be exempt from GSA regulations.

As a cosponsor of this worthwhile amendment, I urge my colleagues to support this effort.

Mr. President, Mr. President, I am happy to see that the Committee on the Judiciary has accepted an amendment designed to enable the Tennessee Valley Authority to develop its own approach for implementing the requirements of S. 414, rather than subjecting it to the uniform regulations which would be developed under this legislation by the Office of Federal Procurement Policy and the General Services Administration.

I am convinced that this amendment is necessary to preserve the flexibility and independence which TVA needs to continue to carry out its program responsibilities associated with these patents in an effective manner.

I am proud of the fact that some of the most effective Federal research and development work on the production and use of new and better fertilizers has been done by TVA at its National Fertilizer Development Center at Muscle Shoals, Ala. During the 47 years that TVA has been working at Muscle Shoals, TVA chemical engineers and agricultural researchers have developed new technology which has helped nearly double the production of 75 percent of the fertilizer used by our Nation's farmers.

TVA owns all the patents for these processes, approximately 230—but, through simple procedures, has issued 622 nonexclusive, royalty-free licenses for the use of this TVA technology at 564 plants in 39 States. The best part about all this is that nearly three-quarters of these plants are owned by small businesses and local farmers' cooperative

TVA has been successful in this regard because it has been able to assess the commercial environment on a case by case basis, and tailor the manner in which it grants licenses to achieve the fullest possible commercial acceptance and usage of TVA developed technology.

I am uncertain whether this success would continue, however, if these TVA practices were subjected to the uniform Government-wide regulations developed by FPP and GSA to implement the requirements of S. 414. While these

uniform regulations might be appropriate for the bulk of Federal agencies, they might actually increase the amount of bureaucratic paperwork and complexity of TVA's operations or other TVA's responsibilities, which might otherwise be ill-suited or detrimental to TVA's programs.

I believe it would be inexcusable to risk the success of these highly efficient and effective TVA technology transfer programs when there is no compelling reason to do so.

In short, "if it ain't broke, don't fix it." I emphasize, however, that this amendment would not exempt TVA's patent-related activities from the uniform patent policy requirements of S. 414. The amendment simply enables TVA to implement these requirements in the manner most compatible with TVA's program needs.

Furthermore, TVA is not just involved with agricultural research and development. In carrying out President Carter's directive to be in a model in energy-related research and development, TVA is delving into many areas which promise to produce important technologies which may provide us with better tools to help resolve our Nation's energy problems. Most of the funding for these activities does not come from the Nation's taxpayers, however, but is financed with funds of TVA's self-financing power program, which ultimately are provided by TVA's customers when they pay their electric bills.

Given its statutory responsibility to the ratepayers in the Tennessee Valley to keep electric rates as low as feasible, in each of the wide variety of energy-related research and development agreements entered into by TVA an individual determination is made as to the ownership and rights of the parties to any patents which might result from the agreement. This determination is just one of numerous business judgments the TVA Board must make in the course of operating the Nation's largest electric system. Before entering into an agreement, TVA needs to determine whether the use of the nonappropriated funds of TVA's self-financing power program can continue to be feasible, and manage the TVA power program efficiently.

This amendment exempts research and development agreements to the use of the nonappropriated funds of TVA's self-financing power system from the strict coverage of the provisions of sections 202 through 205 of S. 414. It is not appropriate to require in all cases that TVA contractors automatically receive title to all inventions which they develop under agreements funded with TVA power system funds.

Nor is it always appropriate for TVA to retain all of the "march-in" and other rights which the bill would require. In TVA's case, it is not uncommon for a business firm to spend its own money on developing a technology and coming to TVA only in the last stage of development to help prove its commercial feasibility in connection with the operations of the TVA power system. A contribu- tion in this instance may be relatively small. The business firm may be understandably reluctant to give up the rights this bill would extend to TVA in a situation. The net effect would be a reduction in the willingness of firms to try out new technology on the TVA system or to charge TVA more for doing it.

The requirements of the bill would not, therefore, function as an incentive for the Nation's taxpayers and could be an added expense borne solely by the ratepayers of the Tennessee Valley region.

