FEDERAL TRADE COMMISSION AND DEPARTMENT OF JUSTICE

ANTITRUST DIVISION ROUNDTABLES:

COMPETITION AND INTELLECTUAL PROPERTY LAW AND

POLICY IN THE KNOWLEDGE-BASED ECONOMY

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FEDERAL TRADE COMMISSION

I N D E X

P R O C E E D I N G S

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STANDARD SETTING ORGANIZATIONS

MS. GALBREATH: If we could begin, good morning. Welcome to the DOJ and FTC joint hearings on Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy. We are here this morning for the third roundtable discussion. My name is Carolyn Galbreath. I'm an attorney in the Division's San Francisco Office.

Joining me to take on the moderating duties this morning are Tor Winston, he's an economist in the Division's Economics Advisory Group, and Gail Levine. Gail is Deputy Assistant General Counsel for Policy Studies here at the FTC.

We'd like to welcome you all this morning to this panel. We are going to be taking two issues today. This morning we'll look at standard setting organizations: evaluating anticompetitive risks of negotiating intellectual property and licensing terms and conditions before a standard is set. Although our discussion could go much longer than two hours, we will limit it to that amount of time and we will end as close to 11:30 this morning as possible.

This afternoon, the hearings will resume at

2:00 and there will be a roundtable discussion of relationship among competitors and incentives to compete and particularly, we will be looking at cross-licensing of patent portfolios, grantbacks, reach-through royalties and non-assertion clauses.

Since our time is limited, we are not going to be taking any breaks this morning. If there are no other housekeeping details, I think we'll begin.

On April 18th, our hearings devoted a day to competitive issues that arise when standards are promulgated that incorporate intellectual property. The joint hearings have explored in depth the broad-based pro-competitive and innovation enhancing aspects of collaborative or de jure standard setting. But as the IP guidelines aptly note, intellectual property is neither particularly free from scrutiny under the antitrust laws nor particularly suspect under them.

In April, we explored whether standards based upon intellectual property may permit the intellectual property owner to exercise competitive hold-up either by failing to disclose IP during the standard setting process or by imposing onerous licensing terms on IP once it has been selected as a standard.

We heard testimony that the causes and effects of non-disclosure and licensing hold-up present difficulties, both practical and legal, for standards groups, practitioners, intellectual property holders and antitrust enforcers, and one aspect of hold-up, whether ex ante discussion and negotiation of licensing terms within standards organizations would run afoul of the antitrust law seems to merit more focused scrutiny. It is to that that we turn our attention today.

And I'd like to turn now to Tor Winston and ask him to introduce our panelists.

MR. WINSTON: To help us navigate this analytical and legal thicket, we've assembled a group of distinguished panelists and I'd like to briefly introduce them.

We have Joseph Farrell, who is the Professor of Economics at University of California, Berkeley; Joe Kattan, who is a partner at Gibson, Dunn & Crutcher; Scott Peterson, who is Corporate Counsel for Hewlett-Packard Company and Chair of the ANSI Patent Committee; Carl Shapiro, the Transamerica Professor of Business Strategy at the Haas School of Business, University of California, Berkeley; Earle Thompson, who is the Intellectual Asset Manager and Senior Counsel at Texas Instruments; and Paul Vishny, who is a member of D'Ancona & Pflaum and General Counsel of the Telecommunications Industry Association.

As a preface to our discussion today, we thought we'd have our panelists give a brief background in terms of their background with the standard setting issues and how they became engaged in the topic for discussion today, the multilateral ex ante discussions of licensing terms within standard setting bodies.

So, maybe if we can just go around the room. I don't know who would like to start. Go ahead, Scott.

MR. PETERSON: I became involved by being asked to give advice on intellectual property issues that came up in the context of particular standard setting activities and that evolved over a period of years to where I was increasingly involved in the policy aspects within HP of standard setting. So, I come at this as an intellectual property attorney who has had the challenge of advising a particular participant in these kind of activities, and I want to make just a footnote, I'm not here in my capacity as Chair of the ANSI Patent Group. I'm speaking solely on behalf of HP.

MR. KATTAN: My practice is very heavily oriented toward technology, and throughout the time I've been in private practice, I've been involved in advising clients on a broad range of issues having to do with standard setting and also with a phenomenon that exists in the computer industry that is something short of the kind of formal standard setting that people generally think of in terms of standard setting organizations. These are things that are called SIG or special interest groups, that are a lot more formal and, at least historically, have typically involved royalty-free licensing or reciprocal royalty-free licensing where the basic proposition is, if you want to get a license on a royalty-free basis from everybody else who is signing on to the standard, you also agree to grant a reciprocal license.

So, I've been involved in advising people on a broad range of issues having to do with both these kind of informal SIGs as well as the formal standard setting.

MR. FARRELL: I'm Joe Farrell. I'm an economist and I've been working on the economics of compatibility and standards since the early 1980s. At first, thinking primarily about de facto standards, bandwagon effects and the like, and then in the mid or late '80s, getting interested in formal standards as well. The feature of the formal standards process that emerged from my discussions with participants and from just thinking about the problem as an economist was primarily the role of vested interests in creating bargaining delays in adoption of formal standards, and I view that as kind of a cousin to hold-up because the more prospect for hold-up there is, the stronger the vested interest, the more likely bargaining delays.

My interest in this topic, I guess, was enriched, shall we say, when I was asked to advise Mitsubishi in the Wang-Mitsubishi litigation on SIMMS. So, I've been interested in this for quite a while. My general perspective, as you will probably hear, is one of considerable concern about these problems. So, perhaps that will help make this a feisty discussion.

MR. VISHNY: I became involved in the standard setting process as General Counsel to TIA, the Telecommunications Industry Association. In my practice, among other things, I represent several trade associations, which are involved in various aspects and are concerned with issues that are similar to the ones we're going to discuss, even when they're not involved in standard setting activities.

TIA was actually formed not a terribly long time ago, about 12 years ago with the coming together of two other trade associations, one of which I represented since 1979. TIA has approximately 2,000 people who work regularly on engineering committees in the formulation of standards in the telecommunications field, and in the capacity as their General Counsel, I've been called upon to give advice whenever problems -- the kind of problems we're going to discuss -- have arisen. They've been extremely infrequent and that increases my interest. The infrequency of the problem increases the interest in kind of a direct proportion to the subject matter of this discussion.

MR. THOMPSON: I sort of backed into handling the standards at Texas Instruments. I'm responsible for all of our standards organizations worldwide, our legal aspects of participation, and one of the things that -- we had a teleconference on all of this and Scott Peterson had raised an interesting issue with me. It was a perspective issue. Scott and I don't necessarily see eye-to-eye, which I think will come out some today, but it may be because of the way we look at things a little bit differently.

You know, from a licensing standpoint, I really view the history of TI as three sort of eras, and basically, it was the pre-'85 kind of era in which most of the semiconductor companies -- and I'm only going to talk about semiconductor licensing today. We've done some others, but I'll just leave it at that. The general feeling was that in the industry it was cross-licensing, basically royalty-free, and it was portfolios. You didn't worry about standards, particularly.

Yes, you did standards because you were selling jelly bean parts and they had to all go on the PC boards the same way, but there were not a whole lot of things other than that. Systems were very complex and the system integrators were the ones that were dealing with system level issues.

Some of that changed around '85, and the reason being is there were a lot of new entrants into the field that were wanting to play the game without having spent the R&D. In other words, in some cases, it became a national priority for some countries to be in the semiconductor industry and there were massive infusions of cash, and since we were -- the people that were in it had already made large investments, you know, there's an inherent competitive advantage.

So, in the mid-'80s, things changed a little bit to where we just tried to level the playing field. There was still the same cross-licensing, it was still basically the portfolio. You weren't so much concerned about the standards issues because you never looked at them. Those weren't part of your licensing strategy. You didn't worry about that. But you did look at how much exposure somebody had and, you know, money exchanged hands.

The present generation is a little bit different. Again, we're going through another metamorphosis in the industry. We're looking at most of the IP that we used to not have to worry about, it was the system integrators' IP, is now moving onboard our chips. We're no longer just a semiconductor company. We sell software along with that, the support tools. We provide reference designs. Basically, the end product is basically wrap some plastic around it, put a display on it and some batteries and you're ready to go.

Well, that exposes a whole different level of exposure for the semiconductor company. Now, all that system level stuff that we used to not have to worry about because we sold parts that the system integrator put together, all that's migrating down to a single chip. We're having to take on the system level responsibility.

The consequence, we've looked very closely at how do we need to change, whether there is something to the ex ante discussions of licensing terms in order to figure out how we handle the indemnification issues. I'll tell you my bias right up front. Having looked at this issue for about seven years as far as the changing world that we're in, my response is still, I don't think it's necessary.

MR. SHAPIRO: Good morning, I'm Carl Shapiro. I'm an economist out at UC, Berkeley. I've been studying standards and network effects, compatibility, interconnection issues for about 20 years. Like Joe, actually, I also really starting thinking in terms of competitive moves preemption, decisions about whether to inter-connect or make your products compatible with another company's and seeing how that played out in the marketplace, but then over time recognizing, learning and focusing more on some of the formal standard setting, which I like to think of in terms of a pre-competitive phase, where companies would get together and essentially decide specifications or standards and then go out and compete in the marketplace, sort of a pre-competitive and then a competitive phase.

Over the last five or ten years, I guess my interest has grown as it's become clear how important for at least a number of industries the standard setting activities are. I think a lot of the companies I talk to indicate, yes, there's more and more people devoted to it, both engineers and business folks thinking about standard setting. Then I've become involved in a number of cases surrounding -- as an expert witness or consultant -- where some of the specific problems that we're going to talk about today have come up and then I've learned, again, probably over a decade -- appreciated, I guess, the critical role of intellectual property. That is kind of woven together with other things I've been studying and working on regarding the patent thicket, the increasing number of patents, the fact that patents often are not applications or pending patents may not be visible. So, these sort of complex of problems that arises not just in standards associated with patents can come particularly into this arena we're talking about today.

So, that brings us right to the hold-up, the sort of patent thicket, and how important those things are when there may be a large number of technologies and patented technologies that could read potentially on a given specification or standard.

MR. WINSTON: Thank you very much. We clearly have a lot of experience and various perspectives and opinions represented here in the panel.

I wanted to just remind people to please speak directly into the microphone, as Carl did an excellent job of doing. And I guess for our discussion today, we'd like to break things down into sort of three main areas of discussion. The first part, we'll talk about whether hold-up occurs and more about how much hold-up occurs and how we can identify those cases. In the second section then, we'll talk about whether these multilateral ex ante discussions may be useful in mitigating hold-up where it might occur and the relating antitrust issues there. And then in the third section, we'll talk more about other mechanisms that might be able to be used to mitigate hold-up where it occurs, other mechanisms that may not raise such antitrust issues.

So, moving on to the first section of the discussion today, ascertaining the existence and scope of hold-up in standard setting organizations and for the purpose of this discussion, I think we'd like to assume that we have a standard setting organization that requires a commitment to RAND, to reasonable and non-discriminatory licensing terms. And what we'd like to explore are what potential remains for hold-up once a company has committed to RAND, identify the potential causes of hold-up and try to assess how much hold-up may be occurring.

Before we launch into that, Carl Shapiro has agreed to give us a brief definition of hold-up just so that we all know what we're talking about, that we're on a common ground here. For the record, too, he’ll give us a definition of what we're talking about with ex ante and ex post in this context.

MR. SHAPIRO: I'm glad I get to give the official definition. I guess I'm going to be stuck with this for a long time.

(Laughter.)

MR. SHAPIRO: Hold-up, I think, is associated with commitments or the expenditures of sunk costs. Let me do it by way of example. I was involved in a case relating to modems. Ex ante, we would refer to the situation before the group of companies have fixed or set a standard or committed to it. Ex post, after such a commitment.

Ex ante, there may be, in that case apparently were, a number of choices of different technologies or specifications to build into the standard. Ex post, there then may be certain essential patents that are needed, technologies or patents that are needed to comply with the standard. So, the notion of hold-up would be that ex post there are very few choices, and a company that controls an essential patent is in a very strong bargaining position to extract royalties or other concessions from people who want to comply with the standard.

Ex ante, the bargaining positions are very different because, let's suppose, there would be maybe lots of choices rather than what later would become the essential patent. In addition to the word "hold-up," opportunism is a word that's commonly used in the relevant economics literature, at least, which is on transaction cost economics, the notion that somebody might wait, perhaps, until commitments were made and then seek to extract a high royalty or might try to steer things in a direction so that they would have an essential patent but not have made a firm commitment ex ante on the terms on which it would be licensed.

MR. WINSTON: Thank you. For the first part of this portion of the discussion, I'd like to throw out some general questions and have people respond. Hopefully the conversation will just steer itself from there.

For this first part, if we could talk about, in practical terms, how does an IP holder hold up the potential licensees for a standard, the licensees that may want to adopt a standard? And what sort of investments are licensees making in adopting standards that may be held up?

MR. THOMPSON: I guess I'll take the first whack at this. Interestingly, where I see most of the hold-up coming from is from a fair bit of fear, uncertainty and doubt in that somebody -- you know, the rumor will start that somebody has IP in this area and the engineers, who are the ones that are at these conferences, tend to get very concerned because they've heard, oh, this could be a big problem.

From a practical standpoint and what I see in my industry and what I basically advise the engineers that we have that go to these things -- we don't send business people, we don't send lawyers -- is don't worry so much about what the IP is that is going into the standard or who has it. To some extent, we'll sort that out at the end. For one thing, you don't know what the IP is going to be. Most of these standards move fairly rapidly. It takes much longer to get through the patent office. So, yes, somebody might say, yes, I've got some IP in there.

Sometimes the reason they're doing that is for the counter-reason, it's not actually for extracting a royalty, but to drive the technology in a different direction. That technology may well be something that he's got ready to go into production, and so, it's much better to go drive somebody in the direction of where he's already got a product or about to have a product than into this other area, and the way of doing it is to confuse it by saying, gee, I've got IP in this area.

You can play this street on both sides. You can game it either way. As a consequence, I generally tend to tell our people to pretty much ignore that. At the end of the day, what I have to look at is go and try to figure out what's the likelihood that I'm going to have to be hit on a standard. Note that -- you know, this goes back to the perspective issue.

When I do out-licensing, I do not even look at standards. In fact, the one thing I don't like is having a patent that covers the standard, which is sort of a different view than most people. And the reason for that is I don't have much bargaining leverage then. I'm limited to, in most cases, a RAND situation. I do not go in immediately for an injunction, which is where you have the maximum leverage. My ideal thing is to have something that's used, it's very good to have and it's not a standard.

On the other hand, where I do worry about it from the standard, is coming in. If there are other players that are at the table that are large companies such as myself, I can look at that and go, fine, I can work out a cross-license with them on a portfolio basis. I am not interested in licensing just that standard. On the other hand, if it is an individual, I look at that and go, well, that may be a tax on the industry, and I you know, it doesn't hurt me any worse than anybody else. Sometimes that gets gamed like some of the modem cases.

There you will see that game because what everybody thought was happening was a large company -- and this was an ex ante discussion. A large company put up, here's our rate. Everybody looked at it and said, it's a large company, fine, we can cross-license. And at the end of the day, that wound up going back to an individual with no exposure, and a certain -- Southern California District Court said, gee, because they had put that out in front, that's good evidence that wasn't the least bit anticompetitive. Totally missed what the issue was. The issue was the fact that you thought it was a large company, you could do a portfolio cross-license, not a license for that individual thing, and it wound up being an individual, no exposure.

So, it's a very difficult way of looking at it. That's kind of my approach.

MR. KATTAN: It seems to me that the issue of hold-up has to be looked at in a context in which there are alternatives or alternative technologies or alternative patents that could read on a standard, such that the value of a particular patent is affected greatly by whether or not it's incorporated to a standard, where if it's not chosen into a standard, it has little value or perhaps no value at all, but if it gets incorporated into a standard, it has very significant value.

So, the question becomes, is there a problem of a hold-up where a technology is adopted that, unbeknownst to the industry that's adopting it, infringes a patent that was not disclosed, or is subject to RAND royalties, which is a somewhat amorphous term because you have to look at the custom of the industry to figure out what's reasonable and non-discriminatory, where if there would have been a contest among people who -- or companies that have competing technologies, you might have had a lower royalty rate result.

I think that if you define the problem that way, hold-up does occur. The big question is how often does it occur and how often does it occur within the standard setting body because there are very good examples where the party exercising the hold-up did not participate in standard setting and, therefore, really didn't have any obligation to disclose anything, didn't have an obligation to make patents available on reasonable and non-discriminatory terms.

That latter problem is just a practical problem. It's really not a legal issue. Nobody can really do anything about it.

I've talked to a lot of people who work in standard setting groups and have asked how often has it been that somebody has come in and said, choose my technology, the other guys aren't telling you what they're going to charge, I'm disclosing to you right here and now what I'm going to charge and it's a pittance, go with me? And that is a context where the antitrust concerns about joint discussions, that we've seen in cases like Addamax or Soundview, simply don't come up because anybody is free to come in and say, choose me.

There's a concern about legal exposure, it's about the competitors who are participating in the standard setting discussing, whether or not the terms that are being offered are reasonable, and we can talk about whether that ought to be an antitrust concern.

Anyway, the answer to that question is, yes, it has happened, but it doesn't happen very often. And to me, that suggests that maybe the problem is not as pervasive as some people might think. I think that the problem does exist, but companies that are engaged in a contest to have their technology chosen have the opportunity to go in and say, choose me and here are the terms, I'm putting my cards on the table, choose me, and that doesn't happen very often. It does happen. Virtually everybody I've talked to has said, yes, I remember in such and such a case that happened. But that's far from the norm.

MR. VISHNY: I don't know if you're going in order. I think what Joe has said would be a good time for somebody who represents a trade association, as such, to say something about hold-up.

I guess you can think of hold-up in several ways. You can think of hold-up as being related to time. You know, you hold up the adoption of a standard or you hold up licensing for a period of time in order to extract a fee that you might not otherwise be able to extract. That would be hold-up.

I suppose that in every standard setting activity there is a measure of hold-up. In this sense, I mean, hold-up can be 10 minutes and it could be 10 months or it can be one week because there are always delays that arise in any process when two people have to come together and carry on commercial negotiations. I don't think anyone can attribute anything harmful, bad, anticompetitive or wrong in the mere existence of some delay that relates to the fact that somebody has something that somebody else wants.

In terms of what actually happens in the standard setting process, for TIA's standpoint, where we have over 600 standards adopted, we have not even -- we could not count the number of controversies we've had over patents on one hand. I've seen problems come up from time to time and they simply get resolved, and they tend to get resolved in a period of delay that is not extreme, not harmful and not difficult.

I've asked some other colleagues in the field what their experience has been in terms of patent-related problems that arise out of the adoption of standards. I know that, for example, in the question of what is a reasonable -- RAND terms, that ANSI has said that they have not had any complaints of controversies arising out of RAND. A representative of IEEE told me that they have had no complaints. A representative of ATIS told me that they have had no complaints. So, I guess when I say that we have had less than a handful of complaints, we have more than others, and what we have is indeed insignificant. We have not seen this as a practical problem.

MR. SHAPIRO: Yeah, I guess I differ a little bit from what Paul just said in terms of timing and how -- the question was, what are the sources of hold-up. I think there are two. One is timing. It relates to timing, but it's not what Paul said. I mean, of course things are already slow. One of the problems with standard setting is it's slow because it requires consensus and so on and so forth, but I think that relates to -- and, of course, people say, look, this bargaining, there's nothing wrong with that, that takes time. But the problem is, if people hide their intellectual property and then the process proceeds and a standard is set, and then they reveal it, it's not like the whole group can then quickly change course.

So, there's a sense of commitment once a consensus has been reached that is hard to deal with. It takes a long time to shift to a new standard when the bad news arrives that somebody wants to hold up the group.

MR. VISHNY: I was not trying to say that time is the only indicator of hold-up. I agree that if somebody is sitting in the audience hiding intellectual property, then raising it for the purpose of attracting a very large royalty, that would be a problem. What I'm trying to say in that context, it's simply not the kind of problem we have seen at TIA in the 600 some standards, and it's not the kind of problem that my colleagues that I've spoken to have seen in the course of their standard formulation activities. I don't know whether it ever exists, but I don't know that it's possible to address every kind of problem that could conceivably arise in every kind of circumstance.

I think, for example, of the whole concept of ex ante negotiations, that people coming together in the context of a standard setting committee talking about their prices, I think of other trade associations I'm involved with, for example, that don't set standards or you have competitors who come together to sell a product, and I suppose if I walked in the room one day and said, you know what, folks, it's going to be okay today to talk about prices, there might be a large scale fainting that would arise from the audience. It kind of assumes that there is one kind of product that should be singled out called intellectual property and there should be discussions permitted, which in other contexts are generally considered to be, per se, unlawful.

MR. WINSTON: If I could just interject one thing and then we'll move on to Joe. For the purpose of this discussion we're assuming that the intellectual property has been disclosed and there has been a commitment to license on RAND terms. I think we're talking very much about sort of the fee hold-up that you mentioned earlier, Paul.

MR. VISHNY: Well, we have, from time to time, had people make commitments to RAND or people say they're not sure they're going to make commitments to RAND. I'm simply trying to say that we have sensed no practical problem in the area.

MR. FARRELL: Well, I think -- let me jump in there if I can. Trying to get back to the question that we're supposed to be discussing which, as I understand it, is how much hold-up is there. It seems to me pretty clear that to the extent these standards organizations have a role, it's because coordinating on choosing a standard is difficult, and the fact that they often take a long time and have trouble coordinating on standard pretty much, I think, implies that they're going to take a long time and have trouble coordinating on a switch to something else if the so-called RAND doesn't look so reasonable to them.

So, it seems to me that economic logic says, pretty firmly, based on that level of description of the situation, there's the prospect for problems happening quite a lot. And yet, I think we need to take very seriously what Paul Vishny had said, which is, you know, there's a remarkable lack of complaints about these problems.

