My name is Robert M. Price, President of Control Data Corporation, with headquarters in Minneapolis, Minnesota.

I wish to thank you, Mr. Chairman, for the opportunity to be here today, and commend you for your initiative in conducting hearings on a wide range of policy options for promoting the growth and international competitiveness of U.S. high technology industries -- which are a proven engine of job creation.

Federal tax, investment, and human capital policies are all critical to our competitive position, and others, I am sure, will address these issues during your hearings. That these factors are critical and new initiatives regarding them are needed there is no question, but today I want to devote my remarks to an even more crucial factor: cooperative research and development. Cooperation has unique potential for protecting and enhancing the competitive position of not only U.S. high technology industries, but also other industries of equal importance to our economy.
Our country's once strong international position in technology has been steadily eroding as other countries have taken a number of steps to accelerate their development and application of advanced technology.

In the brief span of two years, the U.S. position in microelectronics has gone from one of unquestioned and seemingly unassailable leadership to one of considerable questioning and doubt. The experience of being in second place in world-wide shipments of a particular advanced microelectronic component -- the 64K random access memory chip -- occurred for the first time; a report by a government research laboratory raises the possibility that it may be dependent on Japan for super computers by the end of this decade; Japan has sponsored an international conference to announce its intention to become the world leader in computing by 1990.

As these developments show, the greatest progress in advancing and exploiting technology has been made by Japan in targeted industries. The Japanese government has promoted cooperation among industry members at the base technology level as a key strategy for success. This strategy, particularly as implemented in the areas of microelectronics and computers, poses an ominous threat that has serious implications for
virtually all modern industries, and by implication for our national security as well. This threat is accentuated by the pervasive and rapidly growing application within all industries of these base technologies.

An adequate response will require many and varied actions. However, by far the greatest and most rapid progress can be achieved by increasing our efficiency in developing and applying technology. And given the scarcity of available resources -- both human and financial -- achievement of such efficiency will require a vast increase in technological cooperation. Yet intra-industry technological cooperation is a badly neglected topic in the on-going national debate about U.S. industrial policy.

The U.S. is suffering from a wasteful duplication of research and development efforts. The use of basic knowledge by one party should never preclude its use by another. For every corporation to rediscover what others have already learned represents waste -- not only to each company -- but also to society. This is especially valid in light of our critical shortage of competent scientific and engineering talent.

Control Data has been a pioneer in advocating and practicing broad-based cooperation for years.
Our experience in technological cooperation over the past ten to fifteen years has demonstrated that such an approach not only will work -- but that it is essential to the maintenance of a vigorous competitive environment.

Recently the need for cooperation in R & D is beginning to be recognized by others. The most significant endeavor in this regard will be launched next month. The "Microelectronics and Computer Technology Corporation," (MCC), a research and development venture will be owned, operated, and managed initially by a number of companies in the U.S. computer and semiconductor industries. Participating companies so far include Advanced Micro Devices, Control Data, Digital Equipment Corporation, Harris, Honeywell, Motorola, National Semiconductor, NCR, RCA, and Sperry.

MCC represents a cooperative effort to develop a broad base of fundamental technologies. It will undertake projects that will go significantly beyond current state-of-the-art.

MCC projects will be staffed to a considerable extent by personnel "loaned" from shareholder companies. This flow of talent to and from shareholder companies will be key to the success of MCC projects. This process greatly facilitates the transfer of technologies to participating companies.
The benefits to MCC shareholder companies include:

- An expanded scope of R & D to include projects that individual companies could not or would not undertake alone due to the costs and risks involved;

- A reduction in the wasteful duplication of R & D;

- A better definition of R & D needs and pitfalls; and

- A more efficient utilization of scarce scientific and technical talent.

For convenience, MCC will hold title to all know-how and patents. Although participating companies will have initial rights to the technology and receive preferential treatment, the technology will be licensed to other companies on reasonable terms. This is extremely important for example to small companies -- a major source of innovation and job creation.

MCC, therefore, will become a significant national technology resource. Each shareholder or licensee of MCC will draw upon its fundamental technologies, add value, and compete in markets of its own choosing with products and services of its own
design. The ultimate beneficiary of this process is the whole country through increased job opportunities and the expansion in the choice of products and services available to individual consumers.

In view of the national and individual benefits just presented, why isn't technological cooperation a way of life for us?

There are at least two very important reasons:

The first is our business culture, which evolved in an environment of a huge and expanding domestic market, in which competition for most U.S. corporations was mainly with other U.S. companies. Other inhibiting aspects of this business culture are an emphasis on short-term investment horizons -- in itself a complex subject -- and a misplaced view of what is involved in maintaining a proprietary position. But our attitudes have become anachronistic as the world we live in -- and compete in -- has changed fundamentally in the last decade. Such change will accelerate even more over the next 20 years, not only in terms of the rate of technological change, but also in terms of exploding capital intensity and increasing international competition.
The second and more important reason for the lack of cooperation in U.S. research and development, however, is the fear of inadvertently violating our century-old antitrust laws. Many companies are deeply concerned that the Justice Department or the courts will interpret "cooperation" to mean "conspiracy" -- even in R & D -- and, therefore, will be exposed to large treble damages awards.

Even though research consortia are typically completely lawful, the uncertainties in the interpretation and application of U.S. antitrust laws are a major obstacle to pooling resources in research and development. Very little official guidance exists as to either what constitutes a lawfully-structured joint R & D venture or what conduct will ultimately be considered lawful by the courts.

Thus, participants in cooperative R & D ventures must proceed at their peril.

Mr. Chairman, it is time to correct this problem. In order to bring about widespread cooperation, we need a change in the tenor of current laws -- from laws that sometimes permit technological cooperation -- to legislation that encourages it. Within the last year, a number of public and elected officials have begun to emphasize the need to remove unnecessary obstacles to cooperation in R & D.
But there is an urgent need for Congress to act to clear away the uncertainties in the interpretation and the application of the law. Several bills were introduced in 1982 which recognize the shortcomings I have described.

Among these, S.3116, introduced by Senators Mathias and Hart, embodies the most comprehensive and effective solution. It is important to note that S.3116 would not change but rather clarify U.S. antitrust laws. Under its provisions, a set of objective standards or rules would be enacted according to which those companies desiring to cooperate in R & D could legally plan and implement their activities. Statutory rules would deal with such criteria as the scope and duration of permissible activities; the permissible degree of market share; permissible and impermissible collateral restraints on participants; and the question of access to the venture and to the results of its research activities. Of course, activities falling outside of the standards would remain fully subject to the dual deterrents of governmental and private damage actions.

I urge the Committee and your colleagues in the Senate to support S.3116.

Today, the U.S. is the acknowledged world leader in computers and microelectronics, just as we once were in textiles, autos,
and steel. But there are grave threats to that leadership. I am convinced, however, that the stage is set for industry initiatives that will reverse the deterioration of world leadership in technology. Given a chance, we will preserve and enhance free-market competition and at the same time expand employment opportunities, broaden the choices available to consumers, and strengthen our national security.

We truly hope this Congress can begin to adopt the policies that will insure U.S. technological pre-eminence.

Thank you. I would be happy to respond to your questions.