I believe this amendment to s. 414 would provide an effective and equitable approach to enable TVA to continue carrying out its programs in an efficient manner, and I urge its adoption.

Mr. DOLE. Mr. President, I have listened to some of the major concerns about the policy. I believe this bill is a small step in the right direction. I know some Members have concerns about the policy. I am aware of the concerns of the distinguished chairman of the Finance Committee, Senator Long.

Mr. STEVENSON. Mr. President, S. 414 is a test of the Senate's concern about America's capacity to produce and compete in a fiercely competitive world. It is not a panacea. It is, in truth, a part of the solution. But if we are unable to address a problem that has beset us for two decades, what can we do? Are we doomed to play out the conventional wisdom, as we did in the 1920s, until its futility is inescapable and the moment passes?

Today there is scarcely an industrial sector or technology in which the United States does not face a vigorous challenge. For the United States to hold its own, let alone prosper, in this environment requires redoubled efforts to encourage investment, promote exports, and make economic adjustments, as well as to advance technology and stimulate innovation.

Instead, fiscal and monetary policies lurched from one month's Consumer Price Index and employment figures to the next, with broader consequences for today's uncertainty. We provided $1.5 billion in loan guarantees for the geriatric Chrysler Corp., as President Carter, after an 18-month study involving scores of agencies and hundreds of advisers, proposed a mere $55 million for industrial innovation. The new initiatives announced in the President's message to Congress on October 22nd would actually cost $44.6 million. Now that pitiful sum has been whittled to $26.1 million in succes-
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April 23, 1980

sive rounds of budget cutting. The vic-
tims of economic orthodoxy include Na-
tional Science Foundation grants to in-
dustry-supported research in univer-
sities, grants to small businesses for
innovative research and development, and
the National Research Council Com-
technology Center. Apart from this
legislation and S. 1250, to authorize in-
dustrial technology centers, very little
remains of the President's most ambitious
innovative research and development,
which for many years has granted
restrictions to contractors in more
firms and nonprofit organizations.
Small businesses and universities are not
in these hearings from industry, business-
ing the disincenitives and restrictions of
the Small Business Administration's
sets of eligibility criteria, all of
them devised to suit different adminis-
trative purposes.

The legislation discriminates against
its proposed beneficiaries. If they are
successful in commercializing or li-
censing their inventions, they will be re-
qued to pay back the Government con-
tribution. Neither of these requirements
is imposed by the Defense Department,
which has granted un-
tricted title to contractors in
than two-thirds of military R. & D. con-
tracts, a large proportion of them with
the major high-technology corporations. Under this bill, DOD must recoup its expendi-
tures from its smallest but not from its
largest contractors.

S. 414 would maintain Government
ownership of inventions made by a broad
range of firms ensnared in energy, trans-
portation, and other civilian research and
development enterprises whose suc-
cess depends upon private commercial-
ization of new technologies and who are
considering aggressive programs to ad-

autovotive technology. We cannot
state in unequivocal terms policies in these
areas while we encourage companies to
exploit military R. & D. results, routinely
and without controversy.

Nonetheless, S. 414 is a small step in
the right direction. It recognizes that, on
the whole, a policy of granting exclusive

rights in return for commercial develop-
ment stands the best chance of securing
the benefits of Federal R. & D. for the
public and the economy. It extends the
DOD precedent and brings us closer to a
uniform patent policy. It gives small re-
search firms a needed incentive to par-
ticipate in Federal R. & D. programs and
encourages the transfer of technology
from university laboratories to commer-
cial markets. For these reasons, I support
the University and Small Business Patent
Procedures Act.

I believe the limitations of S. 414 will
soon become apparent, if they are not al-
ready apparent to the House committees
considering similar legislation. I am con-
fident that Senator Schmitt and other
members of the Commerce Committee
will continue their leadership on this is-
sue, and I suspect that many of the spon-
sors of this bill will support them. In
the meantime, the Senate should pass
S. 414.

Mr. SCHMITT. Mr. President, I wish to
commend the Senators from Indiana and
Kansas for their able leadership on be-
ginning the process toward a compre-
ensive Government-wide patent policy.