So, how can we understand that? Well, one possibility is there are mechanisms going on that make things work out a lot better than my capsule description says. Another possibility is that excessively high royalties, in the sense that Carl sketched out, do get charged but there's not a lot of complaining about that. So, let's think about that for a moment. Is that possible?

Well, what would be the point of complaining? You'd have to think about what happens if somebody does complain. I think it's also relevant to observe that to the extent that the people paying royalties are competing against each other and are all -- or believe that they're all paying roughly the same royalty, there's a lot of pass-through, so it's the final consumer rather than these competitors who end up paying.

So, it seems to me that if one is going to take the position that things seem to work out okay, I think we owe it to consumers to delve a little deeper than just saying we don't get a lot of complaints. That's certainly important evidence to look at, but I think it's worth taking seriously the possibility, and I wouldn't push it much harder than that, that the reason we don't get complaints is that the people who are ultimately harmed are not the people who are in the wrong.

So, I think, you know, if we're right that the obvious way of describing the economics suggests that there might well be a lot of hold-up, and if we're right that there aren't a lot of complaints, then I think we really need to look deeper and say, okay, are there institutions such as this mutual assured destruction or portfolio cross-licensing that in practice pretty much take care of the problem and how do they do that and when do they break down and in what circumstances might they tend to break down more and so on?

Or is it that high royalties get charged, but nobody has both the information and the forum and the incentive to complain about it and it's not clear what happens if complaints do get lodged or what is going on? I don't think we should just start by saying there's obviously a problem, and I don't think we should just start by saying there's obviously not a problem.

MR. PETERSON: So, I think it's important to keep in mind that hold-up is not a binary thing. It's something that's a matter of degree. There may be many cases which don't rise to the extraordinary level that they get a high visibility of attention. The degree to which a particular patent obtains added leverage by becoming essential to a standard varies quite a bit and the extent to which someone exploits that varies quite a bit. I think there are many cases where those who are implementing and who ultimately do get licenses, their goal at the end of the day, of course, is to participate in the marketplace. They're going to try to solve that problem.

And most of the time, they will solve it by obtaining some sort of a license, and they may be troubled by the restrictions that are imposed on them as a result of the license, the extra grants that they may have given up or the costs, but at the end of the day, they're going to move on. They're not going to come back to the SDO and complain. The SDOs have made it very clear that they don't want to hear about this stuff.

SDOs are not forums in which one goes for a resolution of what RAND is, and they've made it quite clear.

Joe Kattan was mentioning the “choose me” concept earlier. Why is it that people don't do that more frequently? Well, in fact, there is an established, I would say, almost culture, that suggests that that is not acceptable practice because, in fact, when people participate in an SDO, certainly the more formalized ones, they're discouraged from even thinking about those things. So, the idea that someone would go to the table and say, listen, we think this alternative is the one that should be selected over that because, in fact, the patent owner has offered very favorable terms, I think, is a kind of discussion which has been quite frequently discouraged.

So, you know, that would be a nice behavior to have. I think it's, in fact, a behavior that we don't have because people are discouraged from having it.

MS. LEVINE: Scott, can I ask you a follow-up question on that and on the work that standard setting organizations do? Is it possible that standard setting organizations could sort of solve the hold-up problem, or at least help prevent it, with rules like disclosure rules? I guess if that's true, is there a market cure possible? If an SSO lacked disclosure rules, for example, or other rules that could cure hold-up, would it simply lose members, members that would flock to another standard setting organization that had those kind of rules?

MR. PETERSON: I think at the present there's a sufficient disincentive for SDOs to adopt rules that address this issue more aggressively. There's such a disincentive for the SDO to do that that I think there isn't a lot of competition in that regard. I think that, to a degree, we see some of that possibly in that less formal forums do, in fact, adopt more aggressive rules and I think, to a degree, have been taking some business away from SDOs, to some degree.

But on the other hand, there remains an important role for the more formalized forums because they serve the needs of having much broader participation and much more extended consideration. And so, for some kinds of standards, that's important, and yet, for those kinds of bodies, I think there's just a tremendous hesitation to adopt more aggressive rules because I get the sense that they find themselves dragged into a battle that they don't want -- they feel neither skilled nor interested in participating in. So, whether or not the loss of business is enough to drive the change of rules, I tend to be skeptical.

MR. THOMPSON: Let me go back a little bit to something Joe was talking about earlier. You were talking about, you know, it takes a long time to develop these standards. Sometimes it does, sometimes it doesn't. Usually the reason it does is because they're developing the technology as they're developing the standard. Hence, you know, having a bake-off of technology on a regular basis or anything like that where you say, okay, here's my technology and here's its price, and the next guy going, here's my technology and here's its price. From a practical standpoint, it doesn't work very well because you're constantly having to make different choices in there, and gee, if I had known this, I would have gone back and done something else.

That's assuming that you even know at the end of the day whether or not you're going to have a patent on it. In most cases, because of the time delay, you have no idea whether, A, there's going to be a patent that covers it; or B, just because there's a patent on that specific implementation doesn't mean there's not 50 other patents that cover it, and that's where you generally have your problem. That is particularly true in my industry. It's impossible to build a semiconductor device that doesn't infringe 20 other people's patents. You can't do it. Even if you come up with a new widget, you're going to use somebody else's technology that's out there that may or may not be part of it. Frankly, I'd rather deal with the people I know in the room, you know, deal with them later on than try to carefully steer around their technology, because then I'm going to design it squarely into somebody else's IP who wasn't part of it. That happens a fair bit.

MR. FARRELL: Can I interrupt for a moment? Where is this going? You say the choice among technologies is time-consuming and difficult, but I'm not sure how it's made a lot more so by including some commitments about licensing terms at the same time.

MR. THOMPSON: The problem is, the commitments that you make on the licensing has absolutely no bearing to what you're actually going to wind up with at the end of the day. And you've got a lot of engineers now worrying about --

MR. FARRELL: So, you're saying there's no mechanism to make a real commitment.

MR. THOMPSON: Right. There's no mechanism in there because you don't know what your IP is going to be. It may or may not cover what you wind up with then in the standard. You say, fine, I'll announce that I'll license this for 2 percent. Well, A, it depends on what 2 percent means. Is that 2 percent of the chip, 2 percent of the system price, 2 percent of every time the consumer uses it? Well, that doesn't help a whole lot because everybody's presupposing what's going to happen in the future.

You also don't know, at the end of the day, if you've got anything there, and thirdly, there may well be other things you have to trade with that. And so, it winds up not being a practical discussion. And if I start having to do this -- you know, now I've got to have business people in meetings. I've got to have licensing people talking about, gee, what are they going to do. You know, our licensing people are rare beasts because they're, first of all, an engineer, secondly, an attorney, and they're able to handle both worlds. And thirdly, they have to be a business person. That's a rare breed. I don't have those to go around for 300 different standards consortia or standards bodies that I'm in.

It's a very real cost to me to even consider doing that, and that is going to be a major hold-up in and of itself, trying to have these people available and to factor that in.

MR. WINSTON: I think that we've gotten on to a more practical consideration of, how would things like ex ante discussions actually be implemented. For the purpose of this first part of the discussion, we'd like to stick with the idea that maybe there isn't -- hold-up while acknowledging that it's difficult to make these commitments up front and there may be practical reasons and other reasons why there may be difficulties there.

Returning to a few points, a lot of this discussion has talked about hold-up in terms of fees -- royalty fees, higher royalty fees. Are there other mechanisms for hold-up? Are there other ways that a company might be held up rather than just a higher fee?

MR. VISHNY: I think it's important to say that looking at the licensing process as relating to fees, and to fees only, is terribly simplistic. The process is complex. Fees are an aspect of licensing. What your proposed licensee has to give back may be worth a great deal and may have nothing to do with royalties. It could be cross-licensing. There can be territorial discussions that have to take place. There can be international implications, particularly in the world we now all occupy today. There are field of use kinds of restrictions.

You may be interested in other products, as Earle said before, that have nothing to do with the standard under discussion. It simply is not that simple to discuss licensing and to relate it only to royalties. To do so just flies in the face of business reality.

MR. KATTAN: I think I would agree to the extent that there is a problem that people identify in which -- in circumstances in which there may be a participant in the standard setting process who may be championing an alternative standard or indeed a proprietary standard and tries to hold up the process literally in a temporal sense, to delay the adoption of a standard by raising all sorts of technical objections and trying to slow down the process.

Again, I don't necessarily see that as an antitrust issue, but it is a problem that people do encounter in standard setting. That's one of the reasons that people sometimes tend to gravitate toward the SIGs that I talked about earlier, because those types of organizations tend to be less encumbered by the kind of procedure that would allow somebody to hold up the process.

MR. THOMPSON: I think it's, you know, similar to what Joe and Scott were talking about here. I think a very real issue there -- and it's one of the reasons the consortia or SIGs, who you're talking to, came about, is a lot of times it's a way for a company to push its proprietary technology. And in that situation, yes, it's very practical to talk about what the economics are going to be ahead of time. Because you know where the IP is.

This person has probably developed it and now they're trying to get in implementers of it to further that technology. And everybody looks at it and says, is this a good business deal or not and understands what it is. It makes sense in some of those environments to allow that.

But what really happens in there is it's basically set from the beginning. It's not a mutual discussion over what the price is going to be. The company that's pitching in its technology is the one that's going to tell you what it's going to be. You know, here's what I'm going to charge, and gee, everybody else, you know, I want to grantback or I want everybody else to be royalty-free, the way in practice most of those work today.

And they work fairly well. I mean, there's nothing wrong with that. But that's already developed technology. Most of the other standards -- and the reason I go back to the timing and not knowing what it is is you are developing the technology as you are developing the standard. That's not the case in many of the proprietary systems.

MR. KATTAN: I would just take exception to the notion that the SIGs involve proprietary technologies. I think they encompass a wide variety of technologies, some in the state of development, some of which have been developed. But it's not a mechanism for just one company to push its agenda. I don't think that's right.

MR. THOMPSON: There are several different types of those, and yes, there are SIGs that operate just like a more formal SDO, have similar policies and those are carefully negotiated policies. I know because I negotiated about two of those a week. On the other hand, you know, there are other consortia that are set up specifically to push proprietary technology, two different things.

MR. PETERSON: I want to say something about this complexity of license terms issue. In this problem of licensing a patent that's essential to a standard, fairness among those who are going to participate in the marketplace, I think, is of particular concern. And, at least, fees are a way to more readily make something, I think, fair or at least understand fairness. The opportunity for -- although people may enter into very complex bilateral agreements when licensing patents generally -- when that's the way a patent is licensed -- if that was the only way a patent was licensed for practice of a standard, there's all kinds of opportunity for anticompetitive effects to go relatively hidden in these other terms.

I mean, so, for example, the grantbacks or non-assert provisions have very widely varying effects depending on the portfolios of the people that are signing up, whereas fees are something that at least are measurable and can be -- so, although I think, in general, licensing can be very complicated, I think that people should be free to enter into those complicated licenses.

On the other hand, we should not assume that that's the kind of license which ought to be the baseline for the availability of a patent that's essential to a standard.

MR. VISHNY: But I can't imagine imposing the kind of license you think is proper or I think is proper, calling it a baseline and kind of limiting to either discussions or the activity.

MR. SHAPIRO: But I don't think anybody's talking about putting some sort of standardized form on these arrangements. That's more a matter of identifying up front what the terms are going to be. I think your point, Paul, that there's a whole variety of terms, just I think shows why that sort of fair, reasonable and non-discriminatory language is very vague.

I mean, what's non-discriminatory? Is it non-discriminatory to require a broad grantback or cross-license? That makes a huge -- as you just pointed out, that's hugely different for one company versus another, depending on what they would have to give back.

What's non-discriminatory? If you have a fixed fee versus a per unit fee? Very large versus small companies? What do we mean by that? Reasonable, of course, there's not going to be any good benchmark for that. Some patents are great and deserve a lot. Others are minuscule. You know, what's reasonable for one would not be reasonable for another.

So, I guess I'm partly echoing Joe's point that -- at least to an economist -- and believe me, I'm listening to you about how often these problems really surface. I know cases where they are litigated and big disputes. It just seems there's a lot of running room between different interpretations of fair, reasonable and non-discriminatory when we've got complex terms and conditions that are integral to the whole process.

MR. FARRELL: Let me say a couple of things, actually. On the issue of complexity, I'm sure that's right. It's not clear to me that -- I'm not sure if we're still meant to be discussing is there hold-up and how much or whether we've gone on to the other topics. But if we're discussing is there hold-up and if so how much, it seems to me the core point is the extent to which an IP holder acquires additional bargaining power through the SDO having completed its -- or gone a certain distance in its standard option process. And the exact form in which that bargaining power is then exercised may not be tremendously important for the central point.

But let me make a rather fundamental point about reasonable and non-discriminatory. I mean, my instinct is much the same as Carl's, which is that it's going to be very difficult to specify even what that means. But I also think my understanding, at least, of reasonable and non-discriminatory is that it's some kind of an attempt to put a cap on opportunism or hold-up. But I think it's not so obvious that that's the effect it's always going to have.

Suppose you could define what reasonable and non-discriminatory means, or more precisely, suppose you could define what non-discriminatory means and you have a hard time saying what reasonable means. It seems to me you would be flirting with what I would identify as the worst case for this kind of hold-up problem; namely, vigorous competition in implementation of any possible standard, so that the pass-through effect I was mentioning before is at its strongest. Final demand for the standardized product, is inelastic; in other words, very little competition against the standard. A slow and cumbersome processes, for whatever reason, of adopting the standards so that escaping to something else might be difficult and not very tempting. And a well-enforced, non-discrimination rule which contributes to this pass-through issue without a well-enforced royalty-free or -- "reasonable" provision.

And it seems to me that perspective says you're looking at something a little different from what I thought I heard Scott identify, which is there is an important issue of fairness among the intermediate good customers, the adopters of this technology who then compete downstream in the market.

From a consumer point of view, the issue may not be so much parity or fairness among them as what's the pass-through, and the pass-through may actually be pretty strong where there's a lot of competition in implementation of the standard, and a lot of commonality in the marginal royalty rate.

So, I wonder whether -- you know, we have been talking as if reasonable and non-discriminatory is our protection against problems, and the difficulty might be with its definition of enforcement. That may be true. It may be true some of the time. I don't know how to think about this. But I can certainly see a story in which it's actually part of the problem.

MS. GALBREATH: Joe, I really appreciate all of your comments and they are ones that we are going to get back to. But in the interim, I think what we would like to do is to get to the antitrust issues that really are the core of what we are looking at today, and then get the RAND issues at the end of our discussion. So, I really do hope that we will get back to what you've said and get some comments and feedback on that.

Before we get there, however, for this part of the discussion, we are going to try to assume that licensing hold-up exists, that a standard has been set, that it includes intellectual property, and that the potential for licensing hold-up, in whatever form it might come in, and, obviously, the fee issue is one of those forms, but Scott has alluded to other types of hold-ups as well in the licensing process.

There are, obviously, mechanisms that could be used to deal with that hold-up, and among them are the ex ante discussions, multilateral discussion of terms within the organization. We've heard in our previous hearings that a lot of bilateral discussions may be taking place outside of standards organizations. What we're looking at here today is those multilateral licensing discussions.

The question before us, then, is to what extent should those ex ante, multilateral discussions be of concern from an antitrust point of view. Obviously, as antitrust enforcers and as practitioners, our ears perk up a little bit when we hear about horizontal competitors or potential horizontal competitors discussing market terms, price, inputs, allocation of markets, that kind of thing.

Should per se rules apply? Should the rule of reason be before us? And what are the various pros and cons to the approaches that we should be taking to those issues as we are looking at what we think people should be doing in the organizations?

So, with that, I'd like to throw the discussion really open to the panel, and if we could, first, for a moment, talk a bit about the potential for per se concern, if there is one.

MR. VISHNY: Well, I certainly think there's a potential for a per se concern from a legal standpoint. I mean, I see -- just because it's impossible to discuss one aspect without some reference to the other. I remember a class I once took in theology when the professor said -- he broke down the problems that he saw in something in three forms. He said there was a legal problem, there was a practical problem and there was a moral problem. I'm totally incompetent to discuss the moral problem about this, but I see both a legal problem and a practical problem.

From the standpoint of an organization administering the standard setting process, I shudder to think that we would ask our working group chairs to try and define the rule of reason. I don't know that there's any lawyer who would want to trust that to the people who chair our committees, not because they are incompetent people, not because they are unfair people, but because they are unskilled and not prepared for the task.

Are there potential legal problems in a group of purchasers of technology coming together to discuss the terms on which they will purchase the technology? You can also ask, is there any problem in any case where a group of purchasers come together in order to discuss the terms on which they will purchase a product? Is there a difference between this product and every other product in life? And I would suggest there is no necessary difference between this product. It's different, of course, but I can't say that it is necessarily different from every other product in life.

I was thinking to myself that if buyers come together to discuss this, the buyers could come together and collude to fix the prices down, to lower the prices, to the harm of the producer, which might benefit the consumer in terms of the pass-through of a lower price.

But the buyers might come together and collude to fix prices higher and even agree on end product prices to the harm of consumer in that setting because the spillover effects are at least, I would suggest, as likely as any other effect. Buyers could collude to exclude the best technology which may not be price-related, but certainly would be to the harm of consumers in a non-price way, and cross-licensing discussions, for example, where a group of buyers come together and talk about licensing of all kinds of, perhaps even competitive, technology could lead to a fixed agreement on the setting of prices for license technology as well. In other words, the buyer's cartel, in a case like that, could be converted into a seller's cartel.

I think there are those possibilities, at least, in this discussion.

MR. KATTAN: I think there's a fundamental difference between a buyer's cartel and a standard setting organization in that the act of the standard setting very often creates the demand for the technology, or if you want to call it product, that is being purchased, which demand otherwise might not exist at all.

The incorporation of a technology into a standard can, at least in the context where there are reasonable alternatives that are available to the standard setting body, create the demand for that product or for that patent. And in that context, to talk about per se liability is to disregard the integrative effort that takes place in developing the standard and in creating the demand for the technology.

I don't know if it's proper protocol, but Gail Levine wrote a wonderful article on B2B exchanges in which she discussed this very problem. So, I don't think that it's appropriate to talk about per se liability when what you're effectively doing here is potentially creating market power that otherwise would not exist and then seeking to have a discussion that would constrain the market power that you've created.

Whether or not standards organizations take advantage of a more relaxed legal rule, I don't know. I tend to think that most will not. But they ought to have the opportunity to do so, at least in those circumstances where it's their actions that is -- their action that is creating the demand.

MR. VISHNY: I'm not trying to suggest that there is always a per se liability involved in any kind of a discussion and I'm not trying to say that there are always antitrust risks in every discussion, but I do say there are, at least, antitrust concerns in every discussion because of the potential there for other kinds of discussion, as well, and other consequences.

MR. FARRELL: Well, I think there are a couple of things here. I mean, one is a concern that if you stop telling the human participants in the standards organizations, don't discuss business matters, then maybe we'll get temptation to collude on prices downstream, maybe we'll get temptation to do various bad things because we're in this smoke-filled room.

I personally am a bit skeptical of that. I mean, it seems to me -- I don't see why it should be so much harder to tell participants -- instead of telling them don't talk about prices and business matters, tell them, don't talk about selling prices, don't talk about market allocation, talk about trying to implement the best technology available as cheaply as possible. But, you know, that's a practical issue on which other people may have different opinions or more experience than me.

It seems to me then -- I kind of like Scott Peterson's discussion of the buyer monopsony issue. The traditional monopsony issue of reducing the quantity through depressing the price seems to me probably doesn't arise. Something that does arise, I think in principle, is under-rewarding -- the potential for under-rewarding the innovator of the best available technology by essentially executing a form of price squeeze and saying we'd like to adopt your best technology, but we'll give you a dollar for it rather than the X dollars that it's worth relative to the next best alternative.

They could squeeze relative to the appropriate, that is, ex ante reward as well as relative to the inflated ex post opportunistic reward. So, the question then becomes how likely is that kind of -- is that kind coordinated buyer opportunism? I think it's hard to say.

My instinct is probably not that likely partly because of this pass-through issue, which suggests that where you have competing producers acting as the negotiator on behalf of consumers, as it were, they have an incentive not to bargain necessarily all that hard. But that's going to vary. It seems to me in principle, this could be a concern. It's going to be a question of trying to judge how often and how large a concern it is, relative to the other concerns.

I mean, I don't think we should allow ourselves to stop with the observation that this could be a concern. I think we have to try somehow to weigh it against the other concerns that we're talking about.

MS. GALBREATH: Scott?

MR. PETERSON: I think that people take cost into consideration when they're selecting standards all the time. I think it's routine to consider that this alternative will be more costly to implement than that alternative. I think taking cost into consideration is commonplace. However, this particular cost is one that is somehow specifically excluded from the discussion and consideration, and I find that curious and I think unhelpful to the end of selecting the right standard. To suggest that people don't take cost into consideration, I think, that's just not my observation of the kinds of standards that I see.

I mean, it doesn't come in -- this is a case where the cost has particular kinds of business terms associated with it and, therefore, has gotten special treatment in the sense of being excluded from the discussion and otherwise, I just find it curious that it's excluded when, in fact, other costs are considered.

MS. GALBREATH: Scott, could I follow up on that and ask, is it in your experience, and the experience of the rest of the panelists, because the consideration of cost -- and by that I take it you mean all of the various terms and conditions of the license -- is something that people are negotiating bilaterally or is it because costs are apparent as a part of the standard setting organization? And is there a distinction between that and what we as antitrust enforcers think about in terms of price where you're talking about price fixing? Is that a distinction with a difference or not?

MR. PETERSON: I'm talking about the concern that one selecting the standard ought to have is how expensive is it going to be for them and others to implement this, and there are dollars that are associated with that. I don't know what the term would be that one associates with that, okay?

So, I think of it as inputs to this, and I think of that as cost. So, the costs associated with that are considerations. You might have a standard that might require 10 times as many components and therefore, is more costly, and that's clearly contemplated in the consideration. If you have, as Joe was mentioning earlier, the “choose me” opportunity where something was clearly put on the table with a, yes, there's a patent that's associated with this, the licensing terms will be the following, people could take that into consideration.

