DEPARTMENT OF JUSTICE ANTITRUST DIVISION

and FEDERAL TRADE COMMISSION

Hearings on:

COMPETITION AND INTELLECTUAL PROPERTY LAW AND POLICY IN THE KNOWLEDGE BASED ECONOMY

Standard Setting

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Great Hall of the U.S. Department of Justice

333 Pennsylvania Avenue, N.W.

Washington, D.C.

MORNING SESSION PARTICIPATING PANELISTS:

Morning Session: Disclosure of Intellectual Property in Standards Activities

Michael Antalics, Partner, O'Melvey & Myers, LLP
Carl Cargill, Director Corporate Standards, Sun Microsystems, Inc.
Donald R. Deutsch, Vice President, Standards Strategy and Architecture, Oracle Corp.
Ernest Gellhorn, Professor, George Mason University School of Law
Peter Grindley, Senior Managing Economist, LECG, Ltd., London
Mark Lemley, Professor of Law, Boalt Hall, University of California, Berkeley
Amy A. Marasco, Vice President and General Counsel, American National Standards Institute
Richard T. Rapp, President, National Economic Research Associates

MORNING SESSION PARTICIPATING PANELISTS

(Continued):

David Teece, Professor, Haas School of Business, University of California, Berkeley

Dennis A. Yao, Associate Professor of Business And Public Policy and Management, The Wharton School, University of Pennsylvania

MORNING SESSION MODERATORS:

Robert W. Bahr, U.S. Patent and Trademark Office

Gail Levine, Federal Trade Commission

Tor Winston, Department of Justice

AFTERNOON SESSION PARTICIPATING PANELISTS:

Afternoon Session: Licensing Terms in Standards Activities

Stanley M. Besen, Vice President, Charles River Associates
Daniel J. Gifford, Robins, Kaplan, Miller & Ciresi Professor of Law, University of Minnesota School of Law
Richard Holleman, Industry Standards Consultant
Allen M. Lo, Director of Intellectual Property, Juniper Networks, Inc.
Mark R. Patterson, Associate Professor of Law, Fordham University School of Law
Scott K. Peterson, Corporate Counsel, Hewlett-Packard Company
Dr. Lauren J. Stiroh, Vice President, National Economics Research Associates
Daniel Swanson, Partner, Gibson, Dunn & Crutcher, LLP

AFTERNOON SESSION PARTICIPATING PANELISTS
(Continued):

Andrew Updegrove, Partner, Lucash, Gesmer & Updegrove, LLP
Daniel Weitzner, Director of Technology and Society Activities, World Wide Web Consortium

AFTERNOON SESSION MODERATORS:

Robert W. Bahr, U.S. Patent and Trademark Office
Carolyn Galbreath, Department of Justice
Gail Levine, Federal Trade Commission
Tor Winston, Department of Justice

TABLE OF CONTENTS

MORNING SESSION

(9:00 a.m.)

GAIL LEVINE: Good morning. Good morning, and thank you all for coming today. I just want to introduce myself. I'm Gail Levine. I'm the deputy assistant general counsel for policy studies at the Federal Trade Commission.

Tor Winston sitting next to me today is an economist with the Department of Justice. And we also have Bob Bahr from the United States Patent and Trademark Office.

On behalf of all three of us we really want to thank you panelists for coming to join us today to talk about standard setting issues in the knowledge based economy. I want to introduce all of our panelists briefly this morning.

I'm going to do so very briefly because I want us to keep to schedule. But when it's time for us to open our panel discussion, I'm going to ask each of our panelists to say a just few words about themselves and their

standard setting backgrounds so that we have a context within which to place their comments.

This morning we have with us Professor Mark Lemley, who has moved. You moved on me.

MARK LEMLEY: I figured I'm not actually going to block the screen when I'm giving the presentation.

GAIL LEVINE: That's fine. Professor Mark Lemley is going to be giving our morning PowerPoint presentation to bring all of us up to speed on standard setting organization developments. He's a professor of law at Boalt Hall at the University of California, Berkeley.

We also have with us Mike Antalics, a partner at O'Melveny & Myers. Carl Cargill; he's the director of corporate standards at Sun Microsystems.

We have Donald Deutsch, vice president of standards, strategy, and architecture at Oracle Corporation; Professor Gellhorn at George Mason University School of Law, who apologizes; because of some important charitable

work he's doing, he has to leave us early today. But we're grateful for the time we have with him and we're going to make the best use of it we can.

We also have with us Peter Grindley, who is the senior managing economist at LECG Limited of London. We have also Amy Marasco, who is the vice president and general counsel of the American National Standards Institute, ANSI.

We have Richard Rapp, the president of the National Economic Research Associates; David Teece, an economist and a professor at the Haas School of Business at the University of California, Berkeley; and Dennis Yao, who is an associate professor of business and public policy and management at The Wharton School, University of Pennsylvania.

This morning's agenda is going to go like this. We're going to have Mark Lemley give us a presentation of something like 20, 25 minutes that will bring us up-to-date on the standard setting issues.

Then we're going to open up to a panel discussion. And we're going to cover three topics. The first and most -- and the topic we'll spend the most time on is the question of disclosure issues.

Around 11:00 we'll try and take a 15-minute break. Starting around 11:15 we'll come back to talk about challenges to the selection of a standard, challenges to exclusion from the standard setting organization, then break for lunch.

We'll come back in the afternoon, and we'll be talking about -- with a different panel about licensing issues in standards activities. With no further ado, I'd like to introduce Mark Lemley.

MARK LEMLEY: All right. Well, I'm just going to do legal background which I hope is familiar to much of you. And I'm also going to say a little bit about some studies that I have done of different standard setting organizations.

You can learn everything you need

to know about the antitrust rules related to standard setting organizations when you realize that we don't actually know what to call them.

Sometimes they are standard setting organizations. Sometimes they are standards development organizations. Sometimes they are collective technical organizations. Sometimes they are consortia.

And it's kind of ironic it seems to me that we can't standardize the definition or even the terminology for standard setting which suggests maybe we're in trouble elsewhere.

All right. So some brief background on antitrust issues that relate to standard setting organizations but aren't specifically intellectual property issues, and I will run through these with some haste.

If you asked an antitrust lawyer from 40, 50 years ago or certainly from 80 or 90 years ago, can I get together in a room with my competitors and exchange information about what products I'm going to make in the future, they'd

go apoplectic, right?

The fundamental basis of antitrust law is hostile to the idea of competitors getting together to share information. And a bunch of early trade association cases took that hostility quite seriously, suggesting that trade associations themselves might be illegal because they facilitate cartels.

Now, it's true that standard setting organizations can on occasion be a front for a cartel. They can facilitate collusion on price, collusion on innovation in technical areas. But in fact of course they serve all sorts of procompetitive purposes. On the vast majority of occasions they are not fronts for cartels.

Nonetheless, there are some modern cases, notably the Addamax case from the District of Massachusetts, that exhibit a hostility to standard setting organizations themselves so that the very idea of getting together can in some circumstances be problematic.

Even in that case ultimately the First

Circuit does not find an antitrust violation. And it seems to me quite properly that antitrust has largely moved beyond the idea that standard setting organizations themselves are problematic except in the most extreme of cases.

A second set of issues has to do with the standard that is set and its availability to competitors in the marketplace. Now, there are two separate issues here. Do I set a standard that I make available to everyone? And who can participate in my standard setting organization?

Exclusion of parties from the standard setting organization may constitute a group boycott. Under the precedent of Northwest Wholesale Stationers the Court is going to evaluate exclusion under the rule of reason.

It seems to me that except in circumstances in which the standard setting organization is going to confer market power it is unwise to penalize exclusion of particular competitors from a standard setting organization.

Even then closed standards might

sometimes serve a useful purpose. They may create effective competition against the dominant player.

If your goal is to attack a dominant player in the marketplace, you may do that most effectively by excluding that player from membership in the standard setting organization for fear that they will dominate or capture the organization.

Nonetheless, every time you create a standard setting organization that does exclude a subset of competitors in the marketplace, you raise your antitrust risks. And antitrust courts are properly concerned with the circumstances in which you're going to leave people out.

A third set of issues with respect to standard setting organizations has to do with liability of the organization for setting the wrong standard.

Now, this turns out to be by far the largest category of private antitrust cases involving standard setting organizations.

Company A says I went to the standard setting organization; they should have adopted my standard; my standard is better; they adopted company B's standard instead, and that has excluded me from the marketplace.

Now, antitrust law quite properly treats this with some disdain. This sort of argument virtually always represents sour grapes rather than a real threat to competition.

At a minimum it seems to me before an agency or somebody else ought to be concerned with the antitrust consequences of having selected a standard on the technical merits, you have to prove that the people who selected the standard were in fact your horizontal competitors.

Certainly if it's Underwriters Laboratories or somebody with no direct interest in competition in the area then there can be no competitive harm. You have to show market power in effect, right, that the adoption of the standard by the organization actually influenced

the marketplace.

I think you have to show intent, all right, that is that we chose this standard deliberately in order to influence the market in an anticompetitive direction rather than merely because we tried unsuccessfully to choose the right standard.

And finally it seems to me that on the merits you've got to show that objectively the wrong standard was selected.

The upshot of all of this is that this class of cases while it is the most often brought in court is also the least often successful, and it's something that the agencies I think needn't worry about except in extreme cases.

The one exception to that has to do with allegations that a standard setting organization has been captured, right, that it has in fact acted unfairly because of abuse of process within the system. Now, some of these capture cases can be quite extreme.

In the Allied Tube case, for example,

the allegation was that the defendant captured the National Fire Protection Association by recruiting several hundred new members, flying them to the organization's meeting, issuing them walkie-talkies so that it could tell them how to vote to vote down a particular proposal to allow polyvinyl conduit to hold electrical wiring.

And assuming those facts are true as the Supreme Court finds, that's a pretty good example of a standard setting organization that acts not on the merits -- is polyvinyl conduit actually safe -- but because it's been captured by somebody with an interest in banning polyvinyl conduit from the market.

Somewhat less extreme but still significant, standard setting organizations might in fact constitute sham groups. You can set up standard setting organizations which are nominally neutral but in fact are designed particularly to promote one standard at the expense of others.

And one good way to identify this is

you can look at the voting rules. Allegations that voting rules are biased in ways that favor particular companies are allegations that the antitrust agencies ought to take seriously, not because they are antitrust violations in and of themselves, but because they suggest that the organization may not be acting as a neutral participant and so may not be entitled to the kind of deference that I suggested that they ought to receive in the ordinary course of business.

It's worth noting by the way that if somebody captures your standard setting organization the Supreme Court case of Hydrolevel suggests that not just the capturing party but the organization itself will be liable for violating the antitrust laws.