S. 414, a worthwhile measure designed
to stimulate the commercialization of
inventions made by small business and
universities with the assistance of Fed-
eral funds.

I recognize that the stated purpose of
S. 414 is similar to that of my own bill,
S. 1215, the Science and Technology Re-
search and Development Utilization
Policy Act, which has been referred to
the Senate Commerce Committee. That
committee has concluded 4 days of hear-
ings on this bill and the general subject
of Government patent policy. The testi-
mony we received during the course of
these hearings from industry, business—
both large, small and medium size—and
universities was overwhelming in support
of a uniform Government patent policy
that placed title in the hands of the con-
tractor, subject to appropriate safe-
guards for the public and the economy.

While I support the basic objectives of
S. 414, I am concerned that the bill does
not go far enough. This bill would es-

cal the second such decline since World War II.
Other industrialized countries also ex-
erience lower growth rates in the
seventies, but none was as poor as ours.

Growth in domestic output per worker in
the United States—a key source of our
economic growth in the early sixties—
denied gradually after 1967, dropped
dramatically by nearly 1 percent—only the
second such decline since World War II.

Last year exports grew, the trade bal-
balance improved. But the United States
continued to register huge deficits in
steel, automobiles, and other so-called
non-R. & D.-intensive manufactured goods. Our shipments of electrical ma-

inery, aircraft, chemicals, and instru-
ments have not prevented an overall trade deficit in manufactures in 4 of the
last 9 years. Even our high technology
surplus is slipping, and we have a grow-
ing deficit with Japan in electronic and
other sophisticated products.

Growth in domestic output per worker in
the United States—a key source of our
economic growth in the early sixties—
denied gradually after 1967, dropped
dramatically by nearly 1 percent—only the
second such decline since World War II.
Other industrialized countries also ex-
erience lower growth rates in the
seventies, but none was as poor as ours.

We face competition from major trading partners,
including Britain.

The solutions lie in increased invest-
ment in new plant and equipment, new
products, and new firms. They lie in a
reform of economic regulation. They lie in
cooperative efforts to develop new
manufacturing technologies, as Senator
Stevenson and I propose in S. 1250,
which the Commerce Committee will
soon report to the Senate.

But in no small part the solution also
lies in encouraging the widest possible use of Government-supported technol-

ogy, removing disincentives to partici-
pation in Federal R. & D. programs, and
promoting cooperation rather than
antagonism between Government and
industries. Precisely because of tight
budget and fiscal constraints, it is vital
to move in the areas where we have
flexibility.

As Senators are aware, when this bill
was first considered by the Senate in
February, I sponsored an amendment
to extend its provisions to all Govern-
ment contractors in the interest of final-
ly achieving a uniform Government pat-
tractors, regardless of size or profit
status, to acquire their inventions under Federal contracts while retaining the structure and essential pro-
visions of S. 414. It is essential to achieve
the widest possible application of Gov-
ernment-sponsored R & D. at a time of lagging innovation, stagnant pro-
ductivity growth and declining U.S. com-
petitiveness in the international and do-

cantly and fairly.

Mr. President, I continue to believe
that S. 1215 is in the real public interest,
and I am hopeful that when reported
out of the Commerce Committee it will
receive favorable consideration by the
Senate as a whole.

Mr. CANNON. Mr. President, the sym-
bolic importance of S. 414 surpasses what
I expect to be its practical benefits. At
a time of grim economic statistics and

1988-026
ent policy. I believe that should remain the goal, and I note that several spon-
sors of S. 414 said in public hearings that this drafter detracts nothing from the case for small
business and university patent rights to observe that they perform a modest share of Federal R. & D. The Commerce Com-
mmittee had held 4 days of hearings on a comprehensive Government patent pol-
icy legislation introduced by Senator Scudder. With a single exception, our witness strongly endorsed the prin-
ciple of allowing exclusive commercial use of Government-financed inventions as a necessary incentive, in most cases, to pursue development and commercializa-
tion. Overwhelmingly, they favored a policy of granting title to contractors without discrimination on the basis of
size or tax statute. The risk of monop-
olization was judged to be minimal or nonexiste
nt. I recognize, however, the underrepre-
sentation of small research companies in Fed-
eral laboratories is especially dependent on their being available for li-
censing on attractive terms. Allowing these institutions to acquire title to their inventions builds upon the precedent fol-
lowed by the Defense Department in nearly three-quarters of its R. & D.
contracts and brings us closer to a uniform patent policy. For these reasons, I urge my colleagues to support the University and Small Business Patent Procedures Act.8

Mr. DOLE. Mr. President, I yield back any
time I have remaining.