There is too little of that happening both because the information is generally not available because the discussion stops at RAND without any further detail, and to the extent that could play into the conversation that the participants have among themselves, there are, oftentimes, specific admonitions that they should not take that into consideration.

MR. THOMPSON: I think there is nothing that prohibits somebody from making a unilateral declaration, here's what I'm willing to ante up my technology for.

MR. PETERSON: I think there are forums in which that's specifically discouraged.

MR. THOMPSON: Yes.

MR. PETERSON: The aggressive participant, perhaps, could do so, but I think -- for example, the IEEE, I think, is very concerned about that and has resisted being even in receipt of detailed terms. I recall an affair -- this was outside the U.S. -- but ECMA (phonetic), some specific experience with them where they didn't want to see these or have anything to do with them, notwithstanding the fact that the others who would be actively considering this as it came up for vote, this would be information that would be valuable to them.

MR. THOMPSON: I question the value of it, and it goes back to what I said earlier. You know, you make a declaration, here's what my costs are, here's what I'm going to extract. Well, that's not necessarily what your royalty is going to be. There's all sorts of other terms in there. It depends on who it is. If the person has absolutely nothing to trade, yes, it may be an upper limit, but that also is not what -- if everybody thinks, oh, okay, here's what this technology costs, that is also not true because you're liable to have four other people come knock on your door as well.

So, from a practical standpoint, you know, that information does very little good for me. I look at who is in that general area and I have to go look at -- you know, balance entire portfolios against whoever is there, what my costs might be, what's the potential for litigation, how strong do I think their patents are going to be, that kind of thing, and it all goes into a fairly complex modeling.

MR. VISHNY: I don't have the benefit of sitting in on working group meetings at TIA or anywhere else. But from what I'm told, what I hear, is that discussions -- private discussions outside of the setting take place all the time, particularly when some disclosure, however preliminary, is made and a claim of IP, people sit and talk. They want to know what's involved. They approach them and they even begin their negotiations, which are sometimes concluded, sometimes not concluded because you can have applications pending, you don't know if a patent is going to issue. There is so much that is unknown during the course of that process. To treat it as if it were a conclusive arrangement at that point is, again, an impractical thing.

MR. PETERSON: But do we want to foster that kind of behavior? I'm not sure that that actually is more desirable. That these private discussions among some of the individual participants is necessarily more pro-competitive than having some sort of discussion that a broader range of people can participate in. I see all kinds of opportunity for participants to cut their private deals on the side, and that isn't necessarily desirable either.

So, there are challenges associated with managing people's behavior. I don't think that pressing the evaluation of this to bilateral discussions outside eliminates the problem. I think it's susceptible of a different category of problems.

MR. SHAPIRO: It seems to me there's pretty clear consensus that there is a chill on these sort of discussions currently resulting from antitrust fears. I mean, you said that people would faint in the room if they could talk about prices or commercial terms. Okay, that's very chilly.

I think that the agencies can really make a difference here by clarifying things so that that chill is not so broad or deep. This, I think, kind of is going to trickle. You know, if the agencies can say things then these standard setting organizations can modify some of their rules which are, in turn, making companies very uneasy about engaging in these discussions, and tends to channel some of the discussion offline to bilateral rather than multilateral conversations, which raises a whole bunch of other tricky issues. I tend to be with you, Scott, that I'd rather have it be up front where people say, look, here are my terms and conditions, you know, for the group.

Now, okay, it is collective talking about -- you know, you could worry about the buyer's cartel problem. I guess I would not start there or with some sort of per se view, which I understand antitrust lawyers might tend to start with that, I would suggest a rather different approach which is presumption that the attempt to achieve lower costs is pro-competitive. Okay, now there's probably ways to rebut that. You know, I haven't thought through all these rules. But that's very different than sort of a per se, you know, if you're talking about this stuff, that's a cartel, we end the inquiry, okay? I mean, we're fundamentally talking about attempts to get lower costs and that's a good thing.

As Joe has pointed out, there may not be enough incentives in the system for the participants to do that because of pass-through issues. So, we want to encourage that and sort of a recognition and maybe statement from the agencies, yeah, lower costs, that's a good thing, that's pro-competitive and we do think those will tend to be passed through to final consumers who are ultimately kind of -- you know, who are interested in it.

MS. LEVINE: Carl, just a clarification question. Are you talking about lower costs to the firms who are collectively buying the intellectual property?

MR. SHAPIRO: Yeah, lower costs ultimately to implement the standard and produce products, as a result, making sure there's no hold-up, that the royalty costs would be lower and, therefore, the marginal cost of the product is lower and hopefully downstream that will lead to lower consumer prices.

So, I would start there and nowhere near sort of a per se rule when we're talking about trying to prevent hold-up.

MS. GALBREATH: Carl has brought us really to the point that we wanted to go next, which was the pro-competitive or potential pro-competitive aspects of this and to a point that Joe made a while ago about the pass-through. The question that I would pose to the panel is if there are pro-competitive efficiencies from such negotiations, would those pro-competitive efficiencies be passed through to consumers? And, how could we ensure that they would be?

We've talked a lot about the possibility of collusion in the last few minutes. Obviously, the flip side of that is exclusion. And so, to begin with, we've heard about how people do or don't participate. I think that's an issue. And then the issue of pass-through. So, I'll throw it open to the panel. Joe Kattan, I'll turn to you.

MR. KATTAN: Let me just say one thing about pass-through where I have to disagree with Joe and Carl. Their position is royalties are passed through; therefore, companies don't have an incentive to complain because it's no skin off their back. In fact, royalties are passed through by some companies and not by others because some companies that participate in standard setting, particularly in the semiconductor industry, have very broad cross-licenses. They don't have to pay royalties on a standard where the patent is held by somebody with whom they have a cross-license. Other companies don't and they have to pay royalties. So, those companies do have an incentive to complain because their cost position, relative to people who are cross-licensed, is higher.

So, I think that there is something to be taken away. I don't know how much, but there is something to be taken away from the notion that complaints are not as frequent as one might suggest.

Now, suppose if you had an antitrust rule that said that you are allowed, in the context of a standard setting, to discuss the terms under which patents would be licensed, or at least that there's a strong presumption that that's pro-competitive, is the position that Carl advocated and I tend to agree with, would it make a difference?

I'm not convinced how big a difference it would make because I think some standard setting organizations are very, very comfortable having the antitrust restrictions.

If you look at the comments that were filed with regard to the FTC's Dell consent order, standard setting organizations said, oh, my God, are you, FTC, trying to impose on our process a duty of disclosure? If you do that, it's going to drive away a lot of the companies that have IP. So, if you give them that latitude to engage in discussions, to allow disclosures, indeed to require disclosures of IP positions, it is not clear to me how many will take advantage of it and what difference it will make. But clearly to the extent that people do want to take advantage of it and have discussions that result in lower royalties, I think at least in the context of the industries that I'm familiar with, you will have a pass-through to consumers because the entire semiconductor industry is built around selling you something that you already have. By convincing you to buy something that you already have because the new version is just so much cooler.

MR. THOMPSON: Well, that's the PC industry.

MR. KATTAN: And price considerations drive everything. I mean, that's why we see these $299 PCs.

MR. THOMPSON: Let me address the pass-through and the cross-licenses. At the beginning this morning, when I was going through the history of where licensing had come from in TI, the situation that would be most analogous was in the pre-'85 time frame where everybody basically cross-licensed for very little money. You know, the consumer benefitted greatly, or seemed to, until companies started going out of business because other people were coming in without having to have spent the R&D. You know, yes, it's a new generation. Yes, they have things to contribute in the future, but you lose a lot at the same time. That was why there was a period after '85 where it was leveling off the field, and that's where royalties started being charged for that same technology.

Yes, that got passed on to the consumer, but the consumer benefitted because now even the people who wanted to now play in this field were desperately trying to make new inventions of their own so that they could bring their royalty levels back down and that actually encouraged innovation on both sides. So, you know, the consumer, ultimately, benefitted.

Technology hasn't stagnated. That's the reason the PC industry can keep selling you a new computer every couple years. Sorry, Scott.

MS. GALBREATH: Joe.

MR. FARRELL: I think the topic has come up a couple of times, but we haven't really focused on it. There are two dichotomies in the way that royalty is -- or terms, in general, for licensing might be negotiated. One is ex ante versus ex post and the other is multilateral or joint negotiation versus bilateral negotiation. The RAND rules seem to try to make it more multilateral and less bilateral. The kind of first order concern about hold-up that at least some of us started out with suggests that there's a problem with doing it ex post multilaterally versus ex ante.

The bilateral discussions that Scott was suggesting might be sometimes frowned upon and sometimes problematic are a way of doing it ex ante but bilaterally. And it seems to me there are some real questions, questions that I don't actually know the answer to. What happens if you do bilateral ex ante negotiation? Well, you don't have the hold-up problem due to the commitment or sunk costs. You have this strange negotiation where presumably the parties who are perceived to be pivotal in the standards process get very good terms, and parties who are not perceived to be pivotal get much less good terms. And then you have to think through, well, that generates some reward for the innovator and it generates perhaps a rather asymmetric or ex post lopsided market structure downstream. Is that a good way of doing things? It's not clear to me whether that's a good way of doing things.

So, do you want to deal with those problems, which, as I said here, I don't really see how to analyze very convincingly, or do you want to deal with the problems generated by joint negotiation, in which case it seems to me again, you know, still sort of where we started. Logic suggests that ex ante is kind of better than ex post to the extent that you can do it, and Earle, I'm sure, has a good point that it's hard, perhaps, to make these commitments, but you can try, and to the extent that it doesn't generate smoke-filled room problems or technology monopsony problems, which my inclination is not to worry too much about that, but I could be wrong about that.

MR. VISHNY: I have one concern, I guess. I realize it's very hard to explain and, perhaps, impossible to explain. First of all, I think RAND rules tend to be -- give rise to bilateral discussions rather than multilateral. RAND rules may impose on the discussions kind of a common culture, if you will.

MR. FARRELL: That's what I meant.

MR. VISHNY: But the discussions tend to be bilateral. Secondly, there is -- I don't know if I can even define it, but there is reason, I think, to state that RAND rules impose a kind of culture over the entire standard setting process which works, and that the exclusion of commercial negotiations during the process itself also works. At least that's the experience we certainly have at TIA.

The evidence that it works is the absence of problems because we have highly competitive companies. We have companies who go at each other with great strength, with great vigor and with an awful lot of ambition, and that's justified and, in fact, it's what we want, I think, in our society and in our own culture.

The RAND rules act as an inhibitor in the entire process of negotiations. There is the feeling that somewhere out there there is somebody who can ultimately judge the imposition of terms that might prove to be after the fact, if you will -- and that's what happens whenever you go to court, it's after the fact -- that might prove you wrong. I think it has its effect, which is shown in actual practice.

Now, one can theorize that the actual practice doesn't disclose what is, in fact, taking place and that maybe something else is taking place, but that remains a maybe and not a certainty and a maybe which I think does not justify remedial action at this point.

MR. SHAPIRO: Well, are you saying you tend to prefer the R part of RAND without the ND?

MR. VISHNY: No, no, I prefer both. But non-discriminatory, for example, doesn't mean sameness. It doesn't mean without difference. It means something else and I'm not sure I'm capable of defining it. We often talk in life about not being able to define something but recognizing it when it exists. That may be a foolish truism, but it sort of works. I don't think we have problems with that.

I've seen people raise licensing issues that troubled me because I wondered whether they were reasonable or not reasonable, discriminatory or not discriminatory. I mean, reasonable is one thing. Discriminatory means somehow you discriminate between or among different licensees. When do you discriminate? Is every difference a discrimination? I think not.

MR. KATTAN: Let me throw a fire bomb. If the multilateral discussion of price is an antitrust evil, why is it okay -- I guess I'm addressing this to Paul -- to even agree that the price should be reasonable? I mean, the Supreme Court said in Socony Vacuum that you can't even agree on reasonable prices.

So, once we start from the premise that it's okay to talk about some price, haven't we really crossed the threshold and made a decision that in the context of standard setting, in the context in which the demand for a patent may be the product of the collective decision-making, it ought to be permissible to discuss the price under which the patent will be licensed.

MR. SHAPIRO: Or you could point out since reasonable is so vague, it doesn't amount to anything.

MR. FARRELL: I think that raises a real concern. If Paul doesn't quite know what reasonable and non-discriminatory means probably there are few, if any people, who really do know what it means. But then wouldn't you necessarily expect either that the rule is having no effect or that there ought to be arguments all the time? So, I'm puzzled about what's going on there.

MR. VISHNY: Of one thing I am certain and that's the people who are negotiating for the establishment for the creation of a standard don't know what reasonable and non-discriminatory mean. But I'm really trying to say, in other words, it's something that Earle said, and that is that the people who populate these committees are not the people who are skilled at or who carry on commercial negotiations and imposing that task on them is probably impossible.

At TIA, for example, we have an intellectual property working group that meets from time to time looking at our policies and our standards which are consistent with those of ANSI -- we try to keep them consistent, we think they are -- at all times. But we come across a great deal of difficulty when we talk about: who is it who sits in the room? What is it that that person knows? What is it that that person is in the position to disclose at any given time? To what can that person commit? And we have a great deal of difficulty in trying to find it. I think that becomes even more complex when you go beyond the technological terms of the standard setting process and into the commercial terms.

MR. THOMPSON: One other point on is RAND an empty term and what is it you've really agreed to. One thing I mentioned earlier is I'd much rather have a patent that's not part of a standard, and it's because when I commit to RAND licensing, I just gave up my injunctive power for a while, and that's a big difference and a big lever. I have to know what scope of commitment that I have made up front, and that's a very big deal. That's one of the reasons I agreed every type of consortia, SIG agreement or whatever, to know what that scope is that I'm giving up potentially.

MR. SHAPIRO: I want to take exception, Paul. I mean, it seems to me you said something about we shouldn't impose the requirement that people have to discuss these terms and conditions, and, Earle, you said, oh, it would be so costly because you'd have to send all these lawyers, I guess, are worth more than engineers or something like that. I don't know exactly.

MR. VISHNY: You don't want to be so foolish as to send a bunch of lawyers.

MR. SHAPIRO: Well, fine, or licensing -- business people who know about licensing. I don't think anybody here is talking about imposing any such requirement. We're talking about removing a bar or taking away a chill. If all the companies say, look, I can't send the licensing people, they're busy doing other things, don't send them, nobody's making you send them. We're just saying if you want to, and if you think it's important, then you won't be prohibited from doing so.

So, I think that's just a red herring. I don't buy that at all.

MR. VISHNY: I think what you say is, if you want to, it won't be prohibited, provided you do it in a way that's not antitrusty, right? Is that what you say? Or do you say that if you want to, it's not prohibited and you can do it on any basis you want? Is that what you say? And if not, what do you say? I have a lot of difficulty with that.

MS. GALBREATH: One thing that we discussed in the earlier session having to do with standards was the fact that some of the organizations that we're familiar with have gotten around to this question of RAND terms or licensing terms by really requiring a commitment to open or royalty-free licenses. And I'm wondering if anybody has any comments about that as a fix to this problem. I know it's one that we have explored, but is that something that we should be thinking about as we're throwing the rest of these issues into the mix?

MR. FARRELL: Well, I think that raises the technology monopsony concern much more sharply than ex ante negotiation, for example, would. I also think that the way these things are often structured, they're as duties on member participants. And to the extent that

that might create an incentive not to join, it seems like that could be a real concern.

Now, again, coming back to Carl's observation, nobody, I take it, is suggesting that that be a required rule for all SDOs. So, if an SDO is very worried about non-participation, it might choose not to adopt a policy like that. So, to some extent, that's self-regulating. But I don't think we've really thought through the extent to which that's true.

MR. KATTAN: Let me disagree with Joe because I think he's beginning from a faulty factual premise. The way that the organizations that provide for royalty-free licensing work is not by requiring members to commit up front to royalty-free licensing. It is rather by agreeing that there will be a license, which will be royalty-free. If you want to take advantage of the license and get a royalty-free license from all the other members who agree to sign that license, then you have to agree to give them a reciprocal license. So, it doesn't create a monopsony problem, it gives you a choice. What is more valuable to me? Getting a royalty-free license from everybody else or paying everybody else the royalties that they may ask for and at the same time charging royalties for my patents. So, it's fundamentally different from the kind of hold-up that I think Joe is talking about.

MR. THOMPSON: I would have to strongly disagree. There are some organizations that operate that way. The vast majority of them do not operate that way, that are royalty-free. It is a commitment the day you sign that thing that any patents you have will be royalty-free. In some cases it goes so far as to give a third party the right to license your patents for you, and that's a particular problem.

In my corporation, we have certain policies and procedures and that kind of group requires very, very high level signatures within the management chain. I see those. I've got one on my desk right now I'm writing the routing memo for. So, it is not just the ones that say, gee, if you want to participate and enjoy the fruits of this at the end of the day, then you need to grant the license. Most of the ones I see start from the very beginning.

MS. LEVINE: Joe --

MR. SHAPIRO: I don't understand the difference. If everybody says they'll be royalty-free, then it's reciprocal anyhow. So, it just seems -- I'm not sure where we're going here. Plus by the way, Joe, if I think I've got really cool stuff and you guys don't have much, it's still a big concession, perhaps, to say

I'll offer my royalty for your piece of whatever, may not appeal to me much. So, it's not symmetric, necessarily, if we start with different technology positions.

MR. KATTAN: But if you think that your technology position is better than that of everybody else and the value of what you're getting in return from everybody else is not as great as what you've got to offer, you don't sign. It's not an agreement that says you must license your IP on royalty-free terms. It just says, if you want to get a royalty-free license from everybody else, you've got to cross-license them on reciprocal terms.

MR. SHAPIRO: I guess it would be helpful if you could participate without signing. That's a question, whether you can't even participate, then you've got a stronger situation where even to come to the table, you have to give up any claims. That gets more into the -- that's the area where, I think, as Joe said, you might really worry about monopsony power.

MR. FARRELL: Well, I think that was the ETSI story and I think I hear Earle saying that's not uncommon.

MR. THOMPSON: That is not uncommon in the industry. There are frequently -- even if you want to just hear what's going on, you have to agree that it will be a royalty-free license.

MR. KATTAN: So --

MR. THOMPSON: Where you really get a problem is in the -- sometimes what you will see being set up is that that is, for all practical purposes, the buyer of the technology, who may actually have developed something there, but they are the ultimate buyer, it's setting up a consortia or whatever, and if you want to participate in this in order to sell to this buyer, you are agreeing that it's going to be a royalty-free. That lowers the buyer's costs significantly.

Now, what does it do as far as whether or not you participate in it? You have to make a decision at that point, are you going to want that business and is giving up your IP worth it? In some cases, the answer will be yes. It's a business call. But that situation does very much exist.

MR. PETERSON: So, I think that this idea of royalty-free licensing is, in fact, implemented in a lot of different ways, as is illustrated here.

MS. GALBREATH: I think so.

MR. PETERSON: And that's my experience, that it actually is implemented in a variety of different ways. I don't think it is a solution to anything in particular. There is the concept of we would like maybe to have free licenses here as something that might become implemented in some kind of a larger plan or policy. It can be implemented in a variety of different ways. Its utility, I think, varies quite radically from technology or type of standard to another.

So, I think there are some for which the likelihood that there is an essential patent that you -- or a patent to which the standard really would need to have a license for some reason, there's some standards for which that's a much lower probability than others, and for some, where this patent landscape is loosely populated, shall we say, in the sense of likelihood of patents that you're really going to need to be essential, you have a higher -- that would be one indication that maybe there's a higher probability that you should strive for something that is actually RF because in a sense what you're doing is you're trying to look possibly for the unpatented solution or if there are patented solutions, if it turns out that there are unpatented alternatives, it may be that the proponent of that may be just as happy to grant a free license.

So, I think there are some patent situations, there are some kinds of technologies where it plays a very useful role and people focus on it, and yet, there are others where that makes no sense at all. You truly want to compensate the patent holders and foster innovation in that way, but it depends on the technology as to the role that it plays in the standard.

MS. GALBREATH: We are closely approaching what will be the end of our time, and so I'd like to focus us back to a couple of issues as we end the morning. One of those has to do with the question of whether ex ante discussion would really chill innovation. We've touched on that and I'm wondering, given the range of opinion here, if the antitrust agencies were to give some kind of guidance in some form or another and ex ante licensing terms were more actively discussed, would that chill participation in standard setting organizations or chill innovation by people who might otherwise give their technology over to a standard?

So, if we could go there. And then after that, we should really proceed to the question of reasonable and non-discriminatory and spend a little bit of time there before we end the morning.

MR. FARRELL: A quick attempt at an answer to your question, Carolyn. So, Earle's view is that ex ante negotiations are pretty much meaningless because there's no way to make a commitment. I assume that sometimes, maybe often is true. But in those cases, of course, it doesn't really matter what rule you have because if you have a rule that says they're forbidden, it has the same consequences as if you have a rule that says they're allowed, if they are meaningless.

So, we've got to focus on the cases where it does mean something. It seems to me then, in terms of the framework that Scott laid out in his written submission and that Carl and I have talked about, and others have talked about, ex ante makes good sense provided -- and now this is sort of using the stripped down economic theory of the situation -- provided that the standards body doesn't take an aggressive negotiating position, but rather says, let's ex ante compare the terms that are being offered by the different technology proponents and we'll choose the best one. That way, the technology proponent with the best technology can get to choose a RAND corresponding to its technological advantage which is, broadly speaking, the right reward for that innovation.

Now, whether there's a good way to implement that in practical terms without allowing too much -- and maybe it's not an issue but maybe it is an issue -- without allowing too much of the, well, we're the standards body, we have the power, we'll give you a dollar for your patented technology. It seems to me that's the core issue.

And then a much deeper question, which has been raised several times, I raised a few minutes ago, again, what's the real interplay between ex ante versus ex post and the coordinated versus bilateral discussions? I think that one is really a hard question scientifically, as well as policy-wise.

MR. KATTAN: It seems to me that if you allow ex ante discussions, the market is pretty much going to decide whether that's an efficient solution or not, in that if it is an efficient solution people will use it and those who feel that they're not getting sufficient value for their IP will make what Earle said was a business decision whether or not to participate.

Obviously, if companies choose not to participate, standard setting organizations will not make use of the freedom that they are given because they will see that it's causing key players to avoid participation in the process and actually creating a situation which there's less information rather than more information. To the extent that it delays their deliberations because people get hung up talking about price rather than technology, again, the organizations will have to make a choice, is this the path in which we want to go?

So, I think if you allow people to do what, I think, many around this table agree is desirable, the market will pretty much decide whether that's an efficient solution. And it may not be a one-size fits all solution, it may be a solution that works for some standard setting, it doesn't work for others. My gut feeling is that in the overwhelming of cases, the SSOs will choose not to make use of the freedom that they're given if you lift the antitrust restrictions. But to the extent that some do and it results in negotiated royalties, I think that's all for the good.

MS. GALBREATH: Certainly, from the rule of reason perspective we look for innovation enhancement or some kind of efficiencies that are passed on to consumers, and so, those obviously would be things that we would be interested in hearing more about as we go on and finish up the morning.

We should turn now to what reasonable and non-discriminatory means. We've had a little bit of a preface to that and I'd like to go back there for a few minutes. In particular, I noted that in the recent Microsoft decision that we, at least, had one or two lines from the judge who indicated that reasonableness is an objective standard, a quotation from a Supreme Court case from 1992.

I'm wondering if that is the case or if that's the consensus around this table, that reasonableness is an objective standard, and if it is, what would be the indicia of reasonableness if we're looking at RAND? And then going to the flipside of that, what does non-discriminatory mean?

MR. SHAPIRO: Well, far be it from me to overturn the Supreme Court, but come on. Would you agree to buy a house and we'll figure out the reasonable terms later after we move in? I mean, it just doesn't work, okay?

Now, it may work because of reputation or it may work because in some cases there are a lot of close examples that give a clear benchmark, but it's -- I don't know what objective means. I mean, to the economist, it's just asking for trouble, I guess, put it that way.

Now, again, I'm hearing -- you know, there's some, I guess, lack of -- we're not sure how often this is really a problem. We've heard that there's not a lot of big complaints. We know there are some number of cases where it really gets litigated and it's a big dispute. I know that from personal experience. Other people do, too. But, you know, lawyers may like the term "reasonable," but I think economists less so.

Non-discriminatory -- I mean, I mentioned this earlier, maybe I'll slightly repeat myself. You know, it's really not clear what that means. That's something we're more familiar with in terms of, you know, price discrimination and, you know, I've seen situations where the small companies, the small licensees or producers will say, well, you know, it's really discriminatory that everybody pays the same fixed fee because I don't spread that out over very many units. Of course, the big guys say, well, it's really discriminatory I have to pay more in total because it's per unit. So, what do we mean there?

Again, grantbacks -- and this does not just come up in standard setting. It was discriminatory to ask everybody to give some sort of cross-license for stuff that reads on the standard when some people have a lot of IP, other people don't.

I'm not going to give you some definition. There are economic definitions of discrimination. My point is simpler, which is, these terms don't have enough precision unless we either -- specific standard setting bodies define them. I don't think we should be defining them uniformly for all standard setting organizations. But, we should allow them to do so themselves so they're meaningful in a context that works within the companies and technologies with which they deal.

MR. VISHNY: Well, I'm burdened by the fact that I'm a lawyer. But, you know, when something like the U.N. convention and the International Sale of Goods or other codes say that if two parties to a transaction fail to set a price, it should be a reasonable price, and the world manages to live with that. Not only judges, but business people manage to live with that. They know there is potential for conflict, but they manage to live with it.

Is it therefore necessary to define it with precision? I think not. I think there is good policy behind the acceptance of the word "reasonable" in certain settings. And I can understand why an economist would have difficulty with it. It lacks a certain precision clearly. But it's used and it's used by reference to community standards, to standards in an industry, to the going rate, if you will, to how something is traded at a particular time on the market. But it can ultimately be defined.

Do I think an agency should define it? I really think not because I think what is reasonable and what is not reasonable will vary in many cases in many different ways.

MR. SHAPIRO: I agree with that.

MR. VISHNY: Good.

MR. SHAPIRO: We have an agreement on the panel?

MR. VISHNY: I understand the difficulty.

MR. PETERSON: The example that you gave, though, about the use of reasonableness, that's an exception case. That's applying this loose term in the case of exceptions. Here, we're talking about reasonableness as being the way that business is done and I think that that's quite different.

MR. VISHNY: I think it's not more exceptional than the way business is done because we've had as little trouble with it in the standard setting arena than we have in other commercial transactions.

MR. FARRELL: But aren't we talking here not about whether reasonable sometimes work, but about whether it would be okay for a set of parties to a transaction to define things more precisely? And if you look at the world of ordinary commerce, sometimes people will leave prices undefined, but very often they will nail down exactly what the price is. I think we're talking here about whether it's okay for people in this context to do that, not about whether reasonable ever works.

MR. VISHNY: I don't think I would want to say that it's never okay for people to sit down and do that. I don't even believe that that's the issue. I think I would support, in our context, in the standard setting with which I'm familiar, I would strongly support the rule that we have because anything else is so highly unworkable and impractical in that setting. I can't speak for others.

MR. KATTAN: You know, to my knowledge, there have been only two cases in which a company has sued somebody and said, you promised to license me under reasonable and non-discriminatory terms and your terms are unreasonable. There could be two possibilities here, maybe more than two, but then I'm not sure which they are.

One is that the term "reasonable" works reasonably well and that's why people haven't taken a shot at suing somebody, or at least asserting it as a defense, you know, an estoppel defense.

The other possibility is that the term is just so amorphous and has such wide latitude that people say it's not worth my time. And I'm not sure which it is, but the paucity of lawsuits that have been brought, particularly given that one of them was quite successful, suggests to me that maybe the problem is not as pervasive as one might think.

MR. THOMPSON: I have to agree with that, also. I don't think the problem is very pervasive. If a royalty, at some point, is not considered reasonable by a company, they make a choice at that point, you know, from a practical standpoint. They decide, okay, I won't be in this business or I will pay the price today and find some way of getting it down in the future or changing the standard, and that happens a fair bit. You find standards come and go over time for a variety of reasons, not necessarily because it's better but because the cost of implementing it because of the royalty may have been higher. That's where a lot of these special interest groups that Joe has talked about come from.

You have competing things right now. For your wireless laptops, you know, there's about four or five different competing standards. Each one of those would work. Which one will win in the end? I don't know. But some of that is based on the royalty rate, some of it's based on the implementations.

I don't really think that, you know, while RAND is a very uncomfortable sound in many respects, in practice, it hasn't worked out to be that big a problem.

MS. GALBREATH: Before we finish what I'd like to do is turn it over to the panel and if they have any questions of one another, it would be a good time to get those questions out, and I guess lacking that, what we would like to do is go around and give each of our panelists an opportunity just to sum up what they feel have been the most important and salient points of the morning.

MR. KATTAN: Let me just raise one question because I see Danny Weitzner in the room. His organization has a policy, as I understand it, that says we're not going to incorporate anything that's patented into a standard, and that's, in a sense, a policy that says we're not going to pay anything for a technology even if that technology has merit. I think that people are generally comfortable that that policy, which if I wanted to use pejorative antitrust terms I could come up with terms like "boycott" and whatever, it's a reasonable one.

And I've never heard a suggestion that that kind of policy -- if we're going to try to go for the lowest cost alternative, which means we're not going to take anything which is patented, is a reasonable one.

MR. FARRELL: What was -- I think the ASSE case said that wasn't reasonable.

MR. KATTAN: Well, no. What the ASSE cases basically said is that if you have a policy that doesn't enable somebody to comply with a standard because -- the ASSE case was an exclusion case rather than a collusion case. It was not a compatibility standard. Somebody said, I want my product to be certified as safe, and the ASSE said, we're sorry, you have a patent on it, we're not going to certify it. That was exclusion, not collusion.

MR. VISHNY: But it's still an antitrust concern, the exclusion, or can be.

MR. KATTAN: Yes. But the context of those organizations that say we are trying to adopt compatibility standards, which is really what we've been talking about today rather than safety standards that do not require us to pay any royalties. So, if anybody's got a patent, we're not interested unless we can have it for free. Is that a problem? I don't think anybody -- well, I guess I'll pose it as a question. Does anybody think that's a problem? I don't, and if that's not a problem, then why is it that discussing the terms under which you would license becomes a problem?

MR. WEITZNER: Could I, just for the record, say we are considering such a policy. We have not yet finally adopted such a policy. But thank you for raising the question.

MS. LEVINE: For the record, that speaker was Danny Weitzner of the W3C.

MS. GALBREATH: Do any of our panelists have anything more to say about that?

(No response.)

MS. GALBREATH: Then, perhaps, Scott, if you would like to begin summing up and we'll just let people go in whatever order they wish.

MR. PETERSON: I just have one, not really a sum-up, but sort of one point to make, and that is we've struggled a little over what's reasonable, what would be discriminatory and so forth, and also, what's the likelihood that there will actually be pass-throughs to customers, what's the likelihood that there will be some collusive effect that will result in agreement on larger fees that ultimately get passed through.

In my view, the best way to attack all of these nettlesome problems is to have broader participation in the group that is looking at and considering and involved in these licensing negotiations or whatever the process is. The broader participation will likely shed light on what is or isn't discriminatory because you will have those people potentially at the table raising the concerns about whether, in this context, that kind of an arrangement is going to have a terrible effect on some particular participant.

The pass-through -- we were talking earlier about the difference between perhaps the established players and those who may be new entrants or sitting out on the fringe, and those are the ones whose participation can work to cause the collective result to be a better one than might otherwise have been. So, exposure to this broader audience, shedding light on it in a collective sense rather than having it go on in a more ad hoc fashion, I think, has benefits for a number of the different troublesome issues that we've been talking about.

MR. SHAPIRO: I guess I do come out after our discussion this morning really continuing to believe strongly that it's desirable to kind of shed sunlight on these processes and let people know what they're getting into when they're picking a technology so they can manage their costs, which we know is important, not to impose any rules on particular standard setting organizations, but to give them the latitude and variety. Various forms will arise and, hopefully, the agencies can do something, again, to remove that antitrust chill.

Now, how big a problem is it? I mean, that's been lurking here all along. I guess my view is I don't really know. I mean, I hear people who are very experienced saying it's not a real common problem. It clearly comes up sometimes. I don't see any reason not to clarify things so we can avoid whatever the number of cases are where people have been deterred or chilled from talking about these things and problems have arisen.

I guess in that sense, I would draw a parallel to the discussion 10, 15 years ago about cooperative research ventures, and there was this long discussion, gee, are the antitrust laws preventing people from getting together and doing cooperative R&D, and some people said it wasn't a problem, other people said it was a problem and per se, and legislation was passed and I don't know that it made a big difference, but it seemed to me it helped because to the extent people were worried about it unnecessarily, those concerns were alleviated. And we could do something similar here to let people have these discussions if they choose to do so.

MR. THOMPSON: Going back to basically the last question which was, you know, is there a chilling effect by having this. Probably the answer is, at the moment, would be no. If you were allowing ex ante discussions, is there a chilling effect on it? Maybe not. But by the same token, there may be. And the reason why there may be is that, you know, from a corporate standpoint, I'm not wanting to have my engineers going in there.

Now, as Carl had said, well, it's your choice, you either make the decision you can go do that or not, well, very quickly, it then becomes, well, we're not even going to let you in the committee until you tell us everything that's going on and you get sort of an inherent peer pressure there where all of a sudden, whether you like it or not, you're going to find out that your people are there and you're going to have to do that or you're not going to play in the business at all. That is what bothers me.

At some point, you know, it's either going to add to my cost, which, by the way, gets passed on to the consumer at some point, or it's going to be we don't participate in certain groups. To me, it's a major longer term concern and I'm not sure if the thing that we're trying to fix, which doesn't seem to be a real problem, is worth presenting another problem down the road.

MR. VISHNY: I'm grateful for the opportunity by way of being able to come here and exchange views. I, myself, have learned a lot and it's important to learn where you differ, obviously, and why.

I think from our standpoint -- you know, there's the old joke that -- it's not a joke, that if it ain't broke, don't fix it. I don't accept that because obviously something not broken can be improved upon, whether or not it needs fixing. I don't see that allowing ex ante discussions in the context of our standards development groups will improve anything or fix anything.

I think the process works, it works well, it works as efficiently as human beings can work. I acknowledge that we have delays. I don't think the delays, in general, are related to the problem we've been discussing at all. Unfortunately, they're there, but not because of this.

Also, I would not be in favor of a statement that any discussion is automatically a violation of the antitrust rule and exposes you to risk. I don't think that's necessarily true, but I wouldn't be willing, in advance, to lay down the precise circumstances under which it would and would not. I think that's a call that's exceedingly difficult and one which the judges might not accept some day, and after all, they will have the final say.

MR. KATTAN: I think it's important to emphasize a point that Carl made earlier, which is we're not talking about imposing anything on standard setting organizations. What we're talking about is giving them freedom to make a decision as to whether to allow discussions of licensing terms. Some undoubtedly will decide not to. Others might decide to do that and if they see people like Earle walking out, decide that that's too high a cost to pay, I think the market is going to sort that out.

Now, the point that Paul made about judges, I think, is an important one because it really speaks to how big a difference you can make. I would certainly agree with Carl that the rule that you ought to articulate is one that says rule of reason with some kind of presumption that ex ante discussions are legitimate and pro-competitive. Whether that makes a difference, I don't know.

Scott's company was involved in a case that was a rule of reason case, Addamax v. Open Software Foundation, that case lasted --

MR. PETERSON: Multiple times.

MR. KATTAN: And that case lasted how many years, Scott? Five or six years, and the cost of --

MR. PETERSON: The residue goes on to this day.

MR. KATTAN: So, the fear of being embroiled even in a rule of reason case, I think, is there. Certainly those companies that don't want to have the discussions take place, for whatever reason, maybe they are more -- their IP halves who would like to collect more royalties, are going to play into that fear.

So, you can make a difference, I'm just not sure how big a difference you can make.

MS. GALBREATH: Joe?

MR. FARRELL: Well, I think I've actually made my main points in the course of our discussion. I mean, I think analytically we need to distinguish carefully, perhaps more carefully than we always have, between ex ante versus ex post and bilateral versus multilateral discussions, and the role of RAND in that as imposing some, perhaps, nebulous degree of uniformity, which I take to be somewhat akin to multilateral or joint negotiations, is a bit of a mystery. What will happen if you allow or have primarily ex ante but primarily bilateral discussions? Perhaps we already have that.

One would expect to find some parties have very advantageous deals and other parties having less advantageous deals. Is that a good outcome, is that a bad outcome? I think that's going to depend on some features of the market that may be difficult to see.

And this pass-through issue strikes me as perhaps a pretty big one or sometimes probably a pretty big one which says that the participants, the direct technology buyers, may not actually be functioning very well as agents for the end user. Obviously, one can overstate that. I entirely take Joe's point that if there are some people with royalty-free cross-licenses, then that point gets a lot weaker.

So, it seems to me those are the main things that come out. I can also offer to finish it up on a lighter note, if you'd like that. But people should probably say their serious things first.

MS. GALBREATH: Well, I will just say thank you to all the panelists this morning for taking the time in coming and I will let you have the last word.

MR. FARRELL: Okay. Well, we've been talking -- I've noticed that nobody has used the term, but I think at some level we've been talking about submarine patents and the like, and there's actually a dispute which is perhaps illuminated by thinking about the word "submarine." Those of you who know me well know that I enjoy messing around with words. So, I'd like to just take a minute to take a look at the word "submarine" in a slightly unusual way.

Now, if you look at the word "submarine" it's obvious that the last three letters are just kind of a suffix, so I think we can dispense with those. Now, what are we left with? We're left with this rather strange-looking word "submar" and sometimes in this kind of endeavor when you can't make a lot of sense out of something, it helps to look at it the other way around. So, let's look at it the other way around.

(Laughter.)

MR. FARRELL: Coincidence? I think so.

(Laughter.)

MS. GALBREATH: Thank you all very much for coming and participating with us this morning, and join us again this afternoon at 2:00, please.

(Whereupon, at 11:46 a.m., the morning session was concluded.)

AFTERNOON SESSION

(2:00 p.m.)

MR. SCHEFFMAN: Welcome. This is the final session of the FTC-DOJ hearings on Competition and Intellectual Property Law and Policy in a Knowledge-Based Economy. I'm David Scheffman from the Bureau of Economics. I'm joined by Frances Marshall from DOJ, Gail Levine and Sarah Mathias from the FTC Office of General Counsel.

Let me say, since I've done no work at all in these hearings other than appear in this thing, the people who did this at the FTC and DOJ really deserve a tremendous amount of credit. This is probably the most important set of hearings that have ever occurred on this topic that are available, as they are transcribed, on the web page. It's greatly contributed to learning, in general, and to those of us enforcers and practitioners.

So, this is the end of a process that began nine months ago. There, of course, will be a report sometime next year which will be a lot of work, again, by these people to put together and synthesize what we've learned from the hearings.

For today's panelists, I want to compliment, also, the panelists today and all the other panelists that have contributed to these hearings, which obviously have been the critical sub-stand of input. There are biographies available for the people. I'm sure the audience knows all the people, but I'll give them a short bio.

Michelle Burtis is a Director with the consulting company, LECG, and the firm's Practice Director for Mergers and Acquisitions. Her practices include consulting and litigation experience in antitrust and intellectual property issues.

Joe Farrell, of course, is Professor of Economics at UC, Berkeley. He's also Chair of the Competition Policy Center and Affiliate Professor of Business. Of course, Joe was one of the many alumni of the DOJ and FTC here as former Deputy Assistant Attorney General for DOJ.

Jeffery Fromm has practiced as an IP attorney for over 20 years with a focus on computing and imaging technologies over the last several years. In August of this year, he retired from H-P and is now in private practice. Jeff has a long-running involvement with intellectual property issues that arise in open systems and consortia, clearly a very important issue for the discussion today, and frequently advises on strategic alliances, acquisitions and spin-offs.

Mike McFalls is an associate at Jones, Day, where he focuses on antitrust issues, on merger and non-merger matters, and biotech, pharmaceuticals, diagnostics, defense, consumer products, and other matters. Mike is an alum of the FTC where he was in the Office of Policy Planning in 1997 to 2000 and also was an Attorney Advisory to FTC Chairman Bob Pitofsky.

Barbara McGarey serves as Chief Counsel to the NIH, the National Institutes of Health. Barbara has extensive legal expertise on the funding and regulation of the biomedical research enterprise, having served as General Counsel to the NIH Foundation, Deputy Director of the NIH Office of Technology Transfer, and as a litigator with the Department of Justice representing the U.S. Food and Drug Administration.

Janusz Ordover, of course, is Professor of Economics and former Director of the Masters in Economics Program at NYU. Janusz is yet another alum former Deputy Assistant Attorney General for Economics in the Antitrust Division.

Rick Rule is a partner at Fried, Frank and head of the firm's antitrust practice. Rick's practice focuses on providing antitrust advice, structuring joint ventures, representing corporations before DOJ and FTC in the EU. Rick, of course, was Assistant Attorney General at the Department of Antitrust at the Department of

Justice.

Carl Shapiro is Transamerica Professor of Business Strategy at the Haas School of Business at UC, Berkeley, Senior Consultant to CRA, Charles River Associates. Carl, of course, was also a Deputy Assistant Attorney General for Economics for the Department of Justice.

The agenda in these final panels are to clarify some issues that have arisen earlier in the hearings. So, it will be questions asked by the people at the table here and interchange and discussion by the panelists. As a procedural matter, at least what we'll start -- see how well-behaved you are, but we'd encourage you to turn your -- we'd say tent, but turn your name thing on its end if you want to speak, and then we'll see whether that's really necessary or not.

We're going to discuss four general topics today, portfolio cross-licensing, grantbacks and non-assertion clauses, reach-through licensing agreements, and issues related to non-vertically integrated IP holders.

So, I'm going to start with some general questions about portfolio cross-licensing and I'm interested in this general issue on all the topics, which is, definitionally, what is it we're talking about, which is not so ambiguous in portfolio cross-licensing, but is in some of these others, we'll see if we have agreement on what it is we're actually talking about definitionally, and then what is the business purpose of the practices we're talking about and what do we know about the usage of such practices.

So, starting out with portfolio cross-licensing, I put to the panel: what is the business purpose behind portfolio cross-licensing? In what sort of industries does this practice arise? Is this practice becoming more or less common? Does it occur between vertically integrated firms, between rivals? That's the questions I would put to the panel to start off talking about portfolio cross-licensing. So, who would like to begin addressing these general issues?

Carl, since you've written about these issues, do you want to start?

MR. SHAPIRO: Well, sure. First off, I think it's -- in part, I think there's a pretty clear consensus or understanding that portfolio cross-licenses are widely used in certain industries, semiconductors, perhaps, being the best example.

Just to define it and make sure we know what we're talking about then, you know, particularly between some of the large companies in that industry, whether it's Texas Instruments or Hewlett-Packard or Intel or IBM, licenses that go both ways, include a large number of patents, maybe some carve-outs, maybe not, maybe some field of use restrictions or something, maybe not, but pretty broad, and typically apply not just to patents that have been issued but patents that will be issued through or applied for through a certain date. So, just in terms of getting on the table what we're talking about.

I mean, my view, I guess to maybe start the discussion is, you know, certainly if you're talking about cross-licensing patents that have already been applied for or issued on royalty-free terms, it's a wonderful thing from a competitive point of view. This kind of allows companies freedom to design their products and manufacture their products without royalty burdens in a marginal cost sense.

And so, it can lead to improved product quality and lower costs and less basically patent cloud and so forth. I think that's sort of unambiguous, very straightforward, including patents that haven't yet been issued for some period of time, potentially could raise some issues because you could say, well, if I do some R&D and I come up with this patent, I've got to license it to you, maybe my competitor. You might be worried that that would reduce the incentives to innovate a bit because it would be shared.

I think, again, certainly in semiconductors, it's pretty clear that that's not been the effect, I would say. And that because of the lags in patenting, because of the patent thicket problems, the pro-competitive advantages of knowing that you have this sort of patent freedom, at least vis-a-vis a cross-licensing partner, outweigh any possible concerns about stifling or deterring innovation. Maybe other people don't agree with that, but that's my position anyhow. That's what I think I've observed.

So, at least before you get to royalty bearing issues, there's a lot to be said, in a pro-competitive sense, for these type of portfolio cross-licenses.

MR. SCHEFFMAN: Jeffery, I wonder with your experience working for a major high tech company whether you could share with us your perspective, the business perspective about cross-licensing and the pluses and minuses from a business perspective.

MR. FROMM: I certainly agree with Carl. I think, amongst major corporations, it's pervasive in certain industries, not just the integrated circuit business, but the computing business generally has a lot -- most companies participate in some sort of broad portfolio cross-licensing. I think the business aspect is -- certainly, within many corporations, H-P being one, the number one criteria for getting patents is to provide design freedom. Because of the mutually assured destruction problem, in other words, evaluating other people's portfolios for the first time is an interesting exercise when you're looking at five or 10,000 patents. But that's typically what you find. In any group of five or 10,000 patents, I'm reasonably certain that I can find an infringing patent of mine of somebody else's product and vice versa.

Whether I can find 100 or 200 such things is also not difficult. So, I think in that context where you've got a business to run and the leverage isn't really in getting the patents but in providing a mechanism to -- a company like H-P is really in the business of selling products and competing in product sales, providing products to customers, and not necessarily in competing on technology, although technology -- I mean, it's a technology business, so it -- you know, it's certainly an aspect of it.

So, fighting over whether my patent is better than your patent is a lot less interesting to most business managers than fighting over whether my personal computer is better than your handheld personal computer.

And that's the business they're in.

So, I think it's imperative for the health of the industry that certain broad cross-licensing continue. Usually, there's not a problem. Like I say, as Carl said, most of them are forward going. Many of them are not. Some are, some aren't. Some industries participate in what we call capture periods, capture patents that will issue or capture patents that will be filed in the next three to five years. It's rare that they go further than that, mainly because economics change.

My experience, as far as carve-outs, is carve-outs are very common amongst many companies because there are a lot of them in multiple businesses. In general, the way those carve-outs kind of go is it's carve-outs for businesses that the other company is not in yet, but that they might want to get into so that the carve-out is designed so that it doesn't enable the other company to use your patents against you in a business that you are already in and they are not in. That's kind of how the carve-outs typically are arranged.

So, usually the carve-outs don't attack the core businesses where they're competitors. So, if H-P and IBM, for example, were to be interested, they certainly wouldn't carve out -- personal computers wouldn't be a carve-out because that would be senseless.

Why would you do such a thing because ultimately both companies are in the PC business? But usually the carve-outs are fairly broad field of use carve-outs with the idea that you still have some patent power that you can exercise against the other party if they decide to go into a business that you're in and they're not in.

Usually, it's pretty balanced. Sometimes there's balancing payments. Usually the balancing payments tend to be just cash, frequently one-time payments of cash, sometimes significant amounts of cash. Once again, ongoing royalties on broad cross-licenses, I guess I've never seen one of those. I guess they probably do have them, but it's usually someone will do an analysis that my portfolio is bigger than your portfolio today and you owe me X million dollars. And time will pass, it will be four years from now and the capture period will expire and then they get to renegotiate.

But the objective during that four-year period was to prevent any continuing litigation over the patent portfolios during that period so people would be able to design products and ship them without the threat of injunctions primarily.

MR. SCHEFFMAN: Thanks, Jeffery. Joe, do you have a comment?

MR. FARRELL: Yeah. Well, let me try to be a little provocative here. I'd like to suggest that maybe we can view a forward-going portfolio cross-license partly in the light of a private intellectual property policy, that is to say two firms or a bunch of firms get together and decide that notwithstanding all the well-acknowledged advantages of intellectual property, it's actually more pain and inefficiency and trouble than it's worth. They'd rather have the design freedom than have the incremental incentive to innovate. They'd rather have the freedom from submarines and nasty surprises and marginal royalties than have the incremental incentive to innovate.

First of all, I find this a helpful way of looking at broad forward-looking licensing practices that kind of developing a private intellectual property policy has between the parties. I think one can look at it as so often in either an optimistic or a pessimistic way. The optimistic way says in circumstances and in industries where those trade-offs suggest that maybe it's better to have a weaker intellectual property regime, lo and behold, the market works and people can negotiate their way to exactly that. You don't have to change the law, you don't have to have an industry-specific law or enforcement policy in the courts or anything. That's the optimistic view.

The pessimistic view is, look, our intellectual property policy is so messed up, so dysfunctional that people actually go to the trouble of negotiating around it because you lose your design freedom, you have all kinds of trouble if you allow the default court-enforced intellectual property policy to govern what actually happens in the industry. And I think there's a certain amount of truth to both the optimistic view and the pessimistic view. To me, that's a way to frame the issues that helps provoke concern and maybe thought.

MS. MATHIAS: I have a question. We've talked about how beneficial portfolio cross-licensing is, typically in the semiconductor industry, but there are a wide variety of industries where patents are employed outside as semiconductors. What are some of the factors that we might want to consider where the portfolio cross-licensing and other industries, where there may not be quite as much overlapping, that we should look to and think about in our analysis?

MR. ORDOVER: Just to pick on what Joe said and maybe as an answer to the question that you posed, it strikes me that it's important to figure out what the objective here is. I think it's obvious that if you want to stimulate current product competition then cross-licensing is an obviously very effective way to minimize some of the dangers for firms making sunk investments. In many industries, those are significant, and certainly for semiconductors, they're potentially huge.

I think that on the negative side there's the question of disincentives for future R&D. To me, the main question then really becomes as to the scope or the number of firms amongst which these cross-licenses have been exchanged. I mean, in Japan, which I studied long ago, it seemed that these cross-licenses for broad portfolio patents had a way of making it very hard for new firms to come in and overcome the patent thicket, a concept that Carl so beautifully described in his writings, because they had very little to negotiate.

The idea in Japan, at least when it still was a fearsome worldwide competitor as opposed to a pushover nowadays, it seems that the way it all worked was for the leading firms in the industry, whether they were semiconductor firms or automotive firms or whatnot, was to agglomerate huge portfolios which they were swapping with each other, but which they were unwilling to trade with the outside players.

So, from my perspective, the concern really would have to be whether or not these portfolios fence off would-be entrants while creating the design freedom and innovative capabilities for the existing firms. That is, what is the effect on those firms actually trying to come into the industry? Are they going to be disadvantaged? Will they have something to counter balance the absence of their own portfolios, such as some other benefits, assets, complimentary assets that they can bring to the table?

What is the universe of firms that are engaged in cross-licensing relative to the potentially, perhaps unknowable, but significant universe of firms that could be challenging the primacy of the incumbents? And in some cases, that is the right kind of a question to ask from my perspective. I don't know whether semiconductors is one of them, but in, for example, software design for various types of televisions, that has become a concern to the players in these cross-licensing activities, whether compulsory or forced, who are really the only group of firms capable of innovating, going forward, and therefore, they were in a club and there is nobody else that could join.

So, I would really look at the question of the outside universe as can they come in, can they compete, what do they have to offer, can we predict that, or is it just too uncertain to the point of being really unknowable, and therefore, should not be factored into the analysis of a particular set of arrangements?

MS. MATHIAS: Jeff?

MR. FROMM: I think we actually can predict it and I think we have experience with what actually happens and I think it's maybe useful to talk about people who are newcomers who don't have the portfolios. I think for two reasons, the actual effect today is what happens when a newcomer comes in -- well, first of all, let me say that I know of very few companies that wouldn't license their patents, at least amongst American companies. That's not to say that there aren't some patents or some key technologies, especially in the chemical industry where there's one patent on one drug. That's a different kind of a universe.

But, I think, in general, in many other industries, for example, in the computing business, in the IC business, the willingness to license anybody for the right price is pervasive, mainly because people can't afford to walk away from the cash.

So, I guess I think we've seen -- competition has gotten so strong that people have such a desire to get more cash to fund their next generation products with R&D that I think that we do know what will happen if Joe Doe, who has no patents, wants to come to Hewlett-Packard and license a patent. H-P will license it to them. They may not like the rate because they want something for nothing, and that's always an interesting discussion. But, very rarely would it be cases, such as the ones you discussed in Japan, where a group of large corporations would just refuse to license newcomers. That's been my experience.

Now, as far as the disincentive, I think that actually turns out to be -- patent broad cross-licensing tends to be an incentive because what it does -- to future R&D because it's the small companies that have to be -- I think big companies, let's assume they're spending 7 to 10 percent of their gross for R&D. What they have to protect themselves against is somebody coming along and not spending anything towards R&D. So, they want to be sure that the small company that is just starting in the industry is spending its 7 to 10 percent and getting its few patents. So, although you're a company like H-P, you may have 20,000 patents. A small company with only one or two patents is just as dangerous just because of the way the patent system functions.

So, I think the way this actually works is because of the potential for the cashflows to work back and forth that encourages small companies to get their own patents and do their own R&D investment. That's been my experience. Usually there's one hit on a small company. They take one hit for $10 million and then they very quickly start finding their own patents on their own R&D. So, they only have to pay it once.

MS. MATHIAS: I have a quick follow-up question for Jeff and then we'll go to Joe. Do you ever see or had you ever seen exclusive cross-portfolio licensing going on? Was that --

MR. FROMM: I've never seen that. I've never seen any broad exclusive patent licensing. I just don't know of any companies that do that. Certainly, not in the IC businesses, not in the computing businesses. There's always -- there might be one or two patents even out of 10 or 20,000 that are exclusively licensed but I don't know of any broad exclusive licensing.

MS. MATHIAS: Joe?

MR. FARRELL: Well, coming back from Janusz's point, I mean, I think I agree with Janusz that one might worry about an insider's club of cross-licensing that is not open to new members. But I think it's worth pausing a moment to ask ourselves why we would worry about that. After all, the traditional IP analysis, I think, would say I have a patent that is, by assumption, broad enough to keep others out of the industry. I choose to license it to some but not all competitors. Presumably, that's not more restrictive than choosing to keep it completely to myself. And so, why would we worry?

I think the answer to the question actually goes quite deeply to the foundations of this whole set of issues, and that is, it seems to me we worry not because this is a bad thing conditional on having a totally legitimate, in all senses, broad patent. I think we worry because it's a compromising of what we see as a desirable and necessary safety valve against over-issuing of patents. In other words, if you really thought that the insiders had done things that warranted giving them temporary monopoly on that IP -- I use the word "monopoly" not in the antitrust sense here -- then you wouldn't worry about that kind of thing.

The only reason you worry about it -- and I believe we'll come to this later -- that it's the same reason that perhaps we should worry about non-vertically integrated IP holders, is that those practices or those structures weaken -- I'm not sure this is the right metaphor -- weaken the safety valve. And so, I think you can't properly understand these concerns if you're thinking about the intellectual property as being, in all senses, valid and deserved. I think you have to incorporate in your thinking at least the possibility that this is bad IP before you can understand why or before you might start to think that there's a problem with some of these things.

MS. MATHIAS: Carl?

MR. SHAPIRO: I also wanted to pick up on the issue of whether broad portfolio cross-licenses among large incumbent firms would somehow keep out little firms or entrants who are very small. It seems to me one way they might, I suppose, is because the two companies or multiple companies who are engaging in these cross-licenses have the design freedom and the freedom from paying royalties and therefore, can make better, cheaper products. We wouldn't usually call that a barrier to entry, okay? So, that doesn't seem like anything to worry about much less attack. So, that doesn't trouble me.

I agree with what Joe said. I suppose one other way to think about it is there are advantages of being a large firm. So, think about sort of economies of scale or diseconomies of scale in terms of doing R&D and patenting and so forth. And, actually, I think this is picking up on some of what Jeff said.

Given we have this patent thicket, at least in some industries, and all these patents and one product can possibly infringe many, many patents, there's an argument, actually, that there are diseconomies of scale. That is, if I have 10 patents that I can assert against you, I'm in a stronger position than if I just had one, but not 10 times as strong, in some sense.

So, actually, companies that may be an outsider, who've got one patent and less exposure in terms of their revenues when they sit down to negotiate, may have a strategic advantage, not disadvantage. And I think we're going to talk about that when we talk about non-vertically integrated firms as well. I think there are reasons to be concerned, actually, particularly given that patents are opaque and they take a long time to issue and so forth. Again, it's not so much outsiders or small firms are at a disadvantage, but rather large firms could get held up.

MR. SCHEFFMAN: Well, what about -- I'm curious about small firms being held up. There's not much in the news these days -- in the '80s and '90s, we had a lot of stories of what I call the Silicon Valley hold-up, that is a large firm with a big portfolio goes arguably to a small firm and says, I want your technology and I've got a zillion patents here, I'm sure there's something you infringe. So, you might find it in your interest to essentially give me your technology.

Was that a problem? Is it a problem? Is it growing or shrinking or. . .

MR. FROMM: There are some problems like that every now and then, not so much in the patent business. We're talking general -- not just patents, but IP rights generally. I mean, the Microsoft license agreement provides mechanisms to get back patent licenses that probably they couldn't get but for the fact that they have a strong copyright and trade secret position –

So, the problem does exist that people do essentially say, well, I have my -- I haven't seen very much in the way of the problem that you talked about, which is about a 20-year-old problem. I don't know why it seems to have disappeared, but it does.

MS. MATHIAS: Janusz?

MR. ORDOVER: First of all, I don't want to be understood as saying that I think these issues are major problems -- I am all in favor of substantial cross-licensing activities. I think they are decidedly beneficial. I think that the question really, in terms of formulating public policy, is how these activities affect or impinge upon, if at all, the next wave of R&D. I mean, what has been done is done. It's good to be able to share it. We know that it's good to share existing IP in many ways.

The reason I brought up these "small firms," which do not have to be small necessarily in terms of their market capitalization, but in terms of perhaps their portfolio of knowledge within a particular area where there are potential competitors, where the question really arises of whether or not these cross-licensing strategies have the effect of stimulating or retarding the next waves of R&D competition.

And I think to the extent that they have a stimulating effect, then they add more to the benefits than just simply making it more competitive in the current environment. Adapting a more static perspective fails to capture these benefits. And one would want to know a little bit more about how cross-licensing can retard the next waves of R&D competition. Then, of course, they raise these kinds of concerns of the folks here, that DOJ and FTC are well-equipped to think about.

So, my point really was that we need to worry mostly about the dynamic effects, as Joe pointed. How strongly do we feel about these portfolios of patents? Do we always come to believe that they are just totally valid, totally penetrable and therefore, creating the kind of exclusion or market power that IP bestows or is there certain concern that perhaps there is weakness in the margins of those patents or other types of IP?

So, I'm really focusing on the dynamic aspects in terms of thinking about these licenses. I think they are generally pro-competitive, but they cannot -- it's not like they all are per se pro-competitive. One can use that term.

MS. MATHIAS: Rick, we're going to go to you next, but I had a quick question I wanted to throw out as well as we haven't really focused on the consumers and whether or not these portfolio cross-licensings pass on a benefit to the consumers or not. So, I wanted to throw that out and see what. . .

MR. RULE: Before I deal with that, I guess --

MS. MATHIAS: And you don't have to deal with that if -- I know you had another comment.

MR. RULE: Sure. The one comment I wanted to make is -- and I want to raise some old economy issues, but I wanted to first address Dave's question about hold-up.

It strikes me that one of the reasons not to be terribly concerned is if the cross-license is simply a substitute for other consideration. I mean, if you have an asset that has a certain value and the counter-party to the transaction can either pay you cash or they can give you access to their technology, since our system works on the proposition that if you have an asset, you are entitled to basically reap its value in terms of the price you'd set. I don't think you would be terribly concerned -- at least this group -- should be terribly concerned about one company obtaining consideration in the form of a license. I don't think that, in and of itself, is a problem.

I do think, though -- I mean, you know, cross-licensing in the high tech industry is somewhat different. Back in the '80s, in particular, and I guess in the early '90s when you didn't have the sort of patent thicket issue, the notion that Janusz raised was a concern and people were often most focused on cross-licensing in the context of patent pools.

In the context of patent pools, and generally sort of the legal approach to those issues, the question, at least when some of us thought about it in the '80s, was not so much the sharing of the technology that occurred, but it was the restrictions that went along with it. And to some extent, that goes to Janusz's point of who else you let share, and there are certain doctrines under the antitrust laws that addressed that.

The other is to what extent -- how far does that sharing go and where does it cross the legitimate line? And there are obviously a lot of patent pools, at least in the case law, where the technology was not that significant but it was a mechanism for coordinating other activity. For example, by requiring payment of royalties that then would get redistributed and having an effect on price. And I think there are unique problems in the high tech industry because of the various points that Carl and others have made. But I do think that, you know, potentially the big issue is -- and this really goes to consumers in many ways -- are the restrictions that come along with the cross-licensing and the pooling and I see Mike nodding his head. Maybe that's something that appeals to us lawyers more than the economists.

But it is something that oftentimes, at least, as lawyers, when they look at these problems, are particularly concerned about as opposed to the question of whether to enter into that agreement, per se.

MR. SCHEFFMAN: Okay, we have a lot of things to cover, so I want to move to the next topic, which is grantbacks and non-assertion clauses. Now, this is an area -- as some of the others were -- I think it's actually particularly important for us to be sure that we understand what we mean by these, by grantbacks and non-assertion clauses and how they differ or are similar.

I wonder, Mike, could you start us off with that?

MR. McFALLS: Sure. I think the basic definition of a grantback is it's a licensing provision in which a licensee agrees to license back, in some form or other, some IP which may or may not be related to the initial IP licensed, for some period of time, in some or all parts of the world. And I think that there's a lot of variety here, and the variations that you see in the provisions play a significant role from an economic perspective and less so from a legal perspective in evaluating what the likely effect of a grantback could be or would be.

So, you could have royalty-free grantbacks or you could have royalty-bearing ones. As I said, you could have unlimited grantbacks with respect to geographic scope or you could have territorial and national restrictions. You could have unlimited fields of use in which to apply, if you're the licensor, whatever innovations come back to you, or you could be restricted to the scope of the IP that you're licensing.

Also, grantbacks may grant the initial licensor a right to actually sub-license the invention back and you'll often see that perhaps in patent pools where the initial licensor maybe has a dominant or pioneering set of patents and wants to coordinate licensing among a bunch of licensees for a variety of economic incentives that may or may not be pro-competitive, but probably often are pro-competitive.

And exclusive or non-exclusive, the grantback can say, you, as licensor, have the exclusive right to practice, make, use and sell the invention. Not even the initial licensee will practice it or it can be completely non-exclusive whereby the licensee can go out and license this invention, subsequently developed, to somebody else.

And one thing I forgot to mention at the outset, usually these apply to perspective inventions. If all we're talking about are existing patents that a licensee may have, then it's probably more accurate to characterize, although certainly not necessary from an analytical point of view, these as cross-licenses between a dominant patent holder and somebody who has some improvements on it that they've already patented.

So, I hope that's a useful landscape. The variations don't afford us much of a common vocabulary. But they are some of the distinctions worth talking about.

MS. BURTIS: And, Mike, do you equate an exclusive grantback with an assignable grantback? Are those two things the same?

MR. McFALLS: They can be. I mean, it can be exclusive between the licensor and the licensee if it's assignable or assigned. It's akin to an acquisition. So, you have one instead of two being able to practice the invention.

MR. SCHEFFMAN: Jeff, could you tell us briefly what your understanding from the use of these in business, the extent of usage, types of industries and types of agreements?

MR. FROMM: Yeah, I think that grantbacks -- and I'll lump them together with non-asserts because in a patent or a technology licensing perspective, in many cases, they're very similar. Amongst vertically integrated companies, it's very common to have grantbacks. And I've never found a difficulty with them except when the grantback is larger in scope than the forward-going license or longer in duration than the forward going license, that's when the problem starts to become difficult to handle either from a legal perspective, that is, from a negotiating perspective as attorneys or from a business perspective.

So, I think that they're pretty common. I think most license agreements have some mechanism -- most forward-going license agreements -- many of them anyway, certainly the majority that I've ever done or know about, have some form of grantback, at least to improvements. So, I think it's reasonably pervasive in the industry.

MS. LEVINE: Jeff or maybe Mike, can I ask you to help us to understand what a non-assertion clause is and then to explain for us how they are similar to grantbacks and how they're different?

MR. McFALLS: My understanding of non-assertion clauses, and I've seen them principally in the biotechnology field, is it's a way -- a convenient way for people to be able to effectively give comfort to somebody they would otherwise license. But they can't do so, otherwise they might come into conflict with other licensing relationships they might have.

So, instead of licensing somebody, you'll give them a non-assert if you, for instance, face exclusive restrictions in another licensing agreement and somebody has not drafted the exclusivity broadly enough to prevent you from giving a non-assert. Also, you can avoid MFN provisions this way that may appear in other licenses. They're actually very pro-competitive from that point of view, especially when, after negotiating your initial licensing relationships, you soon discover that other people have potentially catastrophic patent blocks on you in very high cost industries to enter.

So, people, quite often, will enter these as a way of giving comfort and consideration for getting something in return. Essentially you're saying, instead of giving somebody an affirmative grant, you give them perhaps a broader grant and say, within this field, just as within a license, I'm not going to see you on patents that I have today. And unlike grantbacks, it can be limited sort of as a technical term to patents that you have today or pending applications.

You may want to limit a non-assert -- and some people do where the scope and direction of innovation and value of future innovations are unclear. To protect themselves, they may just limit it to what they have today and protect their future efforts and investments and come back and negotiate it later. But a lot of people are uneasy with that because the other side, of course, if they're going to get in this field, may want some broader assurances than that, that they can remain in it and won't have to come back to the table and renegotiate.

MS. LEVINE: Can you give us an example or two of some of the specific occurrences of non-assertion clauses? You mentioned that they're used when there's another contract with an MFN clause or an exclusivity provision. Surely it shows up in other contexts than those.

MR. FROMM: I've only read about it, I haven't counseled in it. I've been on the other side of an industry in which it was alleged that there was at least a tacit agreement because of mutually assured destruction not to sue each other for patent infringement, which is a fairly broad non-assert. But my understanding is incomplete in that context because we subsequently learned that there are also a variety of collective rights organizations in those industries in which people exchange consideration in the form of money payments and actual cross-licensing agreements.

MR. FROMM: The distinction -- by the way, I've seen the attempt to call grantbacks non-assertions to get around MFN and I can show you a few court cases where the courts said "bullshit."

(Laughter.)

MR. FROMM: So, I'm not -- that's a legal theory. But most of the non-asserts that I've seen, as opposed to grantbacks, are when there's a difference in kind of the IP right being licensed. The grantbacks, typically if I'm licensing a patent out, I'll get a grantback of a patent license. If I'm licensing a copyright, I might get a grantback of a copyright right. Whereas, if I'm licensing out the copyright right, a grantback of a patent right seems kind of weird. I mean, it just doesn't match up. So, in that context, it's easier to draft the agreements and conceptualize them that the return IP is in the form of a non-assert.

So, if the license out is a copyright and the non-assert comes back as a non-assert of patents, that's the context that I think it almost has to exist in because of the difference in the nature of patents and copyrights or patents and trade secrets.

MS. LEVINE: That suggests for us -- and I want to ask you in a moment what your experience is with non-assertion clauses because I know you've had extensive experience with them, but does that question suggest that there really isn't an analytical difference between a grantback and a non-assertion clause?

MR. FROMM: I've certainly felt that way, and every time I've been -- certainly when you sit down and actually analyze the words, there's a difference, but I think the effects are the same. Outside of the context of exclusive licensing, I mean, certainly in the non-exclusive field, I can't see any difference in the effect.

MS. LEVINE: So, that's to say a non-exclusive grantback has the same economic effect as a non-exclusive assertion clause? Is that what you're saying?

MR. FROMM: Yes, yes, as far as I can tell. I mean, the economists can show us a difference, but I can't see any difference when I negotiate the agreements.

MS. LEVINE: Carl, just for the record, I saw your head shaking there. So, is that a head shake of agreement with this statement or disagreement?

MR. SHAPIRO: I guess there may be legal

differences of note, but there don't seem to be significant economic differences. Of course, I was really shaking my head because Joe Farrell was shaking his head. And Joe is always right.

(Laughter.)

MS. LEVINE: I missed that. Well, Joe, what was your view?

MR. FARRELL: Well, this whole discussion is striking me somewhat in the light of different verbiage for two things that differ from each other but are the same across these categories. One is we give each other, let's say, particularly royalty-free permission to use one another's IP, that already exists. And the other is we do the same thing for IP that doesn't yet exist, and those raise somewhat separate questions, I think.

The first kind is, hey, this is a cross-license relative to the traditional intellectual property benchmark if everybody keeps their inventions to themselves, and anything less restrictive than that is good. This is great, right?

It gets at what Sarah was saying about, we haven't talked enough about consumers. Consumers are implicit in that statement that this is great.

Then any questions along the lines that Janusz raised about, well, what if it's only to some insiders, well, the traditional analysis would say, hey, anything is better than nothing and the benchmark is nothing, so anything is better. And then I had my concern about, well, perhaps you really need to evaluate this in the context of, are you blocking a safety value that ideally shouldn't have to be there at all, but, in fact, does have to be there.

And then the forward-looking ones raise the issues that, again, Janusz pinpointed which is, what does this do to incentives for future innovation? Now, it seems to me if you have firms who jointly lack significant market power reaching agreements on a forward-looking basis, then I would put that in the box that I suggested, that I sketched out earlier, that they've decided that the default IP policy is dysfunctional and they're going to work around it, and you can take either an optimistic or a pessimistic view of that.

If, on the other hand, they do jointly have market power, then potentially you need to worry that they've decided that the incentives for innovation created by the default system may be good for consumers, but very bad for them, and so that's where you'd get into some hard core antitrust concerns, difficult ones, but hard core ones.

MS. LEVINE: Rick, thank you for your patience.

MR. RULE: I'm nothing if not patient. I guess I would draw a -- and again, I suppose I'm looking at it more from a lawyer's point of view and maybe an antitrust lawyer's point of view. The way I've always kind of understood grantbacks -- and I think this is something Joe was getting at -- is as something that develops in the future and comes back to the original grantor. A cross-license would be existing rights or rights that could also come into existence later on, basically being exchanged between parties.

I think non-asserts cover both. They can be both forward-looking and they can with respect to existing portfolios.

And so, to me, a non-assert is broader. I would agree that so far as I can tell, legally or economically, it's a little hard to see what the difference in effect of a non-assert or a non-exclusive grantback in a situation, if a non-assert applies to future created or future arising intellectual property.

There are reasons, though, that you might choose to go the non-assert route rather than a licensing route, whether it's a grantback or a cross-license, and that is, for example, if one company is entering into a license with another of what is potentially a valuable product, maybe a new product, and that company is going to enter into those agreements with a number of different companies, it may seek a non-assert with respect to the company that is licensing the product.

With respect to that company's existing patents and, perhaps, future patents that relate to the product, that is, the initial product that's being licensed, because the initial licensor is concerned that this new product could go out there, a licensee could take it, knowing at the time that it took it that maybe it had patents that essentially could block that product, it could be asserted against that product. But if there's not something like a non-assert, there's a risk that the licensee takes the product, the product develops significantly, there are a lot of sales, there are a lot of third parties who get involved, and then that licensee asserts a claim against the licensed product.

So, in a way, there is -- a non-assert can be a guarantee to the licensor of the first product that any intellectual property issue that exists at that time will be surfaced by the licensee, because presumably if the licensee is going to give a non-assert, they have an incentive -- they're giving up a right that they think is valuable to identify that to the licensor and say, hey, I need to be compensated in this agreement as a result of that. So, it facilitates some bargaining. It also, I think, lowers some of the transaction costs that otherwise exist.

It also, if you have a non-assert, although this, I think you can deal with in a grantback as well, and is dealt with in a grantback, is it encourages the licensor of the original product to essentially provide information and details that otherwise might be used by the licensee to develop a blocking patent position or something in the future, again, like a grantback situation. A non-assert protects the original licensor against that happening by giving the information. That, I would say, is pro-competitive because it, in fact, encourages that exchange of information.

And then, finally, it seems to me that if you're in the first licensor's position, you may be concerned about the third parties to whom you sell your product or license otherwise. And to some extent, if you generally engage in an effort to get non-asserts, you are protecting those other third parties because if you write the non-assert correctly, the non-assert can run not just to the licensor, but also those who license from the licensor, and you protect them against the hold-up problem of a patent issue that existed at the time of the original licensing, but that is sort of held back to sort of spring on an unsuspecting licensor, but also other groups of licensees and hold them up.

MS. LEVINE: You're talking about a contributory infringement problem?

MR. RULE: Right, or it could be direct infringement because let's say that the other licensees take my product and then use it in some way or resell it in some way, and arguably, if my product incorporated intellectual property that infringed the licensee's, then he could assert it against those sellers. There's also some more complex issues, as I understand it, but I don't claim to fully understand them, that sometimes are not -- you know, if I license you, my technology may not directly infringe yours. But when used together with something else, like another device, may actually create an infringement that then some third party may run afoul of and, again, a non-assert can kind of protect in those situations.

MS. MATHIAS: I'd like to throw a question out Janusz I noticed you had your tent turned up, so don't feel like you need to answer it, but I also wanted to keep the ball moving. Joe mentioned, I believe, that what we partly need to be looking at is the market power of the people entering the grantbacks and non-asserts and how they come into play. And my question is, at what point are we looking at their market power? Are we looking at it when they enter the agreement or are we looking at it later in the future when the agreement goes into effect and they start maybe getting market power that they didn't have originally when they were beginning the licensing?

Joe, your tent's up, so I'll actually --

MR. FARRELL: Good question. I think my first answer would be at the time that they enter into the agreement. I guess an exception would be if it's foreseeable that they're going to have more market power. But if it's just something that happens and it wasn't particularly foreseen, or it was foreseen only as a possibility but not as something predictable, then I'd say you probably shouldn't look at that, you should look at basically what they could see when they entered into the agreement.

Let me focus on this question of market power for a moment because it's -- I think it's quite a powerful technique. We've been talking, I think, about -- largely about horizontal competitors, cross-licensing so that they can produce and compete. And there, as I said, I think one screen would be, do the firms entering into this agreement jointly have market power?

As so often is the case, there’s almost a duality or a flipping when you move to vertically related entities. I think this may have been part of what Rick was getting at. I don’t know whether Rick had in mind the Intergraph case, but some of the things he was saying maybe go to that.

If you have a firm with very strong market power, who is applying a grantback or a non-assert or some other private IP policy to innovations complimentary with its very strong market position, then just as in the case where horizontal competitors lack joint market power, this firm plausibly, according to some version of the one monopoly rent theorem, or as I prefer to call it, the internalization of complimentary efficiencies, this firm, with the lock on the market, may well have the right incentives for efficient behavior in the compliment. And so, that would be a second case where thinking about incentives and the market structure would give you some reassurance about the likely purpose and likely effect of these agreements.

Now, you know, ice has its cracks and exceptions and I’ll be happy to send you a paper on that if you want, but I think it’s a useful starting point.

MS. MATHIAS: Janusz?

MR. ORDOVER: I just want to, for a moment, go back to these grantbacks and non-assertion provisions. Maybe it’s all legal mumbo-jumbo for me, but I always thought when I first learned about these grantbacks in school, that their purpose of it was to address the difficulties in writing complete contracts or the reasonably effective contracts related to the transfer of intellectual property.

So, I can give you a piece of IP and it could be valuable, it could be less valuable, who the hell knows what you’re going to do it with it, you’re gaining certain things -- information which is hard to pin down in terms of its complementarity with whatever assets you may have now or in the future. And therefore, in order to sort of facilitate licensing downstream, I think a grantback may be a useful way for the original licensor to get some value later on where the initial contract may be hard to write.

Now, whether that still remains one of the rationale for that kind of arrangement, I just don’t know. From the way the discussion went on, it seems that there is many, many other aspects to it.

Now, I think that the non-assertion claim seems to be driven by what, again, we all have identified as a potential concern, about running into an IP wall that you may not have predicted would exist instead of giving each other a certain degree of assurance that what has been rightfully transferred to you or what I have received from you will not then trigger, further down the road, some kind of potentially costly litigation, debilitating litigation.

I think that from the standard -- well, Carl said that maybe there's not that much of a difference. I try to put them in slightly distinct boxes, and that is, the grantback being a solution to potentially complex contractual licensing, whereas relying on these non-assertions may be sort of a risk-reducing kind of arrangement.

Now, I have a question to Joe, and that is, when you talk about market power as an analytical tool, where is that power to be assessed? I agree with you that it’s sort of a temporal issue, it’s current, something that matters. But is it your control over IP or is it your control over the products that already embody the IP? And I think one can reach different conclusions as to whether this private solution to the IP issue, the public IP issue is, in fact, pro-competitive or anticompetitive. So, I think that it may behoove us to talk a little bit as we proceed about where this market power ought to be measured. At the product level, the likely future control.

I mean, the IP licensing guidelines and the merger guidelines, all these talk about different markets. It will be interesting to figure out where exactly we should focus our attention when we talk about the market power filter.

MR. FARRELL: Yeah, I agree. That's a good question, and I haven't thought about it enough. But I would say to the extent that we're worried about the impact on future innovation, which I think is the core worry, as you identified, presumably the market is the innovation market, and I know some people don't like that phrase, but you can translate that, of course, into product market terms if you want.

MR. ORDOVER: I think future innovation market is a very good concept. I don't understand why people have taken such umbrage to it.

MS. LEVINE: Let me see if I can shift gears a little bit to talk about non-assertion clauses by themselves instead of contrasting them to other creatures. Talk about whether they can enhance competition or impede it and their effects on innovation as well. Jeff, maybe I can start with you -- not just because your tent is up already and you've been wanting to speak for a while, but also because I know you've got concerns about the scope of a non-assertion clause and what it can mean for competition and innovation, for that matter.

MR. FROMM: Right, and I totally agree with Joe that it can play in the market power concept. The only problem I have is market power is so very difficult to measure until the Supreme Court has spoken.

But I think you're right that non-assertion clauses or grantbacks, for that matter, can -- that are broader in scope or broader in duration than the forward-going license are a problem because it would tend, especially if the -- let's take the extreme where there's a non-assertion provision, which, in order to get a forward-going license to one patent I have to forgive, for all time, any -- you know, I have to give you back -- agree not to assert any of my patents against you or any of your customers or any of my competitors for all time.

I mean, we can write a non-assertion provision. There are some license agreements floating around in the industry that look exactly or very similar to what I just quoted. Now, that can't help but be a disincentive to the licensee, the grantor of the non-assert, to further innovate because essentially what it's done is it's eliminated the patent thicket, that's for sure.

And I guess that bothers me because it -- I guess what I would propose is that there should be some sort of heightened scrutiny toward such non-assertion clauses which are more extensive in either scope or duration than the forward-going license. That there might be an indication -- the fact that such a non-assert even exists, it's maybe an indication that there is market power by the original grantor. It's not proof of it, but people wouldn't generally agree to it unless there were something going on. So, I think there ought to be heightened scrutiny whenever there is a strong -- a significant difference in the grantback or the non-assertion provisions in the forward-going licenses.

MS. LEVINE: Okay. Rick?

MR. RULE: The point I would make is I think any of these provisions, whether they're grantbacks or non-assertions, really almost everything we're talking about or will be talking about, can be abused and they can be correctly used, and I would simply say that the antitrust laws generally have appropriate tools for analyzing those sorts of issues. I mean, I think it would be problematic if you saw a company insisting on a non-assert in exchange for a license that was a non-assert that was not only unlimited temporally, but unlimited in terms of geographic or product scope.

And I think it would -- that's not to say those deals don't get cut, but I think if an antitrust lawyer looked at it, an antitrust lawyer probably would be somewhat troubled by a provision like that. And it does seem to me that -- you know, to harken back to an old, but important, antitrust doctrine of ancillary restraints, I think if you apply the notion of reasonable scope and duration and reasonable necessity or connection to whatever is being licensed, that is a way, I think, to constrain the scope of non-asserts to their appropriate limits. But I agree, you can abuse anything and you can certainly abuse a non-assert if it's way too broad and it's unconnected to the underlying licensed technology.

MS. LEVINE: Michael?

MR. McFALLS: I was with the front end of what Rick was saying, which is I think antitrust has plenty of tools in the tool kit to deal with something like this. But I don't think ancillary restraint is really the answer because it's hard to see exactly what the restriction on competition is if you simply have a mutual non-assert or even a one-way non-assert. I mean, I would think the ancillary restraints is more appropriate for a restriction on price or territories that could arise between people who might compete in the absence of a cross-license or something like that.

But in terms of looking at, say, a completely over-broad, non-assert in a commercial sense, I mean, the way you'd analyze it is say, what are the effects likely to be on perspective innovation from the person giving up the non-assert, and why is it significant in a competitive sense that somebody else will be able to function without the fear of infringing in another product market?

I mean, intuitively, at a very broad level, it doesn't seem to have an exclusionary or collusive effect on its face, and I think the focus, again, has to return to what's the actual effect going to be on the grantor of a non-assert's incentive to innovate, and are they an important innovator in the product market in which that entry could occur, and are you going to lose product differentiation or value to consumers at the end of this long road. As a practical matter, that's what an antitrust case would look like in one of those provisions, just as it might with a grantback clause. Otherwise, we have the field of patent misuse to deal with things like this and infringement suits.

MS. LEVINE: Joe, do you agree?

MR. FARRELL: Only somewhat. I thought I was going to comment on Jeff's comment, but actually let me comment on Mike's comment instead because it's a little closer to what I wanted to say. And by the way, I hope when you write the report or transcript, it will be hypertext because there are lots of links going all over the place here.

(Laughter.)

MR. FARRELL: So, Mike, as I understood his comment, was suggesting you would look at the likely effects in the product market, you would look at the likely effects in the innovation market, and that might be a fine thing to do, but it strikes me it's probably going to be hard. And a complimentary technique which I think hews more closely to the economics and also to this private intellectual property policy box that I'm pushing around would be to ask the question, not what are the effects in the product market, what are the effects in the innovation market, how do we weigh them, which is going to be difficult, but to say, all these things are trade-offs. The off-the-shelf, default IP policy is a trade-off, and any private IP policy that you see people implement amongst themselves is a trade-off.

And then you'd ask the question, how credible is it -- and you might demand a fair degree of credibility or -- I don't know -- how credible is it that these parties have really seriously wrong incentives in making that trade-off. And you can, perhaps, get somewhere on that inquiry by thinking about the market structure issues and questions of market power and complementarities and so on without some of the detailed information that you might need in order to do the separate product market and innovation market inquiries.

I'm not suggesting you shouldn't do the latter, I think you should use all the tools available and all the information available, but I think it's useful to have the structural approach as well as the more detailed approach.

MS. LEVINE: Rick?

MR. RULE: The only point I would make is, again, not to offend the principles of antitrust law, but I agree with Joe. I mean, the problem -- if you're advising a client who is entering into a provision like this, they're not very happy if you tell them weight effects in different markets. At least mine aren't, I don't know.

So, one of the benefits of a doctrine like the ancillary restraints doctrine is it's at least a one-offer, a heuristic kind of approach that doesn't directly try to measure those things, but establishes certain rules that are administrable and are somewhat easy to understand and apply at the time you're doing an agreement and essentially decide some things, because I do think that it would ultimately be relevant in a balancing of the relevant effects and doing a structural analysis to analyze what the scope is, what the duration is. All of those things really do, if you think about it, play into it.

And one of the benefits of the way the doctrine has developed over time is it incorporates those notions and it provides a mechanism for folks at the time, in the field, to basically make some of those decisions. I don't disagree that ultimately looking at market structure and trying to analyze effects is ultimately the goal, but I do think that all antitrust rules and all antitrust policies have to be measured against how effective they are practically in accomplishing those results because of information problems that we confront, not only at the time we license things, but also, frankly, when you get to court.

MR. FROMM: I just want to say one other thing. I think there's a timing problem with antitrust rules, which is by the time -- I agree with Rick that if you saw a grantback of the type that I hypothesized in the extreme that antitrust counsel would advise you against putting that in there. But I would also point out that the licensor's antitrust counsel -- he could find antitrust counsel that would say, sure, that's fine. By the time the case, in the unlikely event that it ever got to court, by the time that happens, it's 10 years down the stream or it’s five years down the stream and a lot of water’s gone under the bridge.

So, I think as far as this session is concerned, I think it’s useful to contemplate what kind of rules we might promulgate or the government might promulgate or suggest as to how you would run your activity, and that’s the reason why I tend to not focus so much on definitions of market power, because, as you said, if you try to talk to your client about market power, they just roll their eyes and what the heck does that mean.

But I think if you focus on the -- and maybe it’s a patent misuse question of, is the grantback or is the non-assert provision significantly more extensive than the forward-going. That should be your threshold question. That’s my preference that the government would say that anything that goes beyond that -- and I don’t mean trivially beyond that but significantly beyond that, that ought to raise big red flags, because ultimately it’s saying that there really is market power.

Now, where that line is drawn, who knows? Like I say, the Supreme Court will tell us some day on any given set of facts, but I think from a competitive perspective, which we’re trying to encourage competition in the innovation markets, and I like Joe’s innovation market concept. I think that that's the market we should be focusing on and we want to provide guidelines for people who are trying to do the right thing, and people are trying to do the right thing all the time. It's sometimes people get overzealous. Often you get overzealous if you've got a monopoly position. Why not?

MR. ORDOVER: That's the only time it's fun.

MR. FROMM: Well, that's the only time you can really make a lot of money. You know, you've got to have an illegal drug or something that's a monopoly, you know.

MS. LEVINE: Any response to Jeff's plea for workable rules?

MR. ORDOVER: No, I think I agree because I would say that while these slogans, you know, ancillary restraint doctrine and all that, they all are very valuable, but I presume if two lawyers across this table were to apply the same doctrine to a particular set of facts, unless they colluded ex ante, would probably reach or could reach different answers as to whether or not this is really ancillary to a particular licensing setting or an attempt to reach a contractually satisfactorily resolution to whatever issue is present.

So, I think it would be very important if, at some point, one can actually come to some agreement as to what the shortcuts might be, not necessarily the sort --

the merger guidelines offer you a set of shortcuts. But what are the things that one should look at? And perhaps, is the grantback beyond the duration of the license? I mean, that seems to be an obvious thing to look at. Why would you want to go past that or why should you? I know why you'd want to, but why should you?

Question, is it a grantback relating to products that are only marginally related to the initial licensed out technology? You can ask that. You can ask whether or not it involves -- is the grantback exclusive or not, the usual stuff like that.

So, it would be nice to have a list of these kinds of things that both economists and lawyers can agree upon as being red flags or as being green lights. And I think that we are, really at this stage, still looking for answers. I read the other day the Areeda and Hovenkamp discussion of that issue which seems fairly straightforwardly uninteresting. But, you know, just simple in my way, given just our conversations. But they do offer something simple and maybe that's a plus. I think that we are looking for something richer than what they are suggesting. On the other hand, there's always a virtue in simplicity.

MS. LEVINE: Rick, do you have a response to those red flags?

MR. RULE: Yeah, a couple of points I would say. First, there has yet to be a perfect legal rule that is understood and beyond dispute when you get two lawyers together.

MR. ORDOVER: Or two economists.

MR. RULE: Otherwise, you'd put us out of business and we wouldn't want that. So, the fact that there are disputes and two lawyers can basically take the same rule and come to different conclusions and argue those conclusions, I don't think is necessarily a condemnation of a particular rule. I mean, you know, the merger guidelines are a perfect example of that, and I think any sort of expectation or hope on the part of the FTC or the Department of Justice that you're going to develop those rules this time around, I think you probably ought to set your objectives a little lower.

The second point I would make is that -- I mean, personally, I find approaches like -- and I use ancillary restraints because of reasonable necessity, but there are other ways that one can explicate that. I think at least the attempt that we made back in the '80s was in the now defunct International Guidelines of '89. But if you look at that you'll see a general sort of approach to evaluating restrictions in intellectual property licenses. But it’s more, in the antitrust vernacular, a rule of reason as opposed to per se.

And the concern I would have about what my good friend Janusz just said is that it reminds me of the Nine No-Nos from the early ‘70s. I think those of us old enough to remember those Nine No-Nos in those days recognize that they were far more problematic, generated far more uncertainty, generated far most cost, I think, to the system than did a kind of a rule of reason approach that we’ve evolved to in the interim.

I would also argue that -- and I’ll just make this point quickly -- I think it’s probably wrong to say, well, that’s not an antitrust problem, let’s just look at it under the misuse doctrine. I would refer anyone interested in the topic to a speech that I still think is probably the best ever given by the late Roger Andewelt when he was a deputy in the Antitrust Division, who basically pointed out that the misuse doctrine is essentially an antitrust doctrine, and it kind of got perverted along the way into a very bizarre doctrine. And Roger really was sort of one of the first to advocate bringing misuse back to its antitrust roots, and he actually was pretty successful in that because the Federal Circuit, in many ways, kind of followed him along and I think had a lot of respect for him when he was a judge on the lower court there.

So, I've, at least in my mind, since knowing Roger, never really distinguished between misuse and antitrust. I think they really are largely the same and you can't really say, well, we don't have to worry about it because misuse will deal with it because, I think, generally they are two peas in the same pod.

MR. SCHEFFMAN: We have to move on to the next session, but I would like to ask a cosmic question which is at least -- I mean, we did have some clarity with the Nine No-Nos, but as to what policy was, I think we all agree that was the wrong policy. Now, is the policy right now, that is, how often is it in your experience that businesses are not able to do things that you think are probably okay but they're not willing to take the risk? Or alternatively, how much is it free-for-all and they're doing lots of stuff that probably is not okay because who knows what the standard is and there's actually not a lot of enforcement activity?

MR. ORDOVER: How could we judge that? I mean, I think that this goes back to the discussion we had many, many years ago about the need for some joint venture guidelines because somehow the U.S. firms were panicked when locked into this complete inability to enter into efficient arrangements with their competitors or whatever the term is for people who are both competitors and collaborators -- because there was no clarity.

There's never been any proof that somehow the U.S. firms found the environment so confining as not to be able to exploit whatever was out there.

I think that, you know, the cosmic question is almost impossible to answer, but I would say that, first of all, I think nobody would advocate going back to -- I didn't advocate going back to the Nine No-Nos, at least I wouldn't, but I would like to look at maybe 15 yes-yeses and I think that there is a quite different intellectual approach. So, maybe that's a better way to think of it from my perspective anyway, or at least what can be a yes, what are the things that make a no into a yes or a yes into a no. One way, whichever way it is.

The issue really comes about from the fact that the intellectual property doctrine is evolving potentially separately, at least in the courts, from antitrust doctrine, and I think that the shifting winds between the primacy of a short-term competition-based view of what it is that public policy ought to promote versus the now perhaps ascendant view that we should favor investment in intellectual property and give extensive intellectual property rights. The lack of synchronicity is creating the kind of problems that we all are trying to grapple with.

So, I don’t believe that one can resolve these issues in any other way other than to try to figure out whether there is the scope or is the room for somehow rebalancing these two potentially separate flows of current intellectual analysis of the issues. I mean, it seemed clear that when nobody cared very much about intellectual property many, many years ago things were relatively simple. Antitrust was the obvious focus and things were bad because they seemed like restraints that one should not invoke. Once you begin to understand how important it is to create incentives for R&D, for exploitation of intellectual property, you begin to wonder, well, how far can it all go.

And I think we are, again, at this crossroads because of the patent thicket that Carl talked about, it built up and extends, very broad coverage of patents, and all of a sudden, it turns out to be that huge portions of potentially important space are being foreclosed legitimately by this kind of public policy towards intellectual property.

MR. SCHEFFMAN: I do want you to think about my cosmic question because it’s important, at the end I’m going to ask it again and see if everyone’s got an answer. You may have an answer now, but we have to go on to a different topic. But in the final wrap-up, I certainly intend to ask it again.

But our next topic in moving along, because we’re running behind schedule, is reach-through licensing agreements. This is something that I know that a number of people are concerned in, the NIH, in particular. So, I wonder if Barbara, if you could start us off talking about what you -- again, definitionally what you understand, in your view a reach-through licensing agreement to be and what you see as the issues.

MS. McGAREY: Sure. Actually, it’s a good segue because I wanted to, partly to comment on -- before we leave grantbacks because in our view, grantbacks can have a reach-through connotation. So, it’s a bit of a segue.

But in the biomedical field, we do see grantback requests quite a bit and it is a way of -- when you made the point, is it a way of valuing the technology? We very much see that. It is a way of valuing the technology where the owner of, in most cases, a research tool doesn’t exactly know how to value it or potentially wants to get it into the hands of many, many different researchers. So, instead of valuing it at a financial level we’ll say, well, I’ll take a grantback of an option to an exclusive license, and then they see their tool all over the country in labs, and when there's innovation, that's how they get their value.

So, to us, in our world, we would consider that a reach-through. So, to then start the new session, we would consider a reach-through to be any provision that really requires a continuing relationship with the provider of a material or the licensor. And I should say, we don't always see it in a licensing context. We deal with material transfer agreements and sometimes very informal letter agreements. It's not always a license situation. But very often the tool is patented.

So, we would consider a reach-through to be either a request for a portion of royalties if, in fact, we make an innovation with a tool and license it and get future royalties, even restrictions on what we can do with new intellectual property that may arise out of use of the tool. So, for example, unreasonable requests to review what we might publish or what results we might publish, requests to restrain perhaps negative results. We view all of those as reach-throughs. I can tell from the discussion this morning that's a different definition, perhaps, than in the antitrust world.

But our concern with these types of requests is in the biomedical research enterprise, when a provider of a tool who may have that tool patented requests a continuing relationship, it really serves to restrain future innovation. It can result in a pile-up of royalties so that it could actually prevent a product from coming to market, because usually in the biomedical research context, you're talking about research that's going on at the very beginning stages and a product is maybe 7, 10, 12 years down the road. And if you are combining multiple tools to get to future intellectual property, you've got stack-ups of royalties if the reach-through is actually a royalty.

But mostly in the context that we see it, our scientists are reluctant or we're reluctant to allow our scientists to agree to these provisions in order to use a tool, because in our view, it's really a patent owner is trying to get, by contract, what they could not get through their patent rights, because typically the patent on the tool is not -- the tool is not going to show up in the final product. The tool is not going to be a component of the final product. And so, it's a way for a patent owner to really extend rights that the patent system has not really given them.

And in our view, perhaps parochially, we feel that we provide the innovation. We're using a tool, but really the intellectual property comes from the scientific innovation. So, for us, it really acts as a restraint on innovation.

So, let's see, did I define what we think of as a reach-through?

MS. SCHEFFMAN: Thank you. Michelle, what do you see the economics here?

MS. BURTIS: Well, I was wondering actually first, does NIH have a problem with paying? I mean, the restrictions, I can understand why you would have a problem with that and how it might dampen further innovation. But do you, as an alternative, just pay some lump sum for the research tool?

MS. McGAREY: Well, we'd rather -- yes. I mean, I think that -- and I realize I'm probably not speaking for universities because I think in some context universities would rather agree to a grantback or a reach-through of some type, depending on what the tool is, rather than pay out of their research budget.

But from our point of view, a broad enabling tool should be available on the market as something you can buy versus something that requires you to get a research partner.

MS. BURTIS: Well, typically, people have liked reach-through agreements because then it's a way to efficiently price because –

MS. McGAREY: Right.

MS. BURTIS: -- if, you know, whatever is commercialized never has a market, then the person who has bought the tool ends up paying a very little amount for the tool. On the other hand, it's just sort of a way for everybody to share the risks. I think that's probably why they've become much more popular.

MS. McGAREY: Um-hum.

MR. FROMM: Can I just put on my patent hat for just a second about reach-throughs?

MS. McGAREY: Um-hum.

MR. FROMM: I think we have to understand that reach-throughs are clearly getting royalties on unpatented items, but if the person who wrote -- I mean, that's what we mean by reach-throughs.

MS. McGAREY: Right, okay.

MR. FROMM: Right. I mean, the ultimate tool is noninfringed by the resultant products that people are seeking royalties on.

MS. McGAREY: Right.

MR. FROMM: That's not to say that the patentee, the original patent applicant, could not have written his patent differently to have gotten claims if they were novel to the resultant products.

MS. McGAREY: Yes.

MR. FROMM: Now, the problem that you have is they're not novel.

MS. McGAREY: Right.

MR. FROMM: And that's the reason why he didn't do it.

MS. McGAREY: Right.

MR. FROMM: So, now, is he getting royalties on things that he didn't get a patent to, that patent claims don't read on or define a problem, but he couldn't have gotten those patent claims and I think there's something sort of weird to saying that by contract, not only -- as you point out, not only are we getting something that he couldn't have got, but the patent office has probably already ruled he's not entitled to.

MS. BURTIS: But would you agree he's entitled to a fee?

MR. FROMM: Of course. But it's the same problem --

MS. BURTIS: I mean, it's just a way to structure the fee.

MR. FROMM: Hey, I want a fee, too. But if I have a patent on a voltameter, should I be able to get a fee for every car that's tested with that voltameter? That's an absurd thing.

MS. BURTIS: Well, if your voltameter is a great product, then yes, you should get a big fee. But if it turns out your voltameter doesn’t work very well, then that fee will end up -- if it’s a reach-through royalty, will be very low.

MR. FROMM: So, you’re just arguing that I can structure any royalty agreement, for any tool, any way I want and it should be legal?

MS. BURTIS: Yeah. I mean, it doesn’t necessarily have to be intellectual property, I guess.

MR. FROMM: I just think that --

MS. BURTIS: It’s just a way to pay.

MR. FROMM: I’m not saying that there should be a per se illegality to it --

MS. BURTIS: That’s good.

MR. FROMM: -- any more than there should be a per se illegality to getting royalties past the expiration of a patent or a per se rule against grantbacks that are more extensive. I’m not arguing for Nine No-Nos or any per se rules here. I’m just saying that we ought to look at those kinds of things very carefully because once again, it’s a heightened scrutiny kind of a question, that if I’m going to get royalties on unpatented items, there is -- what I’m getting, I’m using the leverage of my patented tool to change the economics of the downstream markets, the things that I didn’t invent.

MS. BURTIS: There are agreements where people get royalties in terms of some payment on things that are not intellectual property, though.

MS. LEVINE: Barbara?

MS. McGAREY: Well, from our point of view, whether it's legal or not, it comes down to something that we're not willing to let our scientists agree to that and what happens in a practical sense is that tools are not available and science -- I mean, if you had a scientist here they would say, oh, it's completely stop-science. But by that they mean it's delayed a year or two in terms of getting the tools they need. They have to either make them themselves in their labs, you know, enter into a collaborative relationship to get one which they didn't necessarily want.

So, it fosters a big delay, and in biomedicine, that's just a huge deal because biomedicine is traveling very quickly. And so, it means that certain tools are, perhaps, completely unavailable or just worked around and the cost is time.

MR. SCHEFFMAN: Is NIH a little bit different? I'm, as many others here, a faculty member on a university with a very big medical center, Vanderbilt, and I think their position is changing because they see this as a profit center of intellectual property they will create and they like to get reach-through royalties because that's the way of maximizing the value of intellectual property.

MS. McGAREY: Well, in terms of them importing research tools into their science, they don't like them necessarily, although sometimes it's a way to get free tools, and if they don't see anything new coming out of the research, then they're willing to go ahead and give the option rights. In other words, you say, well, you know, probably nothing commercial is going to come of this research, which is famous last words for scientists, but then they're willing to give the reach-through.

In your situation, you're probably talking about technology that they're trying to license out.

MR. SCHEFFMAN: Things they create for the purpose of not just research, but trying to make money for the medical center.

MS. McGAREY: Well, yeah. I should have said in the beginning, I think in the context of reach-through, I think we're talking about broad enabling tools that are not destined to be products themselves one day because when you're licensing out a product, there's a whole different scheme, or licensing out even a tool that you're licensing to a company that's going to produce it as a product and sell it, then, again, you know, you have sort of a more standard licensing arrangement versus reach-through.

I don't think too many universities use reach-through for their tools. Well, for one thing, hopefully they don't if they're NIH-funded because our policies are against that. Maybe they do. But it's mostly something that companies do, small companies in particular, because, again, it's an issue of value or companies that are sort of in the middle in terms of they want the grantback rights so that they can license those out.

I mean, a good example is if a scientist is using a computer array technology to try to find disease genes and you find a disease gene. If that array technology has a reach-through or a grantback, the company may be a technology company. They're not going to commercially develop a disease gene, but they're going to turn around and sub-license it to a pharmaceutical company for lots of money. So, it's a way of getting value for your tool.

MS. LEVINE: Let me see if I can introduce a wrinkle into this and get your thoughts on it and on the comments you wanted to make originally, and then turn it to Frances who I know has an important antitrust-oriented question to this whole conversation.

I wanted to just introduce this wrinkle. Imagine that the licensor of the patented material, like the cell line or whatever, has an in-house researcher who also wants to use that patented material. The firm, that university is licensing, through a reach-through royalty agreement, the cell line to an outside researcher, but also has an inside in-house researcher who also wants to use the material. Does a situation like that, which I gather from Barbara, is that right, that actually does occur?

MS. McGAREY: Yes, very frequently because usually these are non-exclusive arrangements. Usually.

MS. LEVINE: So, if that is the case, then, does that introduce a horizontal aspect to the problem we’ve been discussing?

MR. SHAPIRO: Well, I’ll try to get to that. But first of all, you’ve raised the question of whether these reach-through agreements slow down science innovation. That seems to be very important, particularly in a rapidly moving field. I guess one view would be if the PTO is issuing a lot of patents that are too broad, they shouldn't be and that's gumming up a lot of stuff. I'll set that aside. It may be true.

But given the intellectual property rights that have been issued, it's not surprising people would like to get a return on the patents they've got and I would not particularly expect reach-through royalty licensing arrangements to slow things down unless you have a rule that prevents them. Then, if you won't let your scientists pay me for my IP, well, why should I give it to them for free? I'll exploit it myself.

So, the rules may be slowing things down, but not the reach-through licenses. Actually, they're prohibition.

More generally, I guess I'd like to get into the next -- and this is partly in response to some of the things you said, Jeff. What I think is correct and maybe an important economic point, there's concern, I've heard, maybe outrage, even, that somebody might seek royalties for products beyond the scope of the patent, just like they might seek royalties beyond the lifetime of the patent, which seems to me the law sort of takes a dim view of these sort of things. With economics, it's not nearly so unfavorable. In fact, there's basically some theorems that spreading out royalties over a larger brace and a lower rate could be better.

So, I have a question when I hear those sort of stories. Why did anybody agree to pay royalties on something that wasn't infringing? And I would think normally the answer is, well, they got a lower rate on the stuff that was infringing. Maybe you have another answer, okay?

MR. FROMM: That's not the normal case.

MR. SHAPIRO: But I don't claim to understand it. So, I just want to know why.

MR. FROMM: Sometimes licensors and licensees do agree to royalties that run past the lifetime of a patent for exactly economic reasons, that they need to reduce the royalty rate to compete with some other product to keep the cost of the end user product down and those kinds of things. That does happen. But just as often it happens because the licensor has market power, has real market power and they've got the ultimate tool that allows you to produce a product that -- in other words, it's not that the royalty rate is lower, it's the royalty rate is the same. It's just they get to extend it for 50 years instead of 20.

MR. SHAPIRO: Well --

MR. FROMM: I know from an economic perspective the question is what is the right royalty rate. But I'm saying that happens as well.

MS. BURTIS: It would probably be higher for the regular term, though, than it is for over the 50-year period.

MR. FROMM: No -- well, like I say, both of those events happen. Both of those events happen.

MR. SHAPIRO: I guess I would be skeptical of the notion that I could charge you a royalty rate, the same royalty rate, and then just get a broader scope with the same intellectual property. I mean, that doesn't sound like I would normally think of bargaining working out, whatever the degree of market power is.

And finally, since you raised this last question, it seems to me if you're vertically integrated and you're letting your own researchers or downstream folks use a tool with no charge, let's say, but you still want to charge other people, I mean, and that is a classic sort of vertical situation where you might be less inclined to license it outside to the extent you've got downstream interest, I'm not sure what we can do about that short of imposing some sort of duty to deal, which I would not get to very easily. I don't think you'd want to have a non-discrimination rule necessarily and if you give it free internally, you have to give it for free externally. But that might be worth looking at.

A starting way to view it is, that's nice. Efficiency is associated with vertical integration, but it might annoy the third parties who are feeling they're at a disadvantage.

MR. FARRELL: Well, I was going to say sort of what Carl said, but let me say it more pugnaciously. Coming back to the interchange a few minutes ago between Michelle and Jeff, so the question is why this horror at royalties being charged on things that are not in the patent, either because they are not products that infringe the patent or because they're something too far down the road.

Carl and Rich Gilbert published a paper about a decade ago where they show that the least distorting way to raise a certain amount of reward for innovation is to have an infinitely long-lived but relatively weak patent.

One can go beyond that and say that the least distorting way to raise a certain amount of money for an innovator is to have Ramsey taxes on all goods, whether or not related in the least to the innovation and whether produced using the innovation or not. Those Ramsey taxes will presumably be perpetual and very, very low.

So, what's wrong with this picture? Well, one thing that's wrong with this picture is, who sets these royalty rates? If you're allowed to set it on everything and you're allowed to include non-users of the technology, then you have an awful lot of power, so we have this ad hoc structure or maybe a natural structure where people can just say no and go away and not pay you anything.

So, then the question is, the bargaining is, the default outcome is, you don't get to use the intellectual property and then you're trying to negotiate something that's bilaterally efficient, in other words, least distorting from the point of view of the two parties jointly with that default outcome to govern basically the bargaining positions.

Now, I think it's pretty clear in these bilateral problems, as opposed to the full Ramsey, that there are externalities from these agreements. And therefore, it's not the case, as it would be with a fully Ramsey set-up that efficiency is served by allowing full flexibility. But I also don't think it's at all clear, from an economic point of view, that you'd want to limit them the way that Jeff's intuition or that the law on patent extension limits them.

So, it seems to me a sensible starting point for policy is to not worry too much about the structure of on what goods these things are levied, to worry about there being a genuine option to walk away where that's an issue, and to worry about any effects on future innovation, and that brings us back to our discussion on grantbacks and the like.

So, that would be my perspective on this rate structure issue for royalties.

MS. LEVINE: Frances?

MS. MARSHALL: My question really goes to this issue of what's the anticompetitive element here that antitrust authorities should be concerned about. We have heard a lot in these hearings about the effects on innovation of these sort of reach-through royalty agreements, particularly when they are stacked, when there's more than one research tool that's being used. But if we assume that the research tool is validly patented and that the owner of that patent has the accompanying right to exclude, and can choose whom to license and to whom not to license, is there anything here that we should be concerned about from an antitrust perspective with respect to reach-through royalty arrangements?

MR. ORDOVER: It's hard to say what it would be. I know of a case in which there is actually a research tool -- I don't want to disclose what it is, but there is a way of involving some genetic testing in which -- it turns out it is very difficult to collect a royalty on the use because it's very widespread, it's hard to monitor who is doing how much of it. It's in the labs, it's in the universities, some people can do it in their home, actually on the stove, all kinds of stuff. I mean, it's true. They call it home brew.

So, you know, you have a problem for an intellectual property which is actually essential to a lot of stuff, and yet, monitoring its usage and therefore, collecting the value is almost impossible.

So, what do you do? Well, one thing you can do is perhaps try to collect the royalty on equipment that can perform the test. So, maybe measuring voltage is a brilliant idea, but how can you figure out who is measuring how much voltage and how often. But maybe you can try to say, hey, every time you buy a voltmeter, you're going to pay me 10 bucks. That seems like a fairly reasonable thing.

So, from my perspective, I would say that the issue is really, you know, how important is it for us to believe that the people who do contribute very important intellectual property to society should be entitled to some return, even though the only way to collect that return seems to be by putting a levy on the product that doesn't seem to fall within the scope of the particular patent, and these kinds of doctrines which say, well, you know, if the product can be used only for that purpose, maybe it's not so bad, but if it can be used for three other purposes, then it's horrible and you shouldn't be allowed to do that, makes absolutely no economic sense to me. I mean, as Joe talked about the Ramsey or some kind of an efficient tax.

So, really, again, we're going back to the question of whether or not these kinds of taxes that go beyond the actual license collection mechanisms, that go beyond the patent at issue, are really distortionary, and to my view, they are not distortionary if they don't, in any form or fashion, for example, prohibit entry into the exploitation of the underlying intellectual property with the tools or with the products on which the levy is being imposed. So, if anybody can get into the voltmeter business and just has to pay some kind of a royalty, what's the big deal?

If you say, okay, you pay me the royalty and I will not -- but I'm only going to allow you to be the licensed -- the one that's going to be in compliance with my intellectual property, I think that begins to create a problem. Whether you are using that intellectual property actually diminishes competition downstream as opposed to somewhere else.

MR. SCHEFFMAN: Thanks, Janusz. I want to give Barbara and Rick a chance to comment. We are really late, so we have to move to the next topic, but we want to hear your comments on this.

MS. McGAREY: I'll talk fast. Well, NIH is as outspoken as we can be. We certainly don't like reach-through, we don't agree to it, we don't like our grantees to agree to it, but I don't think I can say that it's anticompetitive or it's something that the Federal Trade Commission or the Department of Justice needs to look at because in my experience with this, I mean, this sort of concern started in the early '90s and I think it's something that the marketplace takes care of, perhaps, very painfully. I mean, we don't like it. Sure, we'd love somebody to solve this problem for us, but the market really does solve it, because what happens is if a recipient does not like the terms, they don't engage in the terms.

And, you know, from the standpoint of biomedical research, maybe it's a problem, but in terms of anticompetitiveness, I can't really say that it is because we've had many examples where we've simply said no or we continued to negotiate and we've negotiated the reach-through out or not, or our scientists have simply designed a better mouse and that -- I think really the market takes care of it because there are not too many -- I don't know, I can't think of an example where this problem, as painful as it was, that ultimately what I would call market forces didn't work this out.

MR. RULE: It strikes me that this is essentially a throwback issue. I mean, Brulotte v. Thys, which is the rule that prevents royalties beyond the life of the patent, is sort of a part of a general notion that was resonant in patent antitrust law in the '50s, '60s, and to some extent, '70s, that if there was something inappropriate about getting some benefit or value beyond the scope of the patent, whatever the heck that meant, and so, there were a bunch of anti-tying doctrines, Brulotte v. Thys was an example of that. But I would have thought that generally there has been an increasing recognition.

I would even argue in the case law that the benefit of mechanisms -- and it sounds like reach-through royalties are one of them for metering, which is another way that we antitrust lawyers think about it, of essentially capturing the value created by intellectual property is a good thing. It tends to disseminate technology broader oftentimes than a single price because certain people can't afford it because it's difficult to evaluate how much it's going to be worth over time, and generally, the treatment of the antitrust laws has been favorable to that. It doesn't seem to me that it's a criticism to say, well, gee, that may reflect monopoly power. That's true, but then again, that's what patent protection, intellectual property protection is all about.

Since it's an idea, it's information, it's zero marginal cost and it's got a positive marginal cost and therefore, a positive marginal value, you would expect somebody to be able to reap a reward and, again, I've never heard any argument as to how somebody can obtain a royalty that exceeds the value to the licensee of whatever it gets. I mean, that's the absolute constraint on what they're going to pay. And the antitrust issue, I think today, is one of excluding people from the market. I think for the reasons the economists have said, generally, these kind of devices typically, it seems to me, actually expand the scope and the dissemination of the technology rather than restrict it, and so, if anything, these are really largely a non-event from an antitrust standpoint. There may be other reasons for them, but I don't think antitrust really has a valid basis for attacking.

MR. SCHEFFMAN: Short comment, Joe?

MR. FARRELL: Yeah. I mean, I'm not sure that I would agree with the focus on: is the IP holder getting too much money? It seems to me a more important issue is, does the structure of these continuing payment streams, for example, discourage appropriate challenge and litigation of the patents by specifying that payments continue even if the patent were to be found invalid or the product non-infringing?

Incentives to challenge, we know, are problematic in any case because of the pass-through problem that I was talking about earlier. Similarly, with incentives to settle, we know how problematic that is. And it seems to me many more problems lurk in that sort of area than in the possibility that some IP holder is getting too much money.

MR. SCHEFFMAN: Thanks, Joe. Okay, the final topic is kind of an interesting topic because things have changed so much with respect to this, which has certainly parties that engage just in research and not in the sordid activity of producing goods used to be considered very good, as opposed to suspicious folks who produce goods in technology and then license it to other folks. But now they're increasingly concerned about the licensing practices of entities that only do research and create intellectual property and license that.

What are the issues there? Are there bona fide issues here? Joe?

MR. FARRELL: Yes. I like the way you set it up and I think maybe it's no coincidence that the view has changed, and what else has been changing at the same time is the extent to which intellectual property protection is readily given on innovations that, at least according to some smart and informed observers, maybe should never be given so much protection.

So, I propose that we should think about the non-vertically integrated IP holders issue in the following way. If the IP were fully legitimate in all possible senses, then the fact that you're not vertically integrated doesn't let you extract more than the value of your technology, so there's really no problem.

However, coming back to something that I think I was saying earlier in a slightly different context. If what's going on is you have a system where there's too many IP rights being granted and the market has developed a safety valve in the form of cross-licensing and similar things that rely on vertical integration and production, then having a non-vertically integrated IP holder represents a blockage at the safety valve. And if your world view is one in which the safety valve is not needed, in other words, you intellectually truly presume that the intellectual property is valid and infringed, then I don't think you can do a good job of understanding the concerns about non-vertically integrated IP holders.

It seems to me the right way to understand it, from all I've read and heard, is that cross-licensing and being able to threaten the other guy the way he's threatening you are a safety valve that helps the system deal with patents that should never have been issued, and then having non-vertically integrated IP holders blocks or gums up that safety valve.

MR. ORDOVER: I just want to ask a question of Joe. How does one know whether the IP should or should not have been issued? I mean, what's the standard -- I can understand a certain unease with extremely broad patents to things that we believe should be somewhat in the public domain, but --

MR. FARRELL: I don't propose to evaluate any particular piece of IP, if that's what you're asking. I'm saying, if we believe, as I think there's every reason to believe, that a lot of pieces of paper with the word "patent" on them come out that shouldn't come out. I don't have to identify which they are in order to say we probably need a safety valve to prevent that doing a lot of competitive harm.

MR. SHAPIRO: I guess I want to mostly second what Joe said. I mean, just from my experience with a number of industries and companies, there's real fear by particularly some of the large companies of the patent holder who kind of appears after significant sunk investments have been made, is totally an IP shop or somebody who purchased the patent from somebody else not in the industry, and there's virtually no way -- you can't fight back very easily, okay?

Now, again, as Joe said, if the patent is totally legitimate, you know, tough luck, you know, pay up, I guess. But if you think, maybe there's problems because it was submarine or it was delayed or there's hold-up or it was too broad, then you say this is kind of the horror story where somebody who can seek injunctive relief against a large revenue stream that may give returns way out of proportion to any real innovation.

You know, I've even seen a situation where a portfolio was split up and some patents split off to a third party who had no other commercial interests, so they could assert it most aggressively against other industry players. So, I think it's a real, real issue. Unless you are totally calm about what the PTO is doing, this is something to worry about.

MR. FROMM: I just wanted to say one thing. There's a -- Joe and Carl apparently believe that it's a PTO problem. That's not been my experience. I mean, there are patents that we all know that get issued and that's what the process is all about, but I think there's another aspect to it, which is when you're evaluating a patent that's been granted, there's this presumption of validity and I can read words and you can read words in the claims and we can then decide that we don't believe that we're talking about the same thing.

It's not the PTO that caused that, it's just the way the system functions. In other words, the patent claims, which are archaic at best, aren't as precise about what they cover as anybody would wish. That's just the way the system is, it's always been that way and it probably will be that way even if the PTO were to crank down the rules on what it allowed.

So, what that ends up meaning, as a potential licensee facing one of these problems, is that you can't agree what the words mean. So, you might very well agree that the patent is valid if it was granted, if it only covered what it was that it was examined on. But often, that's not what the patentee is arguing. He's arguing it's covering something that it was never examined on. Is that the Patent Office's problem? Well --

MR. ORDOVER: I think that there's been a big change in the ratio of these patent claims that are being upheld in the courts. It's not only a PTO problem, but I think that 30 years or 40 years ago, if you were to go to court and try to challenge somebody's infringement of your legitimate patent --

MR. FROMM: Prior to 1981.

MR. ORDOVER: '81, yes. Let's say the likelihood of winning would have been 25, 30, 35 percent, now it's close to 85 to 90 percent. I think that's a big deal. The PTO does presumably what they do, although not necessarily always that well. But it's the pendulum that I talked about a little earlier on which we are now in a regime in which intellectual property is sacrosanct to a large extent and that, of course, gives these kinds of strategic powers to firms whose IP may be very, very weak or not substantially valuable. But then it goes back to something that someone else said.

If this IP is so valueless, how come it can create all that mischief? So, you've got to have the reconcile on these things but maybe that’s for another day.

MR. SHAPIRO: Just to clarify. I think -- by the way, my colleague, Mark Lemley, looked at some of the data on this and I believe what he found was that after the CAFC was set up, then the patent holders were doing better in terms of these statistics for a while. But then, of course, people adjusted in terms of which cases got brought and returned to -- I don't know if it was 50/50 or whatever it was, but sort of with a different recognition of what the underlying property rights were. So, that's a little different than what you said.

MS. BURTIS: I guess that was my question, too, is I don't -- as much as you may not like it, why isn't this just a situation where the perspective licensee evaluates the strength of the patent and attacks it if they don't want what the licensor -- you know, the patent holder is asking for. I don't see why this is bad from a societal standpoint.

MR. FROMM: Well, it's because of the sunk investment problem that Carl mentioned.

MS. BURTIS: Well, that's due diligence.

MR. FARRELL: Only partly because of that.

MS. BURTIS: That gives that patent holder more power and everyone might not like it, but why is -- I still don't understand, why is that not a legitimate patent that can't be asserted?

MR. FROMM: Well, maybe the question is, why is that a problem? I think the simple answer is when you have -- we had a conference call earlier that talked about two different kinds of non-vertically integrated organizations, research corporations that actually do -- what I call Fab-less (phonetic) companies, Fab-less organizations, NIH, UC-Berkeley, Stanford. I mean, they're not vertically integrated but they really do research. And so, any dollars that they get on licensing presumably flow back into research.

So, in that sense, if they can extract high royalties from some third party that flows to researchers at NIH or wherever, that benefits society in about the same way as if it were kept by the ultimate licensee.

But the situation is different when you're talking about the non-vertically integrated organization which is not a research company, which is purely a licensing entity. What does it do with the cash? So, every dollar you take away from a research entity is -- well, we can quantify it. For every $250,000 you take away from a company like H-P, that's one engineer you fire. It's that simple. That's the economic realty today. Now, at NIH the numbers may be different, but the ultimate result is the same. So, the question is, is there a difference economically? Is there something wrong with extracting money from a research-doing organization and giving it to the guy so he can buy another BMW? Somehow that bothers me.

MS. LEVINE: Joe, do you have a response to the BMW point?

MR. FARRELL: Yeah. I don't favor kind of trying to track the money and assuming that mechanistically money flowing into certain hands gets spent on research at the margin, money flowing into other hands doesn't lead to research. I'm sure there's some truth to that, but there's also a lot of truth to the idea that people evaluate the profitability of research plans and will do them if they're profitable or if they're not profitable, so flow of funds may make less difference at the margin.

But I wanted to come back to what Barbara was asking which is, so if a patent holder of possibly a slightly weak patent gets more money, is that a big problem? And that's kind of what Jeff was responding to.

I have a different response, which is, yes, it is, and the system that we have is one where, as I understand it, you apply for a patent, you get a piece of paper that tells you -- patent -- out of the patent office, if you're at all lucky, and then that's not the end of the process. The process continues with your attempting to assert it and demand royalties or cease and desist from infringing my patent or whatever from others, and if they think your patent is weak, then they're supposed to be able to challenge it and if it is judged weak by the court, it's overturned.

The incentives to challenge, particularly in an environment where the IP holder is licensing a number of competing entities at comparable terms, the incentives to challenge, I think, are predictively too weak. If you have contracts or other practices and arrangements that further weaken those incentives, then what you get is a system where this ex post scrutiny of these so-called patents, which was too weak originally, is even weaker, and so you get more of these what I will tendentiously call monopoly mark-ups, and that's bad.

MS. MATHIAS: Mike?

MR. McFALLS: Yeah. I'm largely in agreement with where I think Barbara is, which is many of these are legally self-correcting problems to a large extent. If people are competently counseled and engaging the costs that they expect in patent litigation and the likelihood of being enjoined at the end of the day, but it should illuminate these practices, the practices of some companies that may come under scrutiny in some industries that relate to licensing because it may illuminate very compelling justifications, upper broad cross-licensing, portfolio cross-licensing in industries like microprocessors.

That said, if we step back for a second and look at some other industries, I don't think that there's much question that as a competitive matter, it may be very useful to have a university with the Cohen-Boyer patents, jointly owned and jointly licensed to numerous people, having different incentives than somebody who is vertically integrated and may not have the most incentives to license people who are going to compete with it in the downstream products.

Just as we assume that people don't like creating competition against themselves, and therefore, generally don't require unilateral licensing to occur -- compulsory licensing -- we also tend to think that people who are vertically integrated will have less of an incentive to license, unless, of course, they're faced with mutual assured destruction.

So, when we speak very broadly about non-vertically integrated patent holders, I think outside of some industries the record is more positive, even if there are Lemelsons out there.

MS. MATHIAS: Just as a follow-on question to the non-vertically integrated companies, under what circumstances -- I mean, we've talked about the pros and the cons of these, but under what circumstances would the agencies need to investigate or have any concern about this or is it just something that is beyond what we can do?

MR. McFALLS: If I could hop in right away on that. The second part of the questions that you included sort of had an underlying premise that there are firms out there that buy up a series of patents which may be complements in a broad sense, but which may confer some greater element of market power than any patent individually would or the patents disbursed among several different firms. I think there you have literally a statutory hook for looking at that practice beyond just what would otherwise be a Noerr-protected right to enforce your patents, which is what precedes patent enforcement, which is Section 7, Acquisition of Patents and Exclusive Licenses.

And if it is the case that in the absence of the acquisition, the previous owners of the patents would have licensed them more broadly or at lower rates, which may be very difficult to investigate or prove, but may be worth looking at, and then what you have after the acquisition is higher licensing fees, for instance. That like say the Ciba-Sandoz consent may be worth your time and consideration.

MR. SCHEFFMAN: Well, I'll go back to what I said to begin with. It is funny that -- a lot of what I heard about the concern about the IP houses used to be exactly the concern about big companies with big portfolios getting spurious patents and exerting them against their competitors or excluding. There was a whole Congressional hearing about that, about alleging that that's what Japanese companies do. But it's interesting that the focus has changed. Maybe there's not a problem on the former sort anymore.

Anyway, we're at the wrap-up. I'll ask the cosmic question -- let me say, again, where I think we are. We have had enforcement in the areas over the last 10 years in the areas involving standards and intellectual property and Hatch-Waxman. Those are sort of garden variety antitrust, don't raise overly complex IP issues.

At the same time, the Nine No-Nos have gone away in that enforcement program and the law has been much more relaxed with respect to what it allows in licensing practices. Have we got the balance right? If you were an enforcer, should we be devoting a lot more attention to looking at licensing practices beyond those involving standards and sorts of things, these general issues, cross-licensing, grantbacks, those sort of things, or will private enforcement take care of it or is the market working it out?

MR. SHAPIRO: Maybe I'll start since I'm going to have to rush out, actually. I think your cosmic question, it's really too much to ask. I think we can really see where we are on the overall balancing of too lax versus too tight.

I think it's also a false goal to try to have a precise list of Nine No-Nos -- or how many yes-yeses did you want, Janusz? Twenty-three?

MR. ORDOVER: An unbounded number.

MR. SHAPIRO: Look, obviously, when the IP guidelines sought to address these things in a guideline fashion rather than an enumeration of this is okay or that's not okay. I would hope the hearings overall would give an opportunity to at least say something about issues that weren't fully addressed in the guidelines. I don't think that they need to be wholesale rewritten but, you know, there's more issues, things that have come up.

I mean, I guess I feel the balance is reasonable. It's hard to tell from the DOJ and FTC cases because there's not that many cases, you know, that are publicly sort of we know exactly what's going on. I mean, I could go back and criticize the FTC Intel case again, but I've already had a sub-career doing that.

One thing you might do, for example, is to weigh in more on private cases. In a way, sort of competition advocacy to say, you know, maybe not necessarily which side is right or wrong, but kind of how the agencies would address these sort of issues. So, you can sort of be active in that way so we can get a sense of the balance. I don't feel anything is out of whack, but it's a little hard to tell because it really is fact-based and we need specific cases. We don't have that many.

MR. SCHEFFMAN: Rick?

MR. RULE: I guess I would say that the balance seems -- I think it's impossible to say that there's a perfect balance and that we've got it right now as opposed to five years or ten years ago. I'd like to think that maybe, you know, about 14 years ago we had it right.

(Laughter.)

MR. RULE: And it's changed a little since then. But I think it's hard to say. I think we are probably closer to the right place than we were at the time of the Nine No-Nos. I think the approach is a little more sensible and sensitive and economically-based.

I think, also, if you look at what has happened over the last 10 years, I think the courts have done an all right job in terms of weeding out good claims versus bad claims. I think there was a time when the pendulum could have swung back in a way that was potentially problematic, but I think the courts have done a pretty good job of preventing that.

So, what's hard, though, to say is, are there a lot of licensing practices out there that ought to be challenged but that aren't? You know, it's difficult for a practitioner to say that because normally if you're advising your client to do something, you don't think it's a problem and you think it's a travesty of justice if anybody actually does challenge it. So, you know, the fact that my clients aren't being challenged right and left, I think, means that you're getting it right.

So, I think that it has moved back. I think, as much as I hate to admit it, part of it has to do with the fact that people like Janusz and Carl and Joe and you, Dave, are more involved in the process than economists were 30 years ago, and I think that's made a difference. And generally, I think it's made a difference because folks have moved to a rule of reason. So, there are always opportunities to fine tune at the margin, but I think they are marginal issues as opposed to really significant ones as have existed at various times in the life of the antitrust laws.

MR. SCHEFFMAN: Janusz?

MR. ORDOVER: A quick comment. Of course, I agree that it's impossible to find the right balance of those. Obviously, Rick was close. But I think that really the issue goes to the point that Joe made, and that is whether or not there is private under-enforcement.

If there is a substantial degree of private under-enforcement, and indeed, most of these cases do impinge on business activities of individual firms or groups of firms, whether it's a standard setting circumstance or infringement or whatnot, if there is this huge problem of under-enforcement, which there may or may not be, I just don't know. Then, obviously there ought to be more involvement from the FTC and the DOJ because, after all, they are the ones who try to internalize that externality and deal with it both from the standpoint of forcing an individual case, but also signaling to the outside world, which I think is extremely valuable, where it is that the regulators believe the balance ought to be struck.

I do think that given the amount of time that has been devoted by the FTC and DOJ to these hearings, the second release of the IP licensing guidelines would be a welcomed output at the end of the day. I think there is a lot of learning that has come since that time and there are many hard questions that were posed vis-a-vis the guidelines, and I think that perhaps that may be a useful way to implement the knowledge that has been gained by these very fine hearings.

MS. LEVINE: Any other final comments?

MR. FROMM: I totally agree with Rick that -- you know, it's difficult to know if you have found the right balance. But I think the agencies do the industries a lot of good when -- for example, we have the

Dell consent decree, that is a tremendously positive thing in the industry. It short circuits a lot of discussion. It assists in speeding innovation because it gives you a guideline about where the limits are.

Attorneys are good at trying to push the limits for their clients, that's what we do for a living, and it's nice to be able to say, well, at least we have this guidepost, you know, one concerning Dell. We don't have very many of them.

And so, to the extent that the agencies find the right vehicle, either through consent decrees, through becoming amicus or whatever they may do, I think it is a tremendous benefit for the industry as a whole and aids competition, even if it only short circuits the discussion and shortens the period of time while people are arguing what the licenses are, so they can get on with the kinds of things that Barbara was talking about, getting the tools in use, getting the technology in valuable hands. That is a tremendous thing.

And I'm certainly not arguing for the Nine No-Nos, so we do have to be very careful. But I think we may have -- the government has a role here which is to speak on what makes sense most of the time, and -- I mean, that's the way I read the Dell consent decree, which is, well, you know, if you do these things, you've stepped over the line. Maybe it's hard to find the right case, but I think it's valuable for you to keep looking.

MR. McFALLS: Just if I could add one thing. I think the guidelines are fine as is. The cases have been appropriate, and from what I've seen, the investigations have been of significant issues that are raised by ambiguities in the guidelines that redrafting will not fix. What will fix the ambiguities that exist in the guidelines, especially in cross-licensing restrictions and settlements, are having adjudications in front of the Commission and also in the appellate courts, and I think that's the way that this field was reconceptualized in the late '70s and early '80s, and that's what's going to happen now.

MS. LEVINE: Well, thank you for all your comments today, from all of you panelists. You know that you have been our grand finale. This is the final day of public hearings in the nine-month process of our intellectual property interest hearings and I'm pleased that we ended with a bang. Thank you very much for your comments, not just today, but for our returning panelists, for your comments on previous days. We've collected a wealth of information through these intellectual property interest hearings and now it's time for us to do our job in synthesizing the information.

But we couldn't have done it without you and we're very grateful to you for it. Thank you very much.

MR. SCHEFFMAN: Just a second. Let me add one more thing because she's here. Certainly, the most important person in this whole enterprise of nine months is here -- back there, I think -- Susan DeSanti, and I want to thank her, again, for a splendid effort.

MS. MARSHALL: I'd like to add that the record for the hearing is going to be open until November 15th, next Friday, so that if you have anything you'd like to add on paper, please send it in.

(Whereupon, at 4:20 p.m., the hearing was concluded.)

C E R T I F I C A T I O N O F R E P O R T E R

MATTER NUMBER: P022101

CASE TITLE: INTELLECTUAL PROPERTY WORKSHOP

DATE: NOVEMBER 6, 2002

I HEREBY CERTIFY that the transcript contained herein is a full and accurate transcript of the notes taken by me at the hearing on the above cause before the FEDERAL TRADE COMMISSION to the best of my knowledge and belief.

DATED: NOVEMBER 14, 2002

SONIA GONZALEZ

C E R T I F I C A T I O N O F P R O O F R E A D E R

I HEREBY CERTIFY that I proofread the transcript for accuracy in spelling, hyphenation, punctuation and format.

ELIZABETH M. FARRELL