So being hijacked, even though in some sense it makes the standard setting organization the victim, is not only no defense but may actually get you in trouble on antitrust grounds. All right.

So much for the series of issues which relate to intellectual property but aren't directly intellectual property issues. Let's get to the heart of the matter which is intellectual property rules set by standard setting organizations.

Virtually all organizations deal with this issue in one form or another. And the basic insight is that standard setting organizations need intellectual property not because intellectual property is a bad thing. Intellectual property is a good thing. But sometimes there's just too darn much of it.

Well, the 175,000 new patents issuing every year in the United States, to say nothing of copyrights and other intellectual property rights, in many industries, semiconductors, telecommunications, you end up with a situation in which those intellectual property rights overlap in a massive and potentially debilitating way.

If we don't have some mechanism for

clearing the intellectual property rights owned by dozens or hundreds of different parties, nobody's going to be able to make a product that works with a particular technical standard.

Furthermore, if what you want is to create an open standard, right, to adopt a standard that is free for everyone to use, then at least the ordinary logic of the marketplace suggests that you need some system, some mechanism for controlling intellectual property rights that govern that standard.

Parenthetical caveat here: Sometimes ownership of intellectual property can effectively keep a standard open. The Sun versus Microsoft case it seems to me is the best example of that.

Standardization preventing forking may sometimes best be accomplished by not giving up all intellectual property rights and letting people do whatever they want, but by allowing coordination through the use of intellectual property rights so long as the person who owns

the intellectual property rights then commits to make the standard open.

So Sun can say Java must have this character. All right. All Java programs must look the same only if it has intellectual property control over Java.

And if it nonetheless releases Java and says as long as you comply with our standards anybody is free to use it, then you have an open system that's not -- doesn't exist in spite of intellectual property but in some sense because of intellectual property.

Well, one of the things that it seems to me very important to realize is that standard setting organization rules governing intellectual property rights actually vary quite widely.

What I have done is surveyed 29 standard setting organization rules in the telecommunications and computer areas -- those industries were not chosen at random for reasons I'll talk about in a minute -- to see what kinds of policies there were.

The first thing to understand is that about a quarter of these organizations had no policy whatsoever. Seven out of the twenty-nine had no policy. One of the twenty-nine organizations was in the process of developing a policy at the time I studied it.

So 25 percent of organizations have no rules with respect to intellectual property. And no rules effectively means free ownership of intellectual property. Right? Anybody who owns an IP right can fully assert it, can assert it for injunctive relief or for licenses.

Of those that do have a policy, of the remaining three-quarters, sixteen out of the twenty-one organizations require disclosure; you must tell us if you have an intellectual property of which you are aware.

But interestingly only three of those sixteen organizations require any search of the company's own files to determine whether they have an intellectual property right so that the standard for disclosure in most cases is actually

a little bit different.

It's you must tell us of any intellectual property rights that you own that you are thinking of at the moment, that whoever comes to the standard setting organization and is familiar with this particular standard is aware of and knows might be relevant, right, rather than you must search your files and find all patents which you may later assert.

Seventeen out of twenty-one organizations that I studied require some form of licensing. Most commonly that is licensing on "reasonable and non-discriminatory terms." That's two-thirds of the organizations.

But several of the organizations, three of the twenty-one I studied, require that intellectual property owners fully give up their intellectual property rights in one case or at least require royalty free compulsory licensing, so that while you may retain your intellectual property rights for other purposes you have to license members of the standard on a royalty free

basis.

It's also worth noting that about half of the policies cover only patents. So there is a substantial variance in whether we are talking about a patent policy or whether we are talking about an intellectual property policy. All right?

Within these issues there's also substantial variance in how organizations decide these cases. So assuming that we have a disclosure obligation, what is it that I have to disclose?

One substantial issue that comes up quite regularly is whether I have to disclose pending patents because patents take on average about three years to get through the U.S. PTO, 2.77 to be exact.

The significance of disclosing pending patents is actually quite substantial because standards that are being adopted are often going to be covered not by old patents, but because they are new technical innovations are going to

be covered by applications that haven't yet matured into patents.

Nonetheless most of the organizations that require disclosure require disclosure only of issued patents, not of pending patents. Two of the sixteen organizations require disclosure of all patent applications.

One organization says we'll require disclosure of published but not issued patent applications, but not of unpublished applications.

And one organization interestingly says you have to disclose your pending applications, but only if you are the proponent of the standard that is to be adopted, so that we apply a differential rule depending on your position within the organization.

There is also variance in how reasonable and non-discriminatory royalty is determined. While most organizations call the reasonable and non-discriminatory royalty the touchstone for licensing, virtually none of

them then tell us what a reasonable and non-discriminatory royalty might turn out to be in any given case.

A few organizations rather than requiring reasonable and non-discriminatory licensing merely request reasonable and non-discriminatory licensing, presumably making it optional for the intellectual property owner to decide whether or not they want to commit to license.

That seems to me a rather useless approach because if it's optional, you know, you effectively don't have a policy. You either say you commit to license on these terms, or you say you don't commit to license and you can do whatever you like.

Saying please license but if you really don't want to you don't have to doesn't strike me as particularly useful. A few organizations do specify either the terms for licensing in a particular case or more commonly the procedures that will be used to determine

what a reasonable and non-discriminatory license looks like.

Included in these is a British institute which applies the very interesting provision in the British patent act that says if you have a standard setting organization with a licensing requirement you can go to the British Patent Office and the British Patent Office will determine what the reasonable royalty is for you.

Further evidence of diversity in approaches has to do with the question of who gets licensed. Virtually none of the policies that I studied specified who is licensed.

Two of the policies do in fact specify that everyone who wants to use the standard is licensed rather than merely other members of the standard setting organization.

I don't think it follows from that that the other 15 limit their licensing to other members. Rather it seems to me that they just haven't talked about it.

And you would think ordinarily that

with respect to a standard setting organization the rule would be that you licensed people who wanted to use the standard whether or not they were members of the organization of membership.

A few organizations try to discourage ownership of intellectual property without forbidding it outright either through the kind of policy statement that I mentioned earlier saying, well, please don't own intellectual property, or please license it on reasonable and non-discriminatory terms or through different policies.

So one group will rethink the selection of a standard if it turns out that that standard is governed by an intellectual property right. Now, that expressly does it. My sense is that a bunch of other groups might informally rethink selection of a standard if they find an IP right that they didn't know of.

But this group requires official reconsideration. Another group requires supermajority approval. It takes 50 percent of

the votes to approve a standard, and it takes 75 percent, a majority, to approve a standard covered by a patent.

I would be a lot happier if I thought that this diversity reflected healthy competition in the market in which standards organizations of some sorts put themselves in one category and standards organizations of other sorts put themselves in another category. But I can't find any indication that this diversity is in fact thought out.

First off it seems to me the rules are often set ad hoc, or they are set in response to a specific issue so that if you are a standard setting organization that doesn't have a policy and an IP issue comes up, you may then adopt a policy which reacts specifically to the intellectual property issue that came up in your case, rather than because you looked forward and saw what other issues might arise.

As far as I can tell, lawyers are not normally involved in drafting the policies.

And certainly lawyers from the various member companies are relatively rarely involved in reviewing those policies and deciding what statements will be signed.

Instead the task falls to engineers, who are notoriously indifferent to patent rights. And an engineer who wants his standard adopted by a standard setting organization is likely to sign away rights even if the company or the company's legal department might not particularly have wanted him to do so because the engineer thinks the standard is important and the patents are a nuisance.

Furthermore, because there is such diversity and because so many companies especially in the computer and the telecommunications areas participate in so many different organizations with a different set of rules, getting yourself informed about what it is that you actually commit yourself to by participating in a standard setting organization is not a trivial task.

You cannot know very effectively what price you're going to have to pay because the reasonable and non-discriminatory license standard is pretty vague. You could conceivably learn about all of the policies and how they interact with each other. But my sense is that not everybody does so.

I also can't find any indication that the rules vary in a systematic way by the type of group you are involved in so that large standard setting groups that apply across industries have one set of rules, small standard setting groups have another set of rules, and ad hoc consortia formed around a particular standard have a third set of rules.

In fact it seems to me that the rules are across the board without regard to the type of company. The result is what I call a kind of messy private ordering. It's commonplace that you shouldn't watch sausages and legislation being made.

But from the perspective of an

economist at least, it may also be the case that you shouldn't particularly watch standard setting organization intellectual property rules being made very closely either.

These rules while in one sense are the operation of the marketplace, they are subject to limitations. They are subject to information problems. They are subject to the vagaries of individuals and of individual differences.

All right. What does this mean for antitrust law? Well, I'm just going to introduce the issues we will talk about this morning and this afternoon.

The first issue has to do with antitrust liability for failing to comply with disclosure and licensing rules. A number of cases have set the parameters of this.

The In Re: Dell Computer case that the FTC brought in 1995 woke everyone up with respect to the possibility that you might in fact get yourself in antitrust trouble by deceiving a standard setting organization and engendered

great fights as to whether or not that was what Dell had done.

More recently the Rambus versus Infineon case, while ultimately decided on fraud rather than antitrust grounds, presented the issue rather starkly of alleged efforts by Rambus to capture a standard setting organization by going to the meeting and drafting patent applications specifically to cover the standard.

FTC investigations according to news reports are ongoing, and I will not say any more about that because there are people in the room who must know more about it than I. We'll talk about issues relating to when disclosure is problematic.

It seems to me market power and effect are relevant, that intent or at least knowledge that you are willfully failing to disclose is relevant. Although from what I can see from my practice experience, willful or at least reckless failure to disclose intellectual property rights is surprisingly common.

In a number of cases I've seen failures to disclose in which the person who is in the meeting who proposes the standard and who says, oh, no, we don't have any intellectual property rights in the standard is also the person in whose name the patent is issued, making it difficult to claim that I had no idea there was an intellectual property right when it was my invention.

The second issue in what we're going to talk about this afternoon has to do with the flip side, right, not liability of individual companies for failing to follow the rules, but the potential of liability of standard setting organizations themselves for setting the rules.

The government has on a couple of occasions gone after standards groups that required licensing of intellectual property on terms the government considered unfair. One of these was the European Telecommunications Standards Institute. The other was an FTC case back in 1985.

There is a set of rules dealing with buyers' cartels that can be applied in the licensing context to suggest that you cannot as a standards group collectively bargain with intellectual property owners.

So if you adopt a standard, an IP owner from outside the group comes and says I have a patent and I'm going to sue you all, collectively refusing to license except on terms we all agree to, it looks like a buyers' cartel or in this case more properly a licensee cartel.