Mr. LONG. Mr. President, how much
time remains?

The PRESIDING OFFICER. The Sen-
aator has 12 minutes remaining.

Mr. L0NG. Mr. President, I meant to ask how much time I had remaining.

The PRESIDING OFFICER. The Sen-
aator from Louisiana has no time remain-
ing.

Mr. DOLE. The Senator from Lou-
siana can have my time.

Mr. LONG. One minute, please.

The arguments made by the sponsor of this legislation are that you can de-
velop a product better if someone has a
monopoly, that a monopoly is better
in competition. In my judgment it is ridicu-
ulous on the face of it.

The idea where the public spends tens
of millions of dollars or maybe a hundred
million dollars to develop a product and
you end up with a monopoly because a monop-
oly can charge anywhere from 10 to 100
times the cost of manufacturing the prod-
risk is ridiculous on the face of it. That is the
facts of life, when the king would authorize someone to manufacture a product and nobody could compete.

If this Senate thinks that mercantilism
is better than capitalism, let them vote
for this bill. If they believe that competi-
tion is better than monopoly, then they
ought to vote against the bill.

Mr. DOLE. The Senator from Kansas,
on that note, will yield back the remain-
der of his time.

The PRESIDING OFFICER. All time
has been yielded back. The bill is open to
further amendment. If there be no
further amendment to be proposed, the
question is on agreeing to the committee
amendment in the nature of a substitute, as
amended.

The committee amendment in the na-
ture of a substitute, as amended, was
agreed to.

The PRESIDING OFFICER. The question
is on the engrossment and the third
reading of the bill.

The bill was ordered to be engrossed
for a third reading and was read the third
time.

The PRESIDING OFFICER. The bill
having been read the third time, the
question is, Shall it pass? On this ques-
tion the yea and nay have been ordered,
and the clerk will call the roll.

The legislative clerk called the roll.
Mr. CRANSTON. I announce that the Senator from Idaho (Mr. Chafee), the
Senator from Massachusetts (Mr. Ken-
nedy), and the Senator from Wisconsin
(Mr. Muskie) are necessarily absent.

Mr. BAKER. I announce that the Sen-
ator from Alaska (Mr. Stevens) and the
Senator from Wyoming (Mr. Wallop) are
necessarily absent.

The PRESIDING OFFICER (Mr.
BURDICK). Have all Senators voted?

The result was announced—yeas 91,

[Role call Vote No. 64 Leg.]

YES—91

Armstrong Armstrong
Baker Baker
Baucus Baucus
Bayh Bayh
Bellmon Bellmon
Bentsen Bentsen
Biden Biden
Boren Boren
Boschwitz Boschwitz
Bradley Bradley
Bumpers Bumpers
Burdick Burdick
Byrd Byrd
Cannon Cannon
Chafee Chafee
Chiles Chiles
Cohen Cohen
Crandon Crandon
Culver Culver
Danforth Danforth
DeConcini DeConcini
Dole Dole
Domenici Domenici
Durenberger Durenberger
Durkin Durkin
Eagleton Eagleton
Emswiler Emswiler
Ford Ford
Garn Garn
Glenn Glenn

MUSKIE

NAYS—4

Byrd Byrd
Carlson Carlson
Chiles Chiles
Church Church
Connor Connor
HATCH

Nelson Nelson
Kennedy Kennedy

Wallace Wallace
Stevens Stevens

NOT VOTING—5

So the bill (S. 414), as amended, was
passed, as follows:

S. 414

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 "University and
Title of this Act is "Title 35, United
States Code, Patents.—Title 35 of the
United States Code is amended by adding
after chapter 16, a new chapter as follows:

CHAPTER 18. PATENT RIGHTS IN INVEN-
TIONS MADE WITH FEDERAL ASSIST-
ANCE

SEC. 200. Policy and objective.

