REMARKS ON ACCEPTABLE COOPERATION AMONG COMPETITORS IN THE FACE OF GROWING INTERNATIONAL COMPETITION

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My subject is about cooperation and competition. In my view, if American firms are to compete effectively in global markets, we need to recognize that there is a requirement oftentimes for greater levels of cooperation among those firms; and, accordingly, we should be sensitive to those needs of cooperation when we are applying the antitrust laws. I will argue further that, in addition to applying current antitrust laws in a fashion that is sensitive to the needs of cooperation, we should think very seriously about amending the antitrust laws to provide greater certainty for cooperative arrangements.

I will focus primarily on the need for cooperation in the area of innovation and the commercialization of innovation. Although much of what I have to say today would apply to cooperation among firms that are not heavily involved in innovation, my focus will be on innovation.

My remarks in the area of antitrust, cooperation, and competitiveness draw heavily from a number of articles that I have written with David Teece, who is a Professor of Business and an economist at UC-Berkeley.¹

Let me speak first about innovation and social welfare, to indicate why innovation is incredibly important. Thereafter, I will move from the importance of innovation to the need for cooperation within the context of commercializing innovation.

Innovation is extremely important, but it is also very expensive and very risky. Innovation involves a considerable amount of risk and uncer-

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tainty. Indeed, the norm with respect to innovation is dry holes; probably
no better than one out of any ten efforts in the area of innovation
ever pays off with respect to commercialization. In addition, innovation
involves sunk costs and strong irreversibilities; once you get going down
a track, it's very difficult to loop back and begin again. All this, of course,
increases both risk and expense.

Another important characteristic of innovation—at least, as we regard
modern innovation today—is that it is an interactive process. Innovation
is reiterative; it also loops back on itself. All of this is another way of
saying that innovation is not done in set stages. It used to be popular to
view innovation in separate stages, starting with R&D. Then, one moved
to a separate stage of prototyping; and finally, to manufacturing, distribu-
tion, sales, and so forth.

A more modern and correct view of innovation would recognize that
if you are going to successfully commercialize products, if you're going
to get them to market quickly and make a profit from them, you've got
to be in a position where you're getting feedback and information from
downstream activities. In other words, it's not enough simply to cooperate
or simply to do R&D. If you cut off the process at R&D and don't continue
to work downstream in the manufacturing and distribution areas of the
product lines that evolve from your innovation, then you run the risk
that you will not receive important information and learning needed to
better your product, meet customer needs, and advance to second and
third generation products.

There are also very important appropriability problems for firms en-
gaged in innovation. It's important that a firm capture value from its
innovation, and that the value stays in-house so that the firm can profit
from the innovation. One of the problems that firms typically face in
innovating is leakage—a chance that somebody else will learn quickly
from the innovation, so much so that profit will be taken away from the
innovative firm. To the extent appropriability is a real problem for firms,
we will witness less innovation and less desire to commit adequate re-
sources to commercialization of innovation. As a result, we need to be
very careful when we are thinking about the innovative process to make
sure that there are mechanisms for appropriating the rents and the
returns.

Intellectual property, of course, fits part of the bill—and we'll talk
more about that as part of this program—but it is not alone enough, I
would argue. Patents simply are not effective for many firms operating
in many industries. Know-how is difficult to keep in-house. As a result,
you will see firms making efforts by contract to try to keep the rents of
innovation in-house and to spread them only to the firms that are bearing the risks—a practice, you will see, that I highly approve.

A final characteristic of modern innovation is that it takes place in global markets. You simply cannot credibly argue today that innovation is taking place in the United States and nowhere else. Japan is not playing catch-up any longer with us in terms of innovation; if anything, Japan may have moved ahead in terms of its ability to innovate, and certainly with respect to its ability to commercialize.

One of the greatest problems with respect to firms innovating in the United States, as identified by the recent President’s Commission on Competitiveness, is that, while we do fairly well in the United States at the innovation stage—that is, the stage of ideas—we often fall down in our efforts to commercialize. We need to think about ways that public policy can facilitate greater and more effective commercialization efforts.

The benefits to society from the innovative process are enormous. One study after another shows that there are enormous societal returns to innovation. The benefits to society far exceed the benefits to private firms. We ought, therefore, to be erring in the direction of encouraging innovation and the commercialization of innovation. The long-run benefits, the dynamic efficiencies, and the long-run interests of society, will usually out-strip any short-run concerns that antitrust lawyers and economists typically focus on. We must be careful to understand that it is technology that drives so much of society’s welfare. Our laws should reflect an environment in which that technology can flourish, and in which the commercialization efforts can flourish as well.

Successful innovation and commercialization of innovation in a modern setting often requires that firms cooperate to compete successfully.

There are a number of reasons today why firms may want to reach out and join hands with other firms to successfully innovate. I will outline a number of those reasons.

Today, the scale of investment needed and the scope of talent or assets needed for successful innovation have increased enormously. It is very difficult for single firms today, even large, integrated firms, such as the IBMs of the world, to be able to accomplish innovation in-house. Critical aspects of successful innovation and its commercialization may be missing, which causes firms to want to reach out and cooperate.