Similarly while joint defense agreements are okay in such circumstances, companies must -- and standards organizations must be very careful about sharing settlement authority because that too moves across the line from information sharing and cost reduction into actually colluding to reduce the license price.

Well, in the last -- let me give you 30 seconds on implications for antitrust and what I think the policies ought to be here. It seems to me standard setting organization intellectual

property rules on balance are procompetitive. They're good things. They serve to clear patent thickets.

And I think it's significant that they exist primarily in industries in which it looks like patent hold-up is the biggest problem. You see a lot of standards development organizations in computers, in semiconductors, in telecommunications industry. You see relatively few organizations in pharmaceuticals, in biotechnology, and so forth.

And I think that's not accidental. Standards development organization intellectual property rules can get rid of hold-up problems by eliminating the possibility of injunctive relief that a number of different intellectual property owners could hold over the standard, threatening it.

Furthermore, reasonable and non-discriminatory licensing rules seem to be the best of all possible worlds because they clear the hold-up problem. It can't prevent the

standard being adopted, but they still permit patentees to earn value, to earn revenue for their patents.

So rather than saying intellectual property has no value and therefore perhaps discouraging innovation, we pay but we pay only a reasonable royalty. If I'm right about this, then it seems to me agencies need to focus on abuse of the standard setting process rather than on attacking the process itself.

The standard setting organizations ought generally to be immune from antitrust scrutiny except in extreme cases. And the agencies ought to focus their attention on conduct by companies that undermines this procompetitive value of the standard setting process.

Finally it also seems to me that the variance that I've talked about between policies matters. Some standard setting organization rules are better than others with respect to antitrust liability.

In particular if you have a standard setting organization rule that compels licensing of patents that a member owns whether or not they disclose them, then the risk of strategic non-disclosure in order to capture an organization is substantially reduced.

There is not much reason to strategically non-disclose if I am committing myself to license a patent whether or not I disclose it. Furthermore, if the agencies are to go after strategic non-disclosure, it is important to look at the context of the particular organization.

What did that organization require? Some don't require disclosure at all. Some don't require any search so that lack of knowledge is a very real requirement.

And in deciding whether or not conduct was problematic under the antitrust laws, that variance, those differences from organization to organization it seems to me have to be taken into account. It's 9:30 and I'll stop.

GAIL LEVINE: Beautifully done. Thank you very much, Professor Lemley. A bit of background on the task he's done for us this morning. We asked Professor Lemley to cover an impossibly broad array of legal issues in an impossibly short amount of time and you managed to do it magnificently.

MARK LEMLEY: You can tell me I talk fast.

GAIL LEVINE: It's a good thing you can. Thank you very much. And I want to delve into the issues raised but take care of a couple of housekeeping matters first. Yes, we will have air conditioning soon. It's on its way. DOJ is already working on it right now.

The penalty for getting air conditioning though for our panelists is going to be we have to talk louder because it's very noisy. So when it comes we will try to speak even that much more loudly.

A couple of security concerns for the morning: If you want to leave the room this

morning and use the telephones or facilities in the back, someone will be in the back of the room to escort you and help you find your way back into the room as well.

And a couple of housekeeping matters for our panelists today: Tor and I and Bob are going to be throwing out questions for particular members and for the whole panel.

If you are interested in answering a question, turn your name tent like this, and we'll do our best to find your name tent turned up and then call on you.

When you ready to speak, go ahead and speak into the mike. Don't be alarmed if the mike isn't working immediately. It takes the AV guys in the back just a second to slide up your mike and make sure it's working. So just forge ahead. And now back to the substance of our panel.

As Professor Lemley noted, standard setting organizations can be a tremendous engine of efficiencies and terribly procompetitive. But

in certain circumstances when members' patented technology is incorporated into the standard that the standard setting organization chooses, this has occasionally led to questions about disclosure obligations.

Is this an antitrust problem? And if it is, is there something we should be doing about it? That's our question for the first part of the morning. The answers to those questions depend in part on the costs and the benefits of standard setting rules. And I thought we would open with the questions about that. Tor?

TOR WINSTON: Yes. Just to sort of lay some ground work here so we know what we're talking about in the economic environment, we'd like to just spend a little bit of time talking about why standard setting organizations have the disclosure rules and what sort of costs and benefits derive from those.

And so I think several people might have some comments on that. I'd like to throw out a question to Mike Antalics. Just based on

your experience if you can, just tell us a little more about why you have found disclosure rules are important.

And then maybe we can throw that out more broadly and talk about just under what conditions is disclosure going to be important. We've seen that not all standard setting organizations actually have disclosure requirements.

MICHAEL ANTALICS: Sure. Well, I guess probably the fundamental reason that drives most disclosure rules is that people want to make informed decisions. If they know that there is intellectual property that's out there, they can make an informed decision in the standard setting process.

Is it worth it to incorporate this into the process? It's really designed to avoid the hold-up situation where they create a standard without knowing that there is intellectual property incorporated into it.

The standard becomes used by everybody

in the industry and valuable, just by virtue of the standardization process perhaps more valuable even though the patent at issue may not have that intrinsic value. The value is that it has been incorporated into something that has been adopted by an entire industry.

So the idea behind disclosure is that if the participants and the standard setting body know up front what intellectual property is out there they can decide is it worth it; can we go to, you know, the next best choice.

And perhaps it gives them a little bit of leverage in bargaining for a license fee if they know up front maybe this is the best choice, but we can go to a second best choice if you're not going to be reasonable in terms of licensing. That's the perception by organizations that have disclosure rules.

Probably the types of areas where it might be useful, you'll probably get as many answers there as you have standard setting organizations. But one that comes to mind for

me, I think of it in terms of, you know, when there are likely to be multiple equally valuable ways of doing something.

You know, you're trying to figure out the two prongs on the plug. How far should they be apart? Half an inch apart or should it be five-eighths of an inch?

And it probably doesn't much matter, and companies can do it either way. You might as well pick the way that has zero cost, that isn't protected by intellectual property.

So I think that's the rationale behind organizations that require disclosure. It certainly has costs associated with it that we can get to later that have to be balanced out if you're going to have the type of disclosure policy that some organizations have at the extreme where they require early disclosures.

DENNIS YAO: This is a question as opposed to I guess an informed comment. One thing that I wondered about is whether the standard setting organizations will sometimes do

their own search rather than rely on the individual firms.

The reason I ask that is if the standard setting organization doesn't encompass all of the relevant firms, then it would be in their interest to find out whether or not there was some intellectual property that could present them problems.

Furthermore, this gets around partially the issue of a firm deciding to not tell because it has some strategic reason not to tell. So the first question I guess is: Do they do their own?

And second, if they don't, actually how big is the difference or the advantage of having the firm with the intellectual property do the search versus someone else, some, let's say, more objective, independent group. Thanks.

TOR WINSTON: Does somebody want to respond directly to that?

MARK LEMLEY: Of the organizations I studied, only one actually did its own search.

The rule was that the company tried to do a search and submit a search itself and the organization would do its own search.

Obviously if you want to cover pending applications rather than merely issued patents it won't be terribly helpful to have an outside firm do the search. The inside firm will do the search. They are the ones who define their own applications. The other factor is an unfortunate strategic consequence of the patent rules.

And that is it's hard to do a search that is limited to members of the standard setting organization who may have already committed to license on reasonable and non-discriminatory terms.

So if you do a patent search and you find patents for outsiders, you put yourself on notice that those patents exist, and you will be liable for willful infringement if it turns out you adopt a standard that uses those patents.

And so a number of companies actually try very hard to avoid doing patent searches at

all because they don't want to learn anything that might alarm them.

RICHARD RAPP: I had a reaction first to the question that was put to Mike and then to a phrase that I thought useful in your answer.

In considering the question of where disclosure matters, my sort of off-the-cuff sense is that where compatibility requirements are highest the stakes are highest in terms of the value of standard setting and the activities of standard setting organizations.

But then there was that felicitous phrase multiple equally valuable ways of solving the problem, which is I think a happy thing to focus on because it points to the circumstance where -- to an individual intellectual property holder where standard setting makes the most difference to the value of that patent, let us say.

The observation that I'm making is this. If you are the owner of one of the rights to one of those many equally valuable ways, then

it is the standard setting process that will reduce the substitution, possibly eliminate the substitutes, and elevate your technology to the most valuable.

If you are the possessor of some kind of blockbuster technology that has few substitutes in the marketplace, then the role of de jure standard setting is somewhat less than in the former circumstance.

PETER GRINDLEY: I'd like to make just a general point. Maybe this is the time to make it right at the beginning. The whole question of IP is not just a private gain between participating firms.

We should keep in mind that the purpose of the standards organizations is to provide standards that are going to be eventually used in products that are going to be accepted in the market.

So behind all this you have to think -- just keep in mind as we are discussing the private rent allocations, et cetera, that the

standard has to be accepted by the market.

So keep in mind that issues such as uncertainty, price of the products that are going to be using the standards, the uncertainty surrounding whether the standard is going to be accepted, should be in the back of our minds to think whether disclosure affects issues such as the uncertainty in the consumer's mind about whether the standard is actually going to be accepted or going to be successful.

I have many other comments about ex ante, ex post value of IP. Maybe we'll get to that later on.

AMY MARASCO: Thank you. I would just like to comment that one thing that I think makes this discussion a little more difficult is that the U.S. system is so diverse and so distributed.

And I think that there's nobody that would say informed decisions are not a good thing or that the abuse of the standard setting process is something that should occur. I think everybody agrees that that needs to be avoided

at all costs.

However, there are so many factors that go into what is an appropriate policy for any particular standard setting activity, because it's this great diversity within the U.S. standardization system that I think it's a strength.

It encourages innovation, enhances competition. It's market driven. And I think it's proved successful not only in the U.S. market but when U.S. interests go and compete in the international market. It's important to remember that as well because the U.S. is very intellectual property rich.

And very often other regions of the world seek to impose patent policies that would say, well, you have to disclose or you're going to lose your rights to either seek any royalties other than very minimal royalties.

And that puts the U.S. then at a disadvantage. So I think we need to be careful what we come out with as general principles in

the U.S. because we wouldn't want to disadvantage U.S. interests when they participate in the more international standard setting activities.

Basically when it comes down to determining what is an appropriate policy for any particular standard setting activity, you really have to look at a whole complex list of factors.

You have to look at the objective of the standard setting activity. Who are the participants? What is the process of the standard setting activity? Is it the formal process? Is it a smaller, more special interest group? What are the resources and abilities of the standard setting body itself?

Many standards developers don't have the resources or abilities to conduct patent searches, nor would they want to because they feel their job is to help the experts, the technical experts sitting at the table come up with the best technical solution to any particular standards issue or project and that they don't want to get involved in the commercial

issues or determining patents because that is a very legalistic question.