SEC. 201. Definitions.


SEC. 203. March-in rights.

SEC. 204. Return of Government investment.

SEC. 205. Preference for United States industry.

SEC. 206. Confidentiality.

SEC. 207. Uniform clauses and regulations.

SEC. 208. Domestic and foreign protection for
federally owned inventions.

SEC. 209. Regulations governing Federal licens-
ing or sales of inventions.

SEC. 210. Restrictions on licensing of federally
owned inventions.

SEC. 211. Precedence of chapter.

SEC. 212. Relationship to antitrust laws.

SEC. 213. Policy and objective.

It is the policy and objective of the Con-
gress to use the patent system to promote
the commercial development of inventions made
from federally supported research or development; to
encourage maximum participation of
small business firms in the commercially
used in a manner to promote free competition and enter-
prise; to promote the commercialization and public
use of inventions made with Federal support;
and to encourage maximum participation of
United States by United States industry and labor;
and to ensure that the Government obtains suffi-
cient rights in the inventions made with Federal
support to meet the needs of the Govern-
ment and protect the public against non-
use or unreasonable use of inventions; and to
minimize the costs of administering policies in this area.

SEC. 201. Definitions.

(a) The term "Federal agency" means any
executive agency as defined in section 105 of
title 5, United States Code, and the military
department as defined by section 102 of title
5, United States Code.

(b) The term "funding agreement" means any
contract, grant, cooperative agree-
ment entered into between any Federal
agency, other than the Tennessee Valley Au-
thority, and any contractor for the perfor-
mance of experimental, developmental, or re-
search work funded in whole or in part by
the Federal Government. Such term includes
any assignment, substitution of parties, or
subcontract of any type entered into for the
performance of experimental, development-
al, or research work under a funding agree-
ment as herein defined.

(c) The term "contractor" means any per-
son, firm, business or nonprofit or-
ganization that is a party to a funding agree-
ment.

(d) The term "invention" means any in-
vention or discovery which is or may be paten-
table or otherwise protectable under this title.

(e) The term "subject invention" means any
invention of the contractor conceived or
first actually reduced to practice in the per-
fomance of work under a funding agree-
ment.
benefits are to the extent permitted by law or Government regulations available to the public.

"(g) The term 'made' when used in relation to any invention means the conception or reduction to practice of such invention.

"(h) The term 'small business firm' means a business firm as defined and after April 2, 1955, as amended, by section 3 of the Small Business Act of 1953 (15 U.S.C. 632) and implementing regulations of the Administrator of Small Business Administration.

"(i) Each nonprofit organization means universities and other institutions of higher education or an organization of the type described in section 501 (c) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)).

"(j) 202. Disposition of rights.

"(a) Each nonprofit organization or small business firm may, within a reasonable time after disclosure is required by article 3 of the chapter, receive title to any subject invention: Provided, however, That the Government may prohibit, if otherwise (1) when the funding agreement is for the operation of a Government-owned research facility or (2) in exceptional circumstances when it is determined by the agency that restriction or elimination of disclosure will better promote the policy and objectives of this chapter or (iii) when it is determined by the agency that a determination is authorized by statute or Executive order to conduct foreign intelligence or counterintelligence activities that the restriction or elimination of the right to retain title to any subject invention is necessary to protect the security of such activities.

"(b) Any determination under (ii) of paragraph (a) of this section shall be in writing and accompanied by a written statement of facts justifying the determination. A copy of each such determination and justification shall be transmitted to the Comptroller General of the United States within thirty days after the award of the applicable funding agreement. A copy of the determination of the right to receive title to any subject invention, a copy of any patent application or any patent issuing thereon, a statement specifying that the invention was made with Federal funds, and any additional information which is necessary to make an election to retain title to any subject invention may be received by the contractor, an assignee or exclusive licensee in writing by the Government.

"(c) If the Comptroller General believes that any pattern of determinations by a Federal agency as to the policy and practice of subject inventions as the contractor; (B) a prohibition against the granting of exclusive licenses under United States Patents or Patent Applications in a subject invention by the contractor to persons other than small business or nonprofit firms for a period of in excess of the earlier of five years from first commercial sale or use of the invention or from the date of the exclusive license excepting that time before regulatory agencies necessary to an initial practice or use, obtain approval thereon, on a case-by-case basis, the Federal agency approves a longer exclusive license. If exclusive field use of a patented, commercial sale or use in one field of use shall not be deemed commercial sale or use as to other fields of use or commercial sale or use with respect to a product of the invention shall not be deemed to end the exclusive license, and shall have the effect of a grant of a non-exclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the contractor, assignee, or exclusive licensee refuses such request, to grant such a license itself, if the Federal agency determines that such a license is necessary because the contractor or assignee has not, or is not expected to take within a reasonable time, action to meet requirements, such action shall be brought within sixty days after notice of such determination.

"(d) 203. March-in rights.

"(a) With respect to any subject invention in which a small business or nonprofit firm holds an exclusive license under title V of the Act, the Federal agency may, if the contractor, assignee, or exclusive licensee is not making adequate practical application of the subject invention within a reasonable time, determine to take action and shall grant an exclusive license to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if the contractor, assignee, or exclusive licensee refuses such request, to grant such a license itself, if the Federal agency determines that such a license is necessary.

"(b) Action is necessary because the contractor or assignee has not, or is not expected to take within a reasonable time, action to meet requirements, such action shall be brought within sixty days after notice of such determination.

"(c) Action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonable under the circumstances.

"(d) Action is necessary because the agreement...
ment required by section 206 has not been obtained or waived or because a license under the patent covering any subject invention in the United States is in breach of its agreement obtained pursuant to section 206.

§ 204. Return of Government investment

(1) If the first United States patent application is filed on a subject invention, a nonprofit organization which receives federal funding under the agreement may be waived by the Federal agency as commercial and financial information to be negotiated but the amount of which to be determined by the United States and the public, including provisions for the following:

[snip]

§ 206. Confidentiality

"Federal agencies are authorized to withhold from public access any information disclosing any invention in which the Federal Government owns or may own a right, title, or interest (including a nonexclusive license) for a reasonable time in order for a patent application to be filed. Furthermore, the agency shall not be required to release copies of any document which is a part of an application for patent filed with a Patent Office, Trademark Office or with any foreign patent office.

§ 207. Uniform clauses and regulations

"The Office of Federal Procurement Policy, after receiving recommendations of the Office of Science and Technology Policy, may prescribe regulations which must be made app-licable to Federal agencies implementing the provisions of sections 206 through 205 of this chapter and the Office of Federal Procurement Policy shall establish standards toward funding agreement provisions required under this chapter.

§ 208. Domestic and foreign protection of federally owned inventions

"Each Federal agency is authorized to -

(1) apply for, obtain, and maintain patents on inventions in the United States and in foreign countries on inventions in which the Federal Government owns a right, title, or interest;

(2) grant nonexclusive, exclusive, or partially exclusive licenses under federally owned patents, patent applications, or other forms of protection obtained, royalty-free or for royalties or other consideration, and on such terms and conditions, including the grant to the licensee of the right of enforcement pursuant to the provisions of chapter 29 of this title as determined appropriate in the public interest;

(3) undertake all other suitable and necessary steps to protect and administer rights to federally owned inventions on behalf of the Federal Government either directly or through contract; and

(4) undertake all other necessary steps to protect and administer rights to federally owned inventions on behalf of the United States Patent Office.

§ 209. Restrictions governing Federal licensing

"The Administrator of General Services is authorized to promulgate regulations specifying the terms and conditions upon which any federally owned invention, other than inventions owned by the Tennessee Valley Authority, may be licensed on a nonexclusive, partially exclusive, or exclusive basis.

§ 210. Restrictions on licensing of federally owned inventions

"(a) No Federal agency shall grant any license under a patent or patent application on a federally owned invention unless the person requesting a license has supplied the agency with a plan for development and/ or marketing of the invention, except that any other plan may be treated by the Federal agency as commercial and financial information obtained from a person and privileged and confidential and not subject to disclosure under section 552 of title 5 of the United States Code.

(b) A Federal agency shall normally grant the right to use or sell any subject invention in the United States only to a licensee that agrees that any products produced through the use of the invention will be manufactured substantially in the United States in accordance with the plan submitted and in the event that the plan is not fulfilled the Federal agency may terminate such license in whole or in part if it determines that the licensee is not practicing the plan submitted or request an order for a patent application to be filed.

(2) The desired practical application has not been achieved, or is not likely to be achieved, or is not expected to be achieved, under any nonexclusive license which has been granted, or which may be granted, on the subject invention.
for a license and the licensee cannot other- 
wise demonstrate to the satisfaction of the Federal Agency that it has taken or can be 
expected to take within a reasonable time, 
effective steps to achieve practical appli- 
cation of the invention.

(2) The right of the Federal agency to 
terminate the license in whole or in part if 
the licensee is in breach of an agreement ob- 
tained pursuant to paragraph (b) of this 
section and

(4) the right of the Federal agency to 
terminate the license in whole or in part if 
the agency determines that such actions are 
necessary to meet requirements for public use 
specified by Federal regulations issued after 
the effective date of the Act and such regu- 
lations or otherwise to limit the authority 
of agencies to agree to allow such persons 
or nonprofit organizations or small business 
firms.

(c) Nothing in this chapter is intended to 
limit the authority of agencies to agree to 
the distribution of rights in inventions made 
in the performance of work under funding 
agreements with persons other than non- 
profit organizations or small business 
firms in accordance with the Statement of 
Government Policy issued by the Presi- 
agency regulations, or other applicable reg- 
ulations or to otherwise limit the authority 
of agencies to agree to allow such persons 
to retain ownership of inventions.

(d) Nothing in this chapter shall be 
construed to require the disclosure of in- 
telligence sources or methods to or otherwise 
afford the prohibited to the Director of 
Central Intelligence by statute or Execu- 
tive order for the protection of intelligence 
resources or information that could con- 
stitute a national security classification or 
be held as a secret or a source or method.

§ 212. Relationship to antitrust laws

"Nothing in this chapter shall be deemed to 
convey to any person immunity from civil 
or criminal actions to create any de- 
fenses to actions, under any antitrust law."

(b) The tables of chapters for title 35, 
United States Code, is amended by adding 
immediately after chapter 217 the 
following:

"18. Patent rights in inventions made with 
Federal funds."

Sec. 3. AMENDMENTS TO OTHER ACTS.—The 
following Acts are amended as follows:

(a) Section 156 of the Atomic Energy Act 
of 1946 (42 U.S.C. 2186; 68 Stat. 947) is amended by adding the words "held by the 
Commission".

(b) The National Aeronautics and Space 
Act of 1958 is amended by repealing paragra- 
graph (g) of section 305 (42 U.S.C. 2457(g); 
73 Stat. 434).

(c) The Federal Nonnuclear Energy Re- 
search and Development Act of 1974 is amended by repealing paragraphs (g), (h), 
and (i) of section 9 of the Act (42 U.S.C. 2186; 
73 Stat. 948).

(d) Section 305 of the Atomic Energy Act 
of 1946 (42 U.S.C. 2186; 68 Stat. 947) is amended by deleting the words "held by the 
Commission or"

(2) The National Aeronautics and Space 
Act of 1958 is amended by repealing para- 
graph (g) of section 305 (42 U.S.C. 2457(g); 
73 Stat. 434).

(3) The Federal Nonnuclear Energy Re- 
search and Development Act of 1974 is amended by repealing paragraphs (g), (h), 
and (i) of section 305 of the Act (42 U.S.C. 2186; 
73 Stat. 948).

(4) The National Aeronautics and Space 
Act of 1958 is amended by repealing para-

§ 214. Precedence of chapter

(a) This chapter shall take precedence over 
any other Act which would require a 
disposition of rights in subject inventions 
of small business firms or nonprofit organiza-
tions contractors in a manner that is incon-
sistent with this chapter, including but not 
limited to the following:

(1) section 10(a) of the Act of June 29, 
1939, as added by title I of the Act of August 
14, 1946 (7 U.S.C. 427(a); 60 Stat. 1089); 
(2) the Act of August 14, 1946 (7 U.S.C. 
1625(a); 60 Stat. 1090); 
(3) section 501(c) of the Federal Mine 
Safety and Health Act of 1977 (90 U.S.C. 561 
(c); 83 Stat. 742); 
(4) section 106(c) of the National Traf- 
cic Safety and Highway Act of 1966 (15 
U.S.C. 1395(c); 80 Stat. 721); 
(5) section 12 of the National Science 
Foundation Act of 1950 (42 U.S.C. 171(a); 
82 Stat. 360); 
(6) section 152 of the Atomic Energy Act 
of 1946 (42 U.S.C. 2185; 68 Stat. 943); 
(7) section 305 of the National Aeronautics 
and Space Act of 1958 (42 U.S.C. 2457); 
(8) section 6 of the Coal Research Devel- 
337); 
(9) section 4 of the Hemul Act Amend- 
ments of 1966 (50 U.S.C. 167b; 74 Stat. 1020); 
(10) section 2 of the Arms Control and 
Disarmament Act of 1961 (22 U.S.C. 2572; 
75 Stat. 834); 
(11) subsection (e) of section 302 of the 
Appalachian Regional Development Act of 
1965 (42 U.S.C. 2832; 79 Stat. 937); 
(12) section 9 of the Federal Nonnuclear 
Energy Research and Development Act of 
1978 (42 U.S.C. 2186; 92 Stat. 1891); 
(13) section 5(d) of the Consumer Prod- 
1246); 
(14) section 3 of the Act of April 5, 1944 
(30 U.S.C. 323; 58 Stat. 191); 
(15) section 9001(e) of the Solid Waste 
Disposal Act (42 U.S.C. 6901(e); 90 Stat. 
2629); 
(16) section 219 of the Foreign Assistance 
Act of 1961 (22 U.S.C. 2179; 83 Stat. 806); 
(17) section 427(b) of the Federal Mine 
Safety and Health Act of 1977 (90 U.S.C. 
957(b); 86 Stat. 156); 
(18) section 305(d) of the Surface 
Mining and Reclamation Act of 1977 (30 
U.S.C. 1236(d); 91 Stat. 438); 
(19) section 21(d) of the Federal Fire 
Prevention and Control Act of 1974 (15 
U.S.C. 2912; 89 Stat. 1344); 
(20) section 6(b) of the Solar Photovoltaic 
Energy Research Development and Dem- 
ocration Act of 1978 (42 U.S.C. 5585(b); 
92 Stat. 2510); 
(21) section 13 of the Native Laxx Com- 
2583); and

(22) section 408 of the Water Resources 
and Development Act of 1978 (42 U.S.C. 
7879; 92 Stat. 1380).

The Act creating this chapter shall be con- 
unanimous consent that the remainder be 
dispensed with for 1 minute. The 
PRESIDING OFFICER. Is there 
objection? The Chair hears none, and it 
is so ordered.

Mr. ROBERT C. BYRD. When I said 
there would be no rollecall votes today, I 
meant on the adoption of the conference 
report. I do not foresee a rollecall vote on 
the adoption of the conference report. 
There could be a rollecall vote, how- 
ever, on a procedural matter. So I sug- 
gest that Senators not stray too far.

The PRESIDING OFFICER. The clerk 
will continue reading the conference 
report.

The assistant legislative clerk con- 
tinued to read the conference report.

Mr. BAYH. Mr. President, a parlia- 
mentary inquiry. Is it proper to request 
that the clerk sit while reading?

The PRESIDING OFFICER. There is 
nothing in the rules which indicates 
whether the clerk should sit or stand.

Mr. THURMOND. Mr. President, we 
have no objection to his sitting. He 
will be more comfortable.

The PRESIDING OFFICER. The clerk 
will continue to read while sitting.

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