STATEMENT OF

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BEFORE THE
SUBCOMMITTEE ON PATENTS
OF THE
SENATE JUDICIARY COMMITTEE

FEBRUARY 17, 1987

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Mr. Chairman and Members of the Subcommittee

It is clear that American industry is in the midst of a major economic transition. Part of the transition is being caused by a worldwide explosion in new technologies. Microelectronics, biogenetics, robotics, new materials, information sciences, and other new technologies will shape the world's future economic growth. Our recent huge trade deficits are at least partially explained by new foreign inventions taking an increasing part of markets previously dominated by United States goods.

However, depending on how we react as a nation, the total impact can be positive. The delivery of new American inventions, whether publicy or privately funded, to the marketplace can create an array of new businesses, and new businesses mean new jobs.

Today I want to discuss the exciting opportunities that are now before us for increasing the public sector contribution to innovation.

In the last few years the U.S. has invested on average 110 billion dollars annually in research and development. Fifty-five billion of this is federally-funded; the other half is funded by the private sector.

A federal investment of this magnitude raises two fundamental questions: First, are we unduly subsidizing foreign competition? Second, are we getting a fair return?

The first question cannot be answered conclusively, but we must be vigilant in ensuring that this does not occur. For research that has clear practical applicability, we must try to ensure that American industry has first access to the results of such research -- while at the same time preserving the free and open scientific communication that has historically been so important to the U.S. research enterprise.

As I will discuss later, we must provide a clear policy to contractors on the control of the very valuable technical data they produce. Finally, for our own benefit, we must ensure that America industry is aware of the variety of federal programs to disseminate commercially valuable technical information.

As to the second question, a number of figures suggest that we could get a better payoff from the federally-funded share of our national R&D effort. For example, approximately 120,000 patent applications are filed in the U.S. Patent and Trademark Office annually. Of these, less than 3,000 can be identified as emerging from government sponsored research. The remainder are the result of private sector R&D - including those coming from foreign sources. In addition, less than five percent of the

28,000 patents owned by the United Stated Government have been licensed. Statistics like these, numerous studies on the utilization of results from federally-funded research, and increased foreign competition demonstrate why the Administration has provided strong leadership to help increase the rate of U.S. commercialization of the new products and processes created by the $55 billion federal investment in R&D.

In the past the ownership or management of technology was often separated from the R&D organization that created the technology, putting it in the hands of managers who often had neither first hand knowledge of the technology nor an ability to gage its value. This kind of management makes it much more difficult to continue the iterative process necessary to deliver technology to the marketplace successfully.

The Administration believes that a key element in increasing the commercialization of Federally-supported R&D results is to decentralize technology management by permitting the creating or inventing organizations to own and manage technology developed with government funds. Such organizations would include government laboratories as well as universities and private firms.

Ownership and management of technology by the federally-funded inventing or creating organization brings with it incentives to evaluate each new technology and determine whether it should be published only, patented, copyrighted, maintained as confidential information, possibly trademarked or some combination of these actions. These incentives are the prospects

of income, outside risk capital and royalty return. These incentives have already prompted federally-funded organizations such as universities and their publication oriented employee-inventors to identify new patentable technologies and then to assume the complex responsibility of managing them on to the marketplace.

These incentives are important in a free market economy because intellectual property rights must be established and sometimes licensed away to justify the investment of private risk funding in most technologies. Failure to establish such rights in a potential marketable product by the creating organization could greatly diminish the incentives to complete development through to the marketing of this product.

Public Laws 96-517 and 98-620 give to universities (including universities managing government-owned laboratories) and small businesses the first right of ownership to patentable inventions they make in performance of federally-funded research. The President's February 18, 1983 Memorandum on Patent Policy extends that right, to the extent not prohibited by law, to all other classes of contractors. Public Law 99-502, The Federal Technology Transfer Act of 1986, extends the principle of decentralized management to government operated research laboratories by permitting the federal agencies to delegate the management of laboratory technology to the director of the laboratory.

The success of this effort to decentralize management of new technology is being borne out in many states that are planning

long-term economic growth around increased R&D cooperation between their universities and the private sector. Under P. L. 99-502 federal laboratories can now be included in such arrangements. This type of federal, state, university, and private sector cooperation under local leadership will be essential if we are to maintain technological leadership in the world.

While the laws and regulations that I have referred to are limited to the management of patentable inventions, the President's January 27, 1987 Competitiveness Initiative Statement announced the Administration's intent to extend the policy of contractor ownership to the nonpatentable results of federally-funded research. Item 21 of the competitiveness initiative states:

> "The Reagan Administration will implement a policy to help commercialize non-patentable results of Federally funded research by permitting Federal contractors to own software, engineering drawings, and other technical data generated by Federal contracts in exchange for royalty-free use by the Government."

This policy change is directed toward creating an incentive for commercialization by our contractors of know-how and ideas that cannot be protected by patent but are, nevertheless of potential economic importance. We believe a great deal of progress has been made in fostering the commercialization of federally-funded technology. The President's competitiveness initiatives could lead to even better

results. The large investment of the Federal government in R&D demands that we continue to look for ways to make the investment maximally productive to the American economy.