And also patent searches are imperfect and that leads to again more issues that can come up as part of the process. So clearly the ANSI position is the system not one size fits all.

And we think that's great. And we obviously think the ANSI system is great. But we recognize that there is a need for diversity and that the ANSI system is not the only way.

For each standards activity they have to look at the sector, the technological issues at stake, the participants, the effect on consumers, the ability of the standard setting body, and come out with what is the right policy for that particular activity.

The other thing to remember -- and this has already come up. The policy doesn't affect the non-participants.

So sometimes if you have a policy that might mandate disclosure and then you say, well, then the technical committee can work around

that, well if they work around it they could bump into the IP of somebody who is not at the table.

So again it's really hard to come up with something that's going to solve every particular problem. And one thing we have probably noticed is we don't see that there are a lot of problems out there.

If you look at the number of times that people have shouted patent abuse and you look at the total of the thousands and thousands of standard setting projects that are underway at any given time, we would say that all of the legal remedies that are out there are used when somebody allegedly does abuse the standard setting process.

And competitors certainly are not hesitant or shy to take somebody to court if they feel that something is being abused. And certainly also the enforcement agencies are there. And I think people are very aware of that.

And certainly that goes into the

consideration of a company in terms of how is it going to orchestrate its participation. So basically I think it's just a very complex issue and that there is no one size fits all solution. Thank you.

GAIL LEVINE: On that note I think we're starting to hear quite properly about some of the important costs to participating in standard setting organizations in particular as those standard setting activities cross national borders.

We started out this conversation talking about benefits and now costs are coming into the picture. On that note, Carl, can I ask you -- your name tent is already up, so I figure you are fair game.

CARL CARGILL: On second thought --

GAIL LEVINE: Can you start? Can you tell us about some of those costs? We have heard a lot, for example, about disclosure rules that require searches as well. What would that mean as a practical matter?

CARL CARGILL: There are several things. It spins off on that. Taking from a previous speaker or previous question the idea of knowing up front, there is nothing in most of the rules -- and I'd ask Mark to correct me if I'm wrong -- it says where you have to disclose. It says you should disclose.

And in some of the organizations I'm familiar with it's like 30 days before last call or before the standard is published.

And that's an interesting point because if you spend a year and a half creating a standard and at the very last or after starting implementation someone asserts in the group under the rules which are right now accepted, I've just wasted a year and a half's worth of work or the committee has wasted a year and a half's worth of work.

The first thing is a degree of uncertainty because you don't know when you have to call. That is one of the big stumbling blocks we have right now. So that's one of the first

costs is a lack of knowledge of exactly when and how you game the system to make that happen.

GAIL LEVINE: Let me ask you about that. With the year and a half that's been wasted, is that a year and a half that won't be repeated?

CARL CARGILL: It's non-recoverable.

GAIL LEVINE: Certainly it's non-recoverable. But once you bump into a patent, will the group go back to the drawing board and take another year and a half?

CARL CARGILL: It will attempt to see if it can find a way -- if it is essential technology, it will see if it can work around that essential technology. In other words, how clever can the engineers in the group be to design around that.

And if it's absolutely blocking essential technology, you then have a choice. You either don't make the standard or you accede to the -- I don't want to say blackmail, but that's sort of what I would assume it sort of

tends to be in that environment.

On the search role, in a high-tech industry we're all high-tech companies. When we do a search on a name, for a product name, we spend bazillions of dollars -- or lots of money I suppose is probably a more coherent phrase -- to find a name that we can in fact use or protect or something like that.

We all have big databases. We are all reasonably sophisticated. In the past, maybe not so. But it is not that hard to envision within the next few years most large companies having their own database of patents.

I mean it would be logical if in fact we believe the statement made by lawyers -- and I understand this audience is prejudiced that way -- that IP is absolutely essential to the corporation.

Why aren't we filing it in a place people can access it? I send engineers out right now. And the engineers, yeah, they will give stuff away. But it's not deliberate. Most of

them have a good idea of what they can and can't get away with.

But it's when they can't find out what they are doing that becomes a problem because there is no crosstalk. We file patents at Sun. We file patents, and we do this extensively. But we're also building our own databases.

It's something that you would expect a big company or competent company to do. As you get intellectual property, if it's corporate value, how do you value if you don't know that you have it for only a small group of people? How does an accounting firm value it?

So you have to have the database to know where it is. That's the other thing. And there's also within the standardization process, one of the benefits, cost/benefit analysis is, if you in fact have your technology accepted as a standard you have tremendous competitive advantage rendered by that because you are the first mover, you are the most competent.

And from a royalty free point of view

because I tend to advocate royalty free, if you in fact have your technology accepted and you're the best implementer of it, and then the ability to charge other people to use the technology that's yours and the best implementer, it seems to be slightly unfair over the long term.

And it seems to be a double whammy especially if there's a small competitor. Because if you're a small competitor and you're doing a business plan, the only gap you have is what's reasonable and non-disciminatory.

Imagine walking into a manager and saying this plan's complete except for this little space here that says reasonable and non-discriminatory from our biggest major competitor, and I have no idea what that is because we haven't negotiated because it's still blind.

It's hard to do a business plan with that much missing. So those are some of the issues. I mean cost issues, yeah. It costs us a lot to track. It costs us a lot to play.

The benefits from standards we believe -- although I don't believe there's any honest to God proof of this. The benefits from standards outweigh the costs. It's a matter of faith. And so far I've told this to my management, and that's why we've had a good career. But we assume that's true.

There is no proof of that that I've found in the last 20 years of looking for both academic and practical research. We assume there's a validity there. So costs are extensive. The benefits as far as we know right now outweigh those costs.

GAIL LEVINE: Let me see if I can get the view from Oracle on those same questions, the costs and benefits not of just standard setting organizations, but of the disclosure rules.

DONALD DEUTSCH: I think Mr. Antalics pointed out at the beginning that we are dealing with a reduction of risk for the participants in the process. I think Carl Cargill just pointed out that on the other side for the contributor of

the IP that there is a fear of substantial cost of having to determine whether to disclose.

But there is also a very substantial potential benefit that we get together in standards organizations for the purpose of defining things that hopefully will be accepted in the marketplace.

Because if they aren't, we have wasted our time. So if someone's IP is anointed by the standards process, then that IP has been greatly increased in value.

Now, on the cost side from the point of view of the participant there is a risk because, gee, as Carl points out, I'm not very enthusiastic about sending my engineers to the table to assist a competitor to greatly increase the value of their intellectual property without knowing what it's going to cost me in the end.

I think the new thing I can add to this equation is that -- well, two new things I'd like to put on the table. First of all, the concept of disclosure is not binding. You

disclose or you don't disclose.

I think you have to look at a continuum of participants in the standards process. At one end of the continuum is the direct primary contributor of intellectual property to a process. Next to that is a secondary contributor.

But possibly it wasn't, you know, their spec that started -- that they bring something else to the table. Still next is someone who is at the table who is an active discussant who doesn't actually bring anything that they own to the table.

Still further along the continuum is the passive member of the organization. There's many standards organizations that have multiple standardization activities. My organization, for instance, is a member of W3C. But we are not on all of the working groups of W3C.

We participate in ANSI technical committees but not all the technical committees. So there are members who are not at the table for

the specific activity.

And then finally as has been correctly pointed out by Amy Marasco, there's nothing you can do about the third-party risk of the person who's not even a member of the organization. So you have these extremes: non-member on one extreme, direct contributor of intellectual property on the other.

It is our belief that by limiting the scope of the disclosure burden to the contributor end of the continuum you reduce the cost of disclosure.

And consequently and I guess the second idea I'd like to put on the table, so now we have people evaluating the risk to participate. Do I want to be at the table? Do I want to help my competitor anoint their technology against a disclosure burden?

And frankly I absolutely agree with ANSI's position. We are dealing with very diverse organizations, very diverse objectives. And I think we have almost a classic marketplace

situation where you weigh the risk.

You weigh the cost. The organization sets its rules appropriately. And if they do it incorrectly, then the IP holders won't come to the table because of too much cost or the other people won't come to the table because of too much risk. So consequently that's the way I see it.

TOR WINSTON: I'd like to continue this discussion for a little while longer. I think you said it very nicely in terms of too much cost or too much risk. And so maybe other people can address those issues as well.

DAVID TEECE: Let me just say a few words here. I think this disclosure issue is one of those that the deeper you dig the more complex it gets. On its face disclosure sounds great. It sort of resonates with our accepted notions that consumers with more information make better choices.

And it resonates with our notion of labeling is good for consumer choice, et cetera,

et cetera. But then as you hear from the discussions on this panel, as you start to open up the issue a number of things of great complexity start to emerge.

Okay, what should you disclose? Who should disclose it, the company or the individual? Should you be disclosing patents before they are issued? Should there be a burden to disclose proprietary confidential information? These are extraordinary slippery issues, and there is no easy answer.

And in fact as a result you see that different standards organizations have different policies. I think there are some common themes though or some common economic points that I think can be made.

One is that perhaps the most important thing is there are many different types of disclosure rules that are acceptable. But clarity is of utmost importance. In other words, standard setting organizations should at least be clear what their rules are.

Then companies can decide whether they want to participate or whether they don't want to participate. So point one is you need clarity. Point two, the agencies in looking at these issues should recognize that in general standard setting organizations are populated by users and not by intellectual property owners.

So there's inherent bias. Bias may be the wrong word. But there is a greater representation of users than there are producers of IP because that is the nature of our economy. There are more users than producers.

So if you are trying to balance the interests of intellectual property owners and users, it is not going to come out of a majority vote of any standard setting organization.

Secondly, I think it's very important that we not get this problem out of perspective, at least from an economic point of view. The real costs associated with paying a license fee, or the private costs, are different from the social costs. The social costs are really quite

low. This is a transfer payment.

There's a lot of discussion about the fact that, gee, isn't it bad if you end up anointing a standard and someone has to pay a royalty. This is not a real resource that gets chewed up. It's a payment from one party to another.

And from an economic point of view the costs associated with that are a lot less than the costs associated with chewing up actual real resources. And in none of the debate around standard setting have I seen any mention of that.

And to me as an economist it says that, well, gee, let's keep this thing in perspective. The payment of a royalty is not the wasting of resources. There may be some small distortion there.

But it's not the wasting of resources as it would be, for instance, if a standard is not adopted when it could have been adopted and a market doesn't come into existence when it might otherwise have come into existence.

So as we go down the road of thinking about layering on, you know, enforcement on top of existing rules and so forth and burdening the process, we have to stand back and say what's the dynamic context here. The dynamic context is we need standards because we want markets to emerge so competition can emerge.