In addition, the riskiness that is common to all innovation, whether it’s being done by a single firm or a cooperative venture, is increased today because of the shortness of the product life cycle. Your business clients
experience every day that product life cycles are dramatically shortening. Shorter life cycles mean greater risk for the large investments that are necessary. In other words, if you run into a dry hole here, you will have less opportunity with your successful ventures to average things out, because time moves so quickly; new products and new technologies come into play. So, the shortness of product life cycle may cause firms to want to reach out and cooperate in order to share part of that risk.

There is a need also for access to complementary technologies, know-how, assets, and services. These complementary attributes of other firms may not be possessed in-house, once again pushing firms toward cooperative efforts.

Finally, the problems of appropriability may suggest that one way to handle leakages is to permit firms to be involved in a cooperative effort that will likely share the returns of innovation. A cooperative venture will get the firms together early enough to share the costs and the risks. So, in weak appropriability regimes, i.e., in industries without strong patentability or strong appropriability, we should not be surprised to see firms trying to cooperate by contract to appropriate the benefits of their innovative risks.

The types of technologies that I would expect to see develop along cooperative lines include the following: Large-scale/large investment technology. I would include within this category the recent proposals for high-definition television (HDTV). If we are going to commercialize superconductivity at some point, we are likely to see large-scale/large investment technologies. D-RAM production facilities may be another example where larger efforts of cooperation are needed.

A different category of innovation benefiting from cooperation is small-scale/shared technologies. A good example might be flexible computer-integrated manufacturing, where each small or medium-sized firm on its own is unable to invest in the efficient production plant for computer-integrated manufacturing and may desire to cooperate with other firms, other competitors, to get into that kind of manufacturing.

Finally, cooperation benefits technologies that need to share standards or networking. An example of this might be open computer architecture, where the very cooperation necessary is part of the standard-setting itself.

We have considered the problems of innovation, the importance of innovation, and why cooperation is often critical to the innovative process. I will turn now to the antitrust laws and how they may have a negative impact on the innovation process and the ability of firms to cooperate together successfully to commercialize innovation.
I recognize that there are differences of opinion with respect to the significance of the U.S. antitrust laws on this innovation process. Professor Teece and I believe that U.S. antitrust laws needlessly inhibit cooperative arrangements among U.S. firms in a number of ways.

First of all, rule of reason analysis itself is a barrier. There is little doubt that in the context of cooperative commercialization of innovation, a court taking a look at such a venture would immediately turn to rule of reason analysis and would not get bogged down with any problems of per se rules. This is the correct standard because we are looking at integrative efficiencies, the possibility of market-making, and other pro-competitive benefits.

The rule of reason itself, however, is not a model of clarity. Indeed, there are very few rule of reason cases discussing innovation. As a consequence, there are no clear standards that are sensitive to the special needs of innovators.

More importantly, as the rule of reason has developed in its analysis of agreements among competitors, we see little development of what I will call a market power-based “safe harbor.” Such a safe harbor concept would help small- and medium-sized firms recognize where they stand within the rule of reason. While the Supreme Court and other appellate courts have acknowledged that market definition and power are important to rule of reason analysis, the Supreme Court has not taken the next important step, which is to let firms know the area where a safe harbor should exist; that is, what is the amount of market power below which firms should feel completely free to cooperate together without the worry of antitrust liability and without the fear of treble damage exposure.

In my view, that safe harbor area ought to be at least as high as twenty percent market share. As in Europe and Japan, cooperating firms that together possess less than twenty percent of a relevant market should be free from antitrust exposure.

In the vertical area, under rule of reason analysis, appellate and district courts are granting summary judgments in the vertical area when defendant firms have less than twenty percent market share. But, in the horizontal area, the process of judicial development of rule of reason analysis is just beginning. Perhaps ten years from now that will sort itself out and we will see the twenty percent safe harbor that I think is appropriate. But, while the courts are moving in the right direction, the likely pace of change is short of the kind of response we need today. That is why I favor the kinds of legislative proposals that have now been introduced in Congress.
A separate problem with U.S. antitrust laws is the threat of private treble damage actions. Of course, this is a problem known only in the United States, not among our competing partners in Japan and Europe. I think the threat of treble damage exposure is particularly negative in the area of cooperative innovation. The possible returns and benefits to society are so large in the area of innovation that we should want to make sure we are not erring in the direction of over-deterrence.

Another problem with current antitrust enforcement is that, ironically, we probably treat full-blown horizontal mergers more hospitably, or at least more clearly, than contractual arrangements among competitors. That is, because competitors under contract remain formally separate, we scrutinize the steps they take together as part of their agreement. Whereas, if the very same firms possessing less than twenty percent market share had agreed to merge, they would go forward with our blessing and we would hope that they efficiently handled their markets well and their joint production and pricing equally well.

Finally, with respect to current antitrust laws, I would say the National Cooperative Research Act of 1984 does not go far enough. It was a very good first step, and I am sure Congress recognized it was taking only a first step when it passed that Act. Indeed, many of the kinds of proposals that are before Congress today were advanced in 1983 as well. It is now time for the next step.

Briefly, let me describe some problems with the NCRA of 1984. First, while NCRA said that rule of reason analysis should apply, there is no language in the legislation to help define what the rule of reason ought to be and how it ought to be conducted. Second, the registration approach extends only to R&D; it does not extend to production. If one views cooperation and innovation as an integrated, reiterative process, that is a big shortcoming of the National Cooperative Research Act.

Finally, under the Act single damages remain a threat. It seems to me that firms possessing less than twenty percent market share ought to be free from the threat of any kind of damages.

These negative aspects of the U.S. antitrust laws create a difficult environment for cooperation among many firms. The threat of antitrust liability stops firms from cooperating to commercialize innovation.

Contrast our laws with the more hospitable antitrust environments in Europe and Japan. Without going into the statutory frameworks in each of those countries, which I have detailed in other articles, let me mention the highlights.
Both the EC and Japan provide safe harbors. Europe, for example, has a regular block exemption for cooperative R&D, and R&D, as defined in European terms, goes all the way through manufacturing. Thus, the block exemption covers the kind of cooperation downstream that we ought to be interested in. Japan makes similar provisions.

In addition, for firms that possess more than twenty percent market share, both Europe and Japan provide mechanisms by which one can seek certification—government approval ahead of time—before millions of dollars are invested for the commercialization of advanced technologies. Finally, there are no private treble damage actions in Europe or Japan.

We believe the United States antitrust laws ought to be modified in the following ways:

- We ought to amend the National Cooperative Research Act to extend fully to efforts to exploit innovation through commercialization.

- We ought to create a market power-based safe harbor.

- We ought to recognize that markets for innovation and know-how are usually global.

- The rule of reason ought to be clarified to take account of the special needs of innovation.

- There should be a certification procedure that permits firms to seek approval for cooperative commercialization of innovation, even in cases in which the firms have more than twenty percent market share.

Many of these clarifications could be accomplished by the courts. I want to acknowledge that. Courts, using rule of reason analysis today, could move in the right direction to accomplish a good deal of the needed sensitivity toward the innovation process and cooperation in that area. But my own view is it is time to step out more boldly and to come on a par with our competing partners in Europe and Japan, by freeing U.S. firms to compete through cooperation with a level of certainty they don't now possess.

I am happy to report that legislation has been recently introduced in Congress that moves in that direction. A registration approach, which would extend the National Cooperative Research Act, has been introduced by Congressmen Don Edwards and Hamilton Fish. A certification approach has been introduced by Congressmen Rick Boucher and Tom Campbell. I support both those approaches—indeed, I think they ought to be melded together into a more unified approach that would allow
business to decide what level of relief it is seeking, and therefore, what level of scrutiny it is willing to be open to.²

By extending the NCRA, as Representatives Edwards and Fish would do, we at least move the protections of that Act down to production joint ventures. This will produce increased certainty, but there will still be single damages available.

The Boucher-Campbell certification approach provides an opportunity for the Department of Justice, in consultation with Commerce, to review and certify cooperative efforts that may fall outside a safe harbor. Thus, there would be a mechanism for securing certification ahead of time before large-scale investment is necessary. In addition, the certification process would allow no damages at all, but only injunctive relief for firms that get the certification in hand. I think that adds a significant and appropriate level of certainty. Proposals like U.S. Memories, Inc., HDTV, and superconductivity are likely to benefit enormously from a certification-type process.

Another benefit of a certification process is that it will eliminate case-by-case, industry-specific appeals to Congress each time a new technology comes out. Congress should not be worrying separately about HDTV or superconductors. It seems to me much more appropriate to take a generic approach, one that allows us to move quickly with respect to joint technologies without running through a two-to-three-year process each time before Congress.

Finally, let me say that if Congress were to go forward with a registration approach only, I think it ought to consider, at a minimum, moving the twenty percent safe harbor into that registration approach so that we would have added certainty for small and medium-sized firms.

In conclusion, let me say that the proposals I have been discussing and the needs that I think we ought to respond to for cooperative innovation efforts are important matters. These are areas of public policy that we can address as antitrust lawyers, economists, and people concerned about antitrust policy. These are our areas of expertise.

But I don't want to leave you with the impression that these kinds of changes alone are single-handedly going to take care of the relative decline in U.S. key technologies. Professor Teece and I recognize that if we get U.S. savings rates up, if we start investing more dollars in skills

² Professor Teece and I advanced such a "melded" legislative approach in our October 1988 draft of "Innovation, Cooperation and Antitrust: Balancing Competition and Cooperation," which was presented at the University of California at Berkeley Conference on Antitrust, Innovation and Competitiveness: A Centennial Celebration of the Sherman Act.
and education, and if we create financial or tax incentives for innovation, then these changes are likely to have a significant impact on innovation and U.S. competitiveness, probably greater than the kinds of antitrust proposals we have discussed.

The fact that there are other important policy areas, however, should not cause us to be complacent about antitrust policy. Changes in the antitrust laws can also help move us toward greater competitiveness. My own sense is that, by allowing larger degrees of cooperation, we will free U.S. firms to do what they do well; and that is, compete in global markets, without the government picking winners, and without government subsidy.