And my advice to the extent there is anyone listening here is take the dynamic viewpoint which is not how do we fix the problem down the road, but how do we make sure that in fact the standard process is not overburdened with antitrust layered on top of the rules that the standard setting organizations themselves may adopt.

So the bottom line here is one I think which favors clarity and which recognizes as everyone here I think is saying I think. There is not a one size fits all rule that can be created which unfortunately makes it hard and difficult for the agencies.

Because if it's not a once size fits

all world, then what do we do about antitrust? The answer is probably little.

GAIL LEVINE: I wonder if we could take the comments from Professor Gellhorn and from Mike Antalics on the question of the costs and benefits of disclosure rules, with great apology to this side of the table; not because I want to close the discussion.

In fact I want to reopen it, but with a short sort of substantive break so that we can spend some time talking about the market power questions that underlie all of this stuff. After we talk about market power, we are going to come right back to this discussion with a slightly different tack. Go ahead.

ERNEST GELLHORN: I guess I bring a perspective of some skepticism and maybe hostility to the consensus standard approach that has generated such enthusiasm here. One statement, for example, that was made: Well, there are not lawsuits being brought here or at least very few; so it obviously must be working.

It reminds me of the story of a man in Central Park who was laying out a large contraption. Somebody comes by and says what are you doing? Well, it's my tiger gun. The response is, well, there are no tigers in Central Park, to which his answer is, see, it's working.

And I think that has some resonance here. The fact that there aren't a lot of lawsuits doesn't tell us an awful lot on its face. Likewise I would suggest in fact that there are underlying problems here that are significant.

And they go to the basic problem of standard setting and that in the intellectual property context the issue is just exacerbated because you have the problems of network effects and exclusionary power with the utilization of patents of course.

And that is, for example, if you travel in Europe, particularly Germany today where they're rebuilding their highway system to an incredible degree, you will see highway

drainage pipe is all plastic. That's all you'll see. You go to the United States; it's virtually all concrete.

Why? Because there's a standard. And the effort to introduce polyethylene pipe in the United States has been very retarded because of in my view voluntary consensus standards. The same thing is true, for example, of plastic conduit versus steel conduit for wiring.

Here you had -- also the unions wanted to preserve their work opportunities. But what happens in my view often under the voluntary consensus standard process is that the system is itself set up to be gamed. It requires usually not just a majority but a supermajority.

Industry members participate. They have votes. They may not have more than half the votes. But if it takes a supermajority, you can block it. They frequently are members of committees, indeed chairmen of the committees.

And those who control the agenda as a former law school dean I can assure you control

the process. And I think those are questions that need to be looked at.

I mean Bob Bork's book on the antitrust paradox points out that predation through government process in his chapter 18 is perhaps one of the most efficient and effective ones.

And of course the fact that the standards are then frequently incorporated into government codes raises in my view the additional stumbling block of antitrust enforcement. So I'm not as skeptical, for example, David, as you are of the use of antitrust here though it too can be abused.

MICHAEL ANTALICS: On the issue of cost I just wanted to note that. I mean we do have potential costs on multiple levels here. I mean it's not just the cost of doing a patent search and it's not even just one patent search.

It may be multiple patent searches throughout the standardization process that would have to be undertaken as technology -- as the

standard evolves and as the patent or the patent application is evolving.

You have that significant cost. You also have the cost which David mentioned. It's going to slow down the process. So you could have good products that are delayed coming to market if this whole process is taking longer.

And then finally there's yet another cost which is that if you have mandatory disclosure there are going to be some companies that don't want to take that risk. And they're just not going to participate.

So whatever they might have had to contribute to the process is going to be lost. And in that regard I'm just wondering in response to some of Ernie's questions. And we can talk about this a little bit more as we go.

At the end of the day aren't we going to conclude that among standard organizations there's a bit of a market based test right now? You have some that require disclosure for companies that think that that's important.

It seems that most companies or most standards organizations don't require disclosure. And for some reason they seem to be, you know, the dominant technique of standard setting, the dominant format today.

And I wonder if people don't just choose the standard setting organization that best suits their needs and if we don't get the optimal result through competition among standardization procedures.

GAIL LEVINE: I want to hold that very interesting and provocative thought -- and I know you have a response to it -- so that we can talk about those market power questions. But we're going to come right back to it after we talk about market power for a moment.

TOR WINSTON: Because we are kind of talking about this in the antitrust context, we want to talk a little bit about market power. And I wanted to get an operational definition for that so that we are all talking about the same thing up here when we say market power.

So I propose that we use the definition that's in the IP guidelines which is the ability to profitably maintain prices above or output below competitive levels for a significant period of time.

So just so it's -- we have sort of a base to work from there. And I think there are a lot of interesting issues here. One thing that a lot of people have talked about is does the standard setting organization create market power.

And so if I could just open it up to really anybody who would like to respond to an issue like that in terms of -- and maybe when a standard may convey market power.

MARK LEMLEY: It seems to me there are three cases. In one set of cases an intellectual property right confers market power because there is no effective substitute for that intellectual property right.

In that case it doesn't seem to me what the standard setting organization does

matters very much. I have an intellectual property right. I can assert it. You can't get around it. The adoption of a standard or non-adoption of a standard doesn't affect the market.

On the opposite extreme you have cases in which there are substitutes for standards, right, so that my group may adopt a standard but there are plenty of other substitutes, and those substitutes compete.

In those cases even influencing adoption of a standard by a particular group doesn't strike me as problematic from an antitrust perspective because it's unlikely to raise costs.

It's the middle group of cases in which an intellectual property right that I have would ordinarily compete with other substitutes but in which I can influence the market by securing its adoption in a standard setting organization.

When I actually get more power by

virtue of agreement in a standard setting organization than I otherwise would get from the intellectual property right that antitrust role might want to be concerned.

So for me the question is not so much whether the intellectual property right confers market power as is whether the standard setting -- excuse me -- the standard setting organization confers market power that the IP right would not have otherwise given.

RICHARD RAPP: I think that's exactly right and just want to consider just for a moment another way in which market power can be exercised inside the standard setting situation, and that has to do with collusive potential of standard setting agencies.

Since that has to some degree been discussed also, rather than say what's already been said I'll just play out the kind of variation on that theme and say that it is -- that the licensee cartel aspect of standard setting doesn't always necessarily arise from a

subversion of due process in the way that you described it during your opening remarks, Mark.

It can happen differently. It can happen as a result of what David called the preponderance of users.

The case that comes to mind or the instance speaking -- still speaking generally that comes to mind that I think is interesting is one where you have integrated research based manufacturers in a standard setting body and you introduce a firm that is a non-manufacturer that lives by licensing.

And the question is if you have a bunch of cross-licensing manufacturers who decide that basically they don't like to pay royalties because they don't have to pay them to one another, by what means can the standard setting process subvert the kind of competition that we would like to see, because it's so powerful a force in the American economy, that is to say, unintegrated producers of research interjecting themselves into a situation like that. It's a

variation on the theme of market power through collusion.

PETER GRINDLEY: If I can try and make a contribution on this, essentially what's the value of the power of the IP ex ante before the standard is decided and ex post?

I agree with what Mark has said, and I think we are probably all in agreement that if the IP essentially is dealing with a feature that's almost going to be decided arbitrarily by the standard, then ex ante before the standard is decided that IP may have no particular strength.

But once the standard has been decided and adopted and all the various sunk investments are made in following that standard to make products and so on that are going to be actually produced, then it becomes more much difficult to avoid that particular patent, and it may have more power in the technology market.

I guess we're talking about a technology market that reads on a particular standard. That seems fairly clear.

Just one point which I think Mark has essentially said already by talking about the range of different types of IP; if the IP is necessary for the standard but whatever standard you choose it doesn't really make any difference -- it's a basic patent that has to be used whatever standard is adopted -- then it really doesn't seem to be a concern of the standard organization whether that imposes any greater market power.

It presumably doesn't. You have to look at the details a bit to just get into that. But as a general remark, it doesn't. Maybe the contribution -- maybe I'm adding something by saying it's a question of when the IP is asserted.

And I think the theme that I probably will try to keep coming back to is we have to think about standards that are adopted in the market. The idea is not merely to set a standard that's going to produce a nice product.

That product eventually has to be

accepted in the marketplace. And that's going to take some time. A lot of investment has to be made to do that.

If the standard is adopted, there may be a certain time period before all the various -- basically before that standard is established in the market, installed bases are built up, it's supported by a number of manufacturers.

Coming back to the point about when the IP is asserted, if it's asserted before the standard is issued, then there's time to change that decision if that's appropriate.

If it's asserted several years after the standard has been fully established in the market, then it's very difficult to change that. So ex ante, ex post doesn't just happen on the day the standard is printed on the website.

TOR WINSTON: I think you brought up some interesting points that led to another question I had that maybe we can talk about in conjunction with this.

And that is: What's out there that would discipline market power that is generated in a standard setting process? It's something other people can think about as well in their responses.

DENNIS YAO: One thing that I wanted to mention was to think about not standard setting organizations that are sort of general but standard setting that goes on within a small coalition.

It seems that you can get standards -- obviously you can get coalitions competing to try to push their particular standard. And there's a continuum of that from these small groups maybe of only a few firms to a fairly large network of firms pushing a particular standard to a general standard setting organization.

And you can ask whether or not you have any problems with a small group basically creating their own process, being non-exclusive, creating side deals in order to push their particular idea of where the technology should be

and their particular IP including things like trade secrets, their particular advantages with respect to complementary assets. Is that bad? Well, maybe it's not if there's some competition.

So I think we have to keep those kinds of things as a context for the discussion we're having which seems to be more about a general standard setting organization.

ERNEST GELLHORN: Two things. It seems to me that enhanced market power ought to be noted. First of all, many standards are design based, indeed perhaps most rather than performance based.

And the adoption of design based standards telling them exactly what they must use and precisely how they use it rather than the results or compatibility that need to be sought, it has it seems to be a substantial blocking effect that ought to be considered.

Th second is that standards not infrequently, indeed often are designed initially to be adopted by government either for

purchasing -- and government is the largest purchaser in the economy -- as well as part of codes.

And once you put it as part of a code, of course it is much more difficult then to eliminate it or to change it. So the issue of incumbency is multiplied substantially as a consequence.

CARL CARGILL: Just quickly in talking about the panoply of standards organizations from large to small, the interesting thing that I think must be noted is that within the IT industry the major vendors don't select one form of organization.

A majority -- speaking for Sun at this point in time, a majority of Sun's activities are now in consortia and what I think Andy Updegrove has called joint commercial ventures. I call it alliances. It's fast, very fast paced, very quick. But we play in all of them. We hedge all of our bets.

There is not an organization in the

IT industry I believe that doesn't belong to at least 30, 40, or 50 consortia, standards organizations, alliances. We play against ourselves sometimes.

But that's because we can't afford to lose a standards bet. They have tremendous power if they're accepted. And we'll push some of them to the exclusion of others. And it makes us look silly at times.

But one of the things my lawyers told me before I came was always push back to the basics on this thing. The whole intent of this is interoperability. And how you achieve that interoperability is what you're looking for in a standards organization.

We've been talking about disclosure. Disclosure rules aren't necessary if everyone who joins a standards organization agrees to license, contractually agrees to license. I mean your disclosure rules then become somewhat bland because then you're only worried about what the conditions of RAND are.

You're not worried about being held up. If everyone agrees to royalty free, you don't worry about disclosure at all because you know that it's royalty free. So disclosure is a method of achieving a risk reduction goal. It's not the end of this purpose.

The purpose is interoperability. Driving back to the basic, you're looking for a way to get interoperability. Disclosure is the method. So we're talking about methods rather than fundamental goals here.

And it might be worthwhile to look back at the fundamental goals of why we do standards which is that interoperability, interchange capability which I think is the competition aspect.

TOR WINSTON: Go ahead, Don.

DONALD DEUTSCH: Before I say this let me qualify this so my lawyers don't faint. I'm not a lawyer, and I really don't have much to say about antitrust which is the general topic you're on. However, I've heard a couple things I'd like

to put on the table.

Let me qualify it further by saying I represent an independent software vendor and as such we develop standards that basically define interfaces. And those interfaces, we want to define them for the reasons that Carl just said, to provide interoperability.

As such defining interface standards do not do what Professor Gellhorn had talked about, and that is define what's inside the box, how it is that you provide the goes-intos and the goes-out-ofs of that piece of software.

So it occurred to me as I listened to the discussion that we are talking about this elephant called standards and we all have got hold of a different part and it really means different things.

Now let me put on the table what I -- what caused me to raise my hand here. I believe that historically in the information technology area at least that the standards forum has not been a good place for a competitor to go to try

to achieve sustainable competitive advantage.

There is example after example whereby somebody goes into a standards forum. They are there with the purpose of trying to anoint their technology. There are alternative technologies. Other competitors do not want to give that competitor the upper hand.

So what do they do? They take their ball to another court and you end up with multiple standards. And frankly now back to the economist we have a real cost because the whole industry loses.

But it's happened repeatedly in the software area whereby the attempt to achieve competitive advantage is almost always foiled by competitors who basically go make sure that there isn't just one standard. Thanks.

GAIL LEVINE: Can we give you the last word on market power -- on these market power issues? And then we'd like to return to the questions that were raised just a few minutes ago down at this end of the table about whether there

is such a thing as an ideal disclosure rule.

MARK LEMLEY: Well, this is just very brief. It's perhaps an unfortunate irony. Professor Gellhorn is right that some of the greatest risks of anticompetitive results come precisely in those cases in which the standard is designed to be adopted by or pushed through the government either through purchasing or through code adoption.

And it's ironic I think that those are the hardest to get at with antitrust law because of the Noerr Pennington immunity that a standards organization that is petitioning the government to adopt its standard even for anticompetitive reasons gets greater leeway than a purely private organization that's simply trying to participate in the market.

GAIL LEVINE: Let's see if we can return to this questions we were raising before. David Teece touched on some of these questions, and Mike Antalics raised it at the very end. Is there such a thing as an ideal disclosure rule?

Is variety the best thing?

Should we seek to have a variety of disclosure rules that work best for different industries, for different standard setting organizations? Should we let the market decide? You had alluded to that solution at the very end. And I know that Carl Cargill had a response to that that he wanted to raise.

I think the question was, you know, will standard setting organizations in competition with each other work to provide the optimal disclosure rule, to the extent there is such a thing?

CARL CARGILL: I would love to say yes. I would love to say that standard setting organizations do in fact learn. Again going back to discussions I've had with many people, standards organizations either change or die fundamentally.

Standardization has grown tremendously over the last 20 years, the use of standardization within the IT industry. I should

point that out. Consortia tend to either stay important or they tend to go away.

As I say, the IT industry with which I'm familiar has a tendency to use consortia because we've moved away from other organizations. We use them for a host of reasons.

But a lot of the reasons are that we can focus specifically, precisely on a specific area. And agreeing with Amy here, there are all sorts of varieties of disclosure rules.

And Mark brought this up with its disclosure and the IPR rules. He also brought up the point that he doesn't think there's any thought that goes into them. And I would think it's substantially less than that.

I think in many cases when you put an organization together it's like I don't know; we'll just see what's out there. And we'll just like glom it in because nobody pays attention. You have to remember that a lot of consortia are done by marketing people.

So you have marketing people and engineers cooperating to do legal stuff, and this is where we have a lot of fun. And later on we have the lawyers look at them. And you'll notice a lot of lawyers who do this, twitch a lot. So this is the other thing.

But IPR has always been sort of an afterthought because normally what you see in a standards organization are -- you're supposed to be there to work together.

And the minute the impact of the IPR rules like Robert's Rules of Order -- Robert's Rules of Order control unruly meetings. If you used them in a standards organization, you'll probably fail because it's hard to get consensus when using Robert's Rules of Order.

The idea is that it's people of like-mindedness who are there to do something, to accomplish something. So will we ever have a singularity of rules? No. But I would like to have a singularity of guidelines. In other words, how can in fact we tell when we're being

gamed intellectually?

I mean you're right. Engineers do these things. They don't know when they're being gamed legally. And the worst thing you ever want to have is engineers and lawyers arguing about law because W3C has had this for the last two-and-a-half years.

And they finally figured out that it's probably best to have lawyers do the IPR policy and let engineers do the technology. But it's taken a long time to get there.

So singularity, no. Commonality of rules and a host of underlying expectations I would love to see. We don't have those now. We need those. And that then allows a commonality to derive.

DENNIS YAO: I'd like to think about disclosure in the broader context again. We can think about disclosure as if you don't disclose then we might end up with the wrong decision. So this is a problem in terms of the standard.

Then you can ask what other things

ought to be disclosed which could also lead to we've come to the wrong decision. They could include things like trade secrets.

They could include things like -- I don't know -- your plans for future business, and a lot of things that we don't expect to have discussed. And yet they could make a lot of difference in terms of what's the ideal standard to choose.

So when we pick out intellectual property patents, we're picking out one thing. It's an identifiable thing. It's a thing that you can use for a hold-up.

But in terms of are we getting the information you need to make the right choice, there's a whole bunch of other things that perhaps we're leaving out. And it's important to sort of recognize that.

AMY MARASCO: Thanks. I guess just reacting, Carl, to what you said, I'm not sure that I see a difference between having a one size fits all rule versus one size fits all

guidelines. I still think it's pushing towards a one size fits all solution.

And I'm not sure that that's going to work in the diversity of standards organizations that we have in the U.S. For example, many standard setting bodies do not mandate disclosure. They encourage it.

Certainly that's a benefit for the participants and for the resulting standard. But one of the reasons that they don't is in their particular context -- and again it's a very context specific kind of analysis that has to be made.

In those contexts there's too great a risk that companies that do have large patent portfolios are going to say I'm not going to risk a failure to disclose, that someone's going to allege that I negligently or whatever failed to disclose that we had a patent.

Some companies have tens of thousands of patents. They have literally hundreds of very good technical people participating on technical

committees and hundreds of standard setting opportunities.

These standards are evolving as I think Mike pointed out, that there's when do you do a patent search; when do you try to make the disclosure. Trying to say that we can have a guidance as to when all these things are going to happen in a perfect world is just not going to be useful in the U.S. standard setting context.

So I think that it's not to say that it's perfect in all standard setting organizations. But I also think there's an awareness being raised.

And I think the Department of Justice and the Federal Trade Commission holding these hearings, looking at all these issues is a good thing. So thank you.

CARL CARGILL: I take what you're saying and I can sympathize with it. But I'm not looking -- as a producer I'm not so much interested in the standard setting organization as the result of that organization.

And the results I am getting are conflicted results. Because of as Mark pointed out a lack of clarity, I cannot put a system together for multiple organizations.

I cannot take a system that has the WAP forum, ETSI, ISO because the IPR rules are so complex that if I string a system together and put it out I break. I've got lifetime employment for international patent lawyers.

And your statement that it's a U.S. system is fine. I'm a multinational company. The GSM does not come from the United States. It comes from ETSI, and that's French rules. ISO comes from Switzerland.

That's the Canton of Geneva rules under Swiss law, and they default to that. Those are the problems I have. Guidelines may not be -- may lead to something, but it's better than what I've got right now which is random acts of unkindness.

I'm having trouble putting a complex, interoperable, intergalactic system together

under those rules right now because if I have an engineer come back with a solution I have to vet it through legal.

It's like what rules applied when you brought that in and what rules apply to this one. And look. They don't match. And if you're a small company you're doomed. I'm big enough to get lawyers to help me do this because we've got lots of lawyers.

But if you're a small company, you're dead because you can't sue because you're not big enough, and you're just dead. And that's the death of innovation, and that's what we can't afford to live with.

GAIL LEVINE: Mike?

MICHAEL ANTALICS: I was just thinking that in antitrust law we usually reserve black and white rules for areas where we have a lot of certainty. I mean we have a per se rule against naked price fixing because almost all the time that's bad for consumers.

Maybe not all the time. But we're

pretty sure that most of the time it is. I'm not sure with standard setting organizations we can say most of the time any particular method is bad.

In fact I think all of them do serve different purposes by virtue of the fact that different companies have adopted different standard setting procedures.

And then I guess the final point would be, Carl, there's a little bit of you better be careful what you wish for because if we're going to look for some sort of a general rule, at least the dominant -- I don't know what the numbers are precisely. But my guess is ANSI type standard setting is the dominant system that's out there.

CARL CARGILL: No, not in IT.

MICHAEL ANTALICS: I think that makes a point though. If you want to do a consortium type of standard setting, that may work for a particular industry, and you can kind of set the rules of the game as you get into each organization.

But I'm not sure you can lay down rules or guidelines that are going to be useful that would apply to everybody. I just don't know.

RICHARD RAPP: Just on the subject of a single optimal kind of solution to this complex problem, two things that I will mention that we all know. One is that there is great variation among markets and industries in the degree of intellectual property dependence and the degree to which IP matters.

There are also obviously great differences among markets and industries in the degree to which compatibility matters. And I'm inclined to ask in those two things what more do you need to know to know that a one size fits all rule won't work.

The other observation that I would make -- and perhaps I'll put it in the form of a question to those who are in the trenches. When we talk about finding the optimal patent rule, how much progress would it be toward the solution

to your problems if we just had the clarity of which David spoke at the outset?

In other words, if we didn't go all the way to a uniform rule, but just whatever standard setting circumstance you walked into you knew exactly where you stood with respect to disclosure and the rules of licensure, wouldn't that take you a long way?

DAVID TEECE: Yeah. I think that there are only three rules I can think of. The first one is that there shouldn't be only one rule. I think there seems to be a fair amount of resonance around that one.

The second rule should be whatever rules an organization has, they should be clear. And the third one is that they should be structured so that lawyers are not part of the game.

Because as was pointed out before, if you burden this process such that the technical and marketing people who are there trying to create standards and move markets forward, if

they have to bring the lawyers along you know what that means.

It means that it's going to slow the process. It's going to make it more deliberate. And we have to recognize that trade-off. It's not all bad that these consortia and so forth are driven by the marketing people and the technical people. In fact that may be close to optimal.

The minute we start adding on the baggage associated with lawyers and rules, et cetera, et cetera, people are then going to be careful. They're going to be deliberate. There may be some benefit in that in the total equation, but you have to look at the big picture.

The big picture is the companies are out there competing in markets that move extremely quickly where product life cycles are not years but are months, where the failure to reach a standard means that there could be billions of dollars of consumer benefit that are recognized.

So whatever we do here, we have to keep in mind the dynamic context of evolving markets and the importance of standards for creating markets.

And I think if somehow or other as the agencies begin to think about this they can think about the dynamics or the benefits of the competition not yet created, rather than sort of focusing on the ex post side of things.

PETER GRINDLEY: I want to go back about two comments. Just a general one is that we see a variety of disclosure rules, IP policy. We just don't see differences between organizations.

You also see them evolving over time, and they will evolve within a given organization which may change its IP policy depending on what its members think is important.

As Donald has said, companies have lots of options out there, alternatives for all but maybe the largest standard organizations. There are many committees that they can go to if

they are not happy with the one that they're dealing with.

And that puts a lot of pressure on the organization itself to review its trade-off in a sense between participation, the breadth of its membership, and its IP policy, the happiness of its members with the IP policy. So they are responsive and so we do an evolution there.

So maybe the great variety that Mark pointed out in the beginning is evolutionary or maybe it's just lack of direction. I'm not sure. I would say it's probably evolutionary.

GAIL LEVINE: Don and then Mark.

DONALD DEUTSCH: I'd like to respond to Richard Rapp. I believe I characterized myself as someone in the trenches. I've been involved with technical standards for over 25 years.

And the way I understood the question is sort of a specific one size fits all rule; is there some more general statement about the openness and clarity of the process that would

assist.

And I'm not willing to go quite that far. But I can say that the criteria we use in evaluating the forum is that we want to participate in forums that are open to all interested parties.

I think the characteristic of a lot of places where we are working today and others are, that is not true. And Oracle is the second largest software company in the world today.

But when the standard for the sequal language which is the interface to our core product was being established in the mid-1980s, Oracle was at the table. And at the time you would characterize us as a garage.

One of the characteristics of the de jure standards process under which this is done is that all interested parties, large and small, regardless of technical philosophy are at the table.

We think even though now maybe we're considered the big guy, that that's one reason

the United States continues to be the dominant force in the information technology industry, because we do include the entreprenurial, creative part of our industry.

The second thing that we look for in a forum is what I've termed in my contribution transparency. We want to know going in what is the objective of the organization; what are the rules under which the organization operates; who will be the other participants and when I'm participating who they will be.

And some of you in the audience with hold of a different part of this elephant may say what's he talking about. And I can tell you that today I have engineers participating in consortia standards processes where they know that someone from another company is at the table but they don't know who that engineer is.

So we do have some rules that we use in evaluating organizations. Unfortunately sometimes we still make the decision to go to the table despite the fact that those rules aren't

quite there.

MARK LEMLEY: I just want to bring us back to the rule of the agencies. I take it that the agencies are unlikely to adopt a rule that says all standard setting organizations must have the following disclosure rules and no other.

When we are talking about by a one size fits all rule as a government mandated rule, that doesn't seem to me to be a particularly plausible solution.

What it does seem to me that the agencies can do is take account of the fact that different standard setting organization IP rules have different disclosure consequences, and some are better able to be gamed than others.

So Carl said earlier -- and I want to endorse it -- in a world in which you are compelled to license all your patents royalty free there is no need for a disclosure rule. Yeah, you can disclose it to us, but we don't really care because we're getting it for free anyway. I know that's an extreme case.

Most organizations don't have a such a policy. If the rule is everybody has to license on non-disciminatory terms, we'll want to know, right, because you want to know how many patents you're getting yourself into if you adopt a particular standard.

But it's not as critical that you know because you know at the end of the day you're going to have a licensing process and some set of rules to figure it out. You're not going to be held up by injunctive relief.

On the other hand, I take it if the organization has a no disclosure rule and it basically says do whatever you want, then the agency ought not particularly to be concerned about intervening because as long as people know that that's the rule they've committed themselves to that.

It's in the situation in which we require disclosure but we don't require licensing that disclosure becomes so important that the gaming of the system becomes particularly

problematic because presumably the only benefit that the organization gets is effective disclosure of the information.

So it seems to me the agencies can concentrate their efforts in the subset of circumstances in which strategic non-disclosure is likely to be a problem.

And that's going to be driven by what the rules are. Now, that's not a mandate; you must use one rule or another. But it is a context specific response to the diversity that we've talked about.

CARL CARGILL: Just a comment. One of the points that Mark raised is on the second one where you have the reasonable and non-discriminatory.

It's a question that has puzzled people. When we were in one of the committees and someone brought this up, the response was well, we don't know what it is but we'll know it when we see it from the group of lawyers that were there. Hard to do a business plan on that.

So one of the things I would like to focus on is a more precise definition of reasonable and non-discriminatory because again if I'm doing a plan and I have a standard that has ten or fifteen reasonable and non-discriminatory licensing fees, I could very well be out of business because my product will never be competitive because I have 30 percent of it immediately disappearing into licensing fees.

So when everyone says RAND it sounds nice. But you're looking at profit margins. Every time I pay a royalty, every time I give a royalty away I am incurring a cost.

And that giving of money away to someone else has -- in other words, I'm paying them to implement their technology, as Don said, to make my competitor successful.

There is something -- while we understand that's the cost of doing business, in the standards organization especially when the standard has sort of a lock on the market, you're driving to a very unusual position where I'm

paying you so you can lock the market against me so that I can continue to pay you.

And it's one of those very -- I'm not quite sure how to deal with it. But I know that when something like the web comes up and you have the web developers who first of all mistrust lawyers and they see a reasonable and non-discriminatory, every alarm bell in their little, tiny brains goes off.

And that's why you have open source because open source is the ultimate response to this dilemma on the part of developers and software which is, no, IPR doesn't count. It's we have to develop for the good of humanity. That's a very extreme position and I don't espouse that, by the way.

GAIL LEVINE: Let me assure you that those licensing issues are going to be the topic of the entire afternoon's discussion. If you want to respond to that --

AMY MARASCO: Well, just very quickly I would say that again you're balancing so many

different interests here. You're balancing the rights of and interests of people who want to compete in manufacturing products that meet the standards, balancing the rights of consumers and what's going to be good for them is this technology and the standard going to be a good solution, and the rights of the IP holders.

And I think that it's important to realize that they do have rights under the patent laws and that whenever groups seem to look like they are trying to take those away without the IP holder's consent, you know, there's a need to look at that closely and the fact that they do -- they put in the money for research and development, and they are entitled to get something for the sharing of their technology.

But that may in turn benefit all of us because then it will become standardized in a product. That's not always the right solution. But when it is the right solution, I don't think we have to every time we see RAND say, oh, my goodness, this is going to be a terrible problem.

Again it's a very case-by-case analysis. Thank you.

GAIL LEVINE: I think -- let's see if we can spend the next sort of ten minutes before we take our 11:00 break dealing with one last disclosure issue question. And that is the question of legal redress and legal remedies.

To the extent that a failure to disclose ever poses or does pose an antitrust question, are there effective means for those anticompetitive consequences to be addressed?

Are those means to be found within the antitrust laws? Are there non-antitrust remedies that can do the job? And what does it mean when the state is getting involved in those standard setting organizations? And how does that impact the remedies available? Is there anybody who wants to jump in on that right away? Mike?

MICHAEL ANTALICS: Sure. Well, back when I was at the Commission we did the Dell case which I should say really was based largely on some principles arising out of the equitable

estoppel doctrine where we thought it was a good starting point for us because here you have courts sitting in equity saying this is not fair.

So we thought we were on the right side if we based it on that. But the equitable estoppel doctrine just requires some misleading conduct that's relied on, and then there's injury as a result of that.

It doesn't even have to be intentional misleading acts, just a misleading act. In our case, in the Dell case, we certainly had a misleading act because the association required the companies to certify whether or not they had an intellectual property.

And Dell in fact certified twice that they did not. We also had the fact that everybody then used the standard. The standard became wildly successful back at the 486 generation of computers, to date myself a little bit.

And in fact I think it was people got locked into the standard just because it was a

standard as opposed to, you know, the value of the patent itself. And then there was injury there.

You know, Dell was demanding royalty payments which, as Carl said, these are incremental costs that -- you know, marginal costs that are going to get passed on through to the consumer ultimately.

Somebody's going to pay for it. If everybody pays an extra dollar for their computer, you know, that's an enormous cost to the consumer ultimately. So you do have certainly potential antitrust remedies.

I think in our case we saw a market effect. And I think in a monopolization case you would want to go into a market analysis and make sure that there is some market effect.

But as far as individual companies are concerned, even absent the antitrust angle there is the doctrine of equitable estoppel that's available to companies if they are injured as a result of relying on another company's

misrepresentation in the standard setting process.

And there are some cases as well that would extend that out so that the misleading conduct doesn't even have to be an affirmative misrepresentation. If you have a knowing silence in order to mislead the standard setting body, that may also be sufficient under the equitable estoppel doctrine.

Mark, I know -- although I haven't read all of your paper, I did see you -- you talked about quite a few various remedies that are available to people. And maybe you can elaborate on some of them.

MARK LEMLEY: Well, yeah. I take it that -- I would and I hope you would all start with as a first principle the idea that antitrust ought to be a remedy of last resort, that if this is in fact a problem that can be solved under doctrines of contract law or under doctrines of intellectual property law, or maybe even under, you know, common law torts like fraud, then

there's less need for certainly the agencies to intervene because private litigation can take care of the problem.

I'm a little less sanguine about the effectiveness of some of those remedies. There were at least questions. In contract law I think the problem's pretty clear.

There are remedies you would ordinarily get for breach of a non-disclosure contract which are not going to put the marketplace back in the position that it really should have been in had the information been properly disclosed.

In the intellectual property context equitable estoppel is a much stronger doctrine. And to the extent that equitable estoppel will effectively constrain somebody from strategic non-disclosure by preventing them from enforcing their patent rights in that case, then it seems to me antitrust agencies ought to say, great, nothing we have to worry about here. Right?

Now, there are some limits on that.

Let me identify two in particular. One is the extent to which these doctrines can be applied to non-members of the standard -- or by non-members of the standard setting organization.

So the Court periodically talks about reliance interests. And one of the things I have to demonstrate for this estoppel to work is that I relied on this statement or misleading silence.

And it may be more difficult for a non-member of the organization to say that they relied on non-disclosure within the organization when in fact they may have not known about it. So they may not be able to effectively use the equitable estoppel defense.

The other issue which is just an unresolved issue that intellectual property is going to have to deal with has to do with licensing so that if I commit to license on reasonable and non-discriminatory terms and then I don't, what's the remedy?

One view would say, well, you've just breached my contract and so I can sue you for

patent infringement. You might have a breach of contract action against me. If that's right, then it's not -- you're not going to make the potential licensees whole.

Alternatively you might say what I've done is impliedly licensed, right, that by signing on to this commitment I've impliedly licensed my IP. And the difference is one of remedy. Am going to get injunctive relief? Am I going to get treble damages for willfulness and attorneys' fees and so forth?

Or am I going to be able to sue for what I should get under a reasonable and non-discriminatory royalty in circumstances where we can't come to an agreement?

So I guess, you know, what I would say ultimately is I think there are a number of other legal options, and antitrust ought to be a rule of last resort although it's not so clear when you walk through the doctrines that they're going to cover all the situations.

ERNEST GELLHORN: Building on the last

two comments, it seems to me one thing we also ought to note is that in the intellectual property area which is somewhat unique is speed and duration of any particular technology in contrast to other industries. And antitrust moves slowly. So as a consequence it's necessarily very confined.

That seems to me to go back to our prior discussion in that there is a special role here for guidance by the agencies in terms of, one, factors that ought to be considered, openness, transparency that was suggested, and also factors that ought to be looked at with some great care because of risks that they create.

Then the second area I would point to is that the antitrust rules here are somewhat different. In contrast to most areas of antitrust, we have the Supreme Court acknowledging that a merits based decision is essentially immune.

And also implicitly acknowledging and being able to determine whether it's merit based

is very difficult because there's essentially always going to be an argument I would say for the other side or maybe other two or three sides.

So the focus of the Supreme Court in Allied Tube as Mark mentioned was process. And yet that has not been an area that's been explored and I think ought to be explored and could be explored at least in terms again of how the process could be set so it's more difficult rather than easier to game.

And then finally there is I think the misinterpretation of the Supreme Court's application of the Noerr doctrine to extend a causation break so that whenever government adopts a standard unless one can show independent harm from the action prior to the government's adoption of the standard that there is going to be either no antitrust liability or damages in terms of private relief.

I think that goes way too broadly and as a consequence is an area that I would urge the Commission or the agency -- the Justice

Department to attack first by rule as a possibility or, second, by action.

GAIL LEVINE: Can we give you the last word before we take our 11:00 break? And then we'll come back after that break to talk about challenges to selections of a standard.

DENNIS YAO: Since the last word is a question, that could be a problem. I wanted to remark about -- we were focusing on the legal remedies.

But one thing that we should also keep in mind is since we're trying to I guess deter this fraudulent behavior is what in some sense the reputation and business costs are for Dell or for some other company that engages in this behavior.

They could be sufficiently large as to be the primary deterrent as opposed to whatever legal remedies we come up with.

And so the question was really to throw it to the business people to ask them about the effect on Dell, for example, of this bad

publicity regarding their I guess alleged fraudulent use of the standard setting process.

GAIL LEVINE: Well, that's worth waiting for. We'll indulge. Any answers?

CARL CARGILL: Let's wait. No. Don and I can talk. I don't think -- Dell was shocked by it. I think the largest shock was to the entire community because soon everyone in standards was talking about the FTC versus Dell. We didn't know what it meant, but we all knew that we should be concerned.

So there was a behavior change brought about by that. And we now tell all of our engineers that, you know, you've got this thing; you've got to disclose if you know about it, so don't learn about the IP we hold because that makes you dangerous.

There's all sorts of interesting things there. But as far as Dell being damaged in standards organizations, I don't really see it. Because it was hit so hard, I mean it was smacked upside the head pretty well. That's

an old marketing phrase that I slip into occasionally.

Because they are under such restraint, people trust them. It's when you get by with a game and no one catches you, that's when you start to see this kind of penalty applied. Someone brought up in the -- it was Stan Besen who said it's game theory.

You fool people two or three times and the next time you go back to play with them they don't like you. And that hurts more than the actual remedy. Remedy, it's over and done with. They've been hit.

People know and it's very clear that things have happened. It's when you game the system and you hurt people several times in a row. People start to mistrust you after that. And that's what you're looking for here.

But again that's just among the standards people who play. It's like, yeah, you got me last time; I'll remember that. And the next time you may be allied with them and have to

support them no matter what. So it's not really deep penalties.

I mean we play too quickly, too fast. If you get legal remedies, everyone knows and that's done with that because you have to be clean after that. Everybody knows that.

GAIL LEVINE: All right. With that maybe we can take a break and meet back here at 11:15. Thanks.

(Recess.)

GAIL LEVINE: This is probably a good time to get started again. The good news is that we have our air conditioning back on again. So it's going to get much more comfortable in here very soon.

The penalty is we warned you before that we're going to have to ask people to speak a little bit louder than they did before, also to speak directly into their microphones. I was the worst offender on this one. But you all please do as I now am doing. Grab the mike, take it to you, and really speak right into it.

The issue we're now going to talk about for the next 30 minutes or so will be the question of challenges to the selection of a standard in the standard setting organization.

In a paper submitted for this workshop, Professor Gellhorn posed the argument that incumbents can use a standard setting organization to exclude newcomers and to block the innovation of rivals. It's an area that others on our panel have written on before.

And I wanted to use those thoughts as a springboard for our discussion today of whether this kind of conduct can indeed raise antitrust concerns, the efficiencies afforded when incumbents play key roles in standard setting organizations, and what if anything we should be doing about it. Professor Gellhorn, do you want to start us off?

ERNEST GELLHORN: A couple of comments. First, I guess in reaction to what we've already talked about I've learned a couple of astonishing things today.

The one that we ended the last session on that I really did love was that I can now tell clients that they ought to engage in antitrust violations because it's going to improve their reputation. And I thought that was just great. And what's interesting of course is that market reality does affect things.

There was a point that I hadn't thought about before. But I do think in any case that Mike Antalics now can go sell himself to Dell as being their greatest beneficiary.

The second thing is -- and this goes back to Mark's paper, and by the time I'm done I'll have probably disagreed with everybody. And that is we start out I thought from the presumption that when competitors get into the same room together as Adam Smith said, little good can come out of it.

And what we're suggesting here at least -- I've been listening to the legal rules coming out as no, no. Presumptively what standard setting associations do by bringing

competitors together and getting them to focus on merits is a good thing.

Well, I agree that theoretically a standard setting session can be a good thing. It can improve the efficiency. But I don't think presumptively, depending on the process, that it will or is likely to.

Now, this is an area where in contrast to usual antitrust cases we don't look at results, basically the Supreme Court said, unless you've got egregious conduct, because Courts and agencies really are not in a position to evaluate whether or not it was a good or a bad standard.

Whereas as lawyers we're always comfortable with evaluating process. And as basically an administrative law lawyer I'm confident that we can give you great guidance. Actually there's a little skepticism on that.

But I do think here that the critical thing to do is to look at the process, and is the process one whereby -- and I think the rules ought to be fairly simple.

Those who participate who have an interest in what's being done can either control the agenda, a point I noted earlier which is very powerful, or determine or influence the outcome.

And that one of the areas we haven't talked about that ought to be a focus of a standards guideline is a conflict of interest policy that is utilized by the standard setting organization because once you get into signing that I have no conflict of interest, people start to worry and think about it.

The other two points I would make is that there are I think backward antitrust rules that we have developed here, I think by Circuit Courts, not the Supreme Court. And the first is the Joor Manufacturing case, Sessions Tank Liners versus Joor Manufacturing cited in my paper in the Ninth Circuit.

I'm confident and comfortable speaking about the case simply because the author of the opinion was a coauthor with me on an article many years ago. And so this dispute between us

started many years ago.

And that is basically what Judge Canby for the Ninth Circuit said was that where the standard is being applied by government we can't deconstruct what is the cause of the harm.

And as a consequence even if the standard were put together in that case by relatively egregious conduct or by what otherwise looks to be cover agreement or self-interests joining with each other, you can't find liability or certainly no damages because of the fact that it was government conduct which caused the injury through the adoption of a code or enforcement or application of it.

And therefore Noerr Pennington comes into play. I would urge a different rule. And that is that Noerr Pennington be read as applicable to the petitioning process when a standard setting organization asks for government approval.

But if the liability -- or excuse me. If the conduct which is harmful is caused by the

misuse of the process, then liability ought to be possibly attached.

Now, that goes back to my initial point, and that is some skepticism about the desirability of all the standards we have created. My basic concern is the advantage of incumbency.

And that's why perhaps in the intellectual property area where things move so swiftly it is less of a concern. But I'm not yet persuaded.

DENNIS YAO: I'd like to follow up a little bit those comments by Professor Gellhorn concerning agenda setting. It's very clear in the political economy literature that decision making processes are easy to manipulate.

And we've seen that in -- it's been shown in experiments. It's been shown through various case histories and other such things.

I think in this particular case it might be even worse because there is a desire to increase -- because speed and quickness of

getting the standard is of the essence, the decision process may in fact get a little more truncated than usual.

If that's true, then perhaps the range for agenda setting increases. And so I think that's something that we should be very concerned about. Now, there was -- a lot of this depends upon thinking about the participants as being in self-interest mode.

Now, one could argue that a lot of the participants are not fully in self-interest mode, and that would change the nature of the decision making process. And I don't know what way to think about this.

If we have engineers who are interested in the best technical outcomes as opposed to someone who is worried about the firm's best business interest, then maybe we'll get some different kinds of results.

But that's an empirical question. There was some comment as well that if you're playing in a particular standard setting

organization that -- and someone's trying to pull a fast one on you, that you can somehow stop them. And if that's true, that suggests that the process won't be manipulated quite as badly.

But if you stop them, you end up with nothing. So it slows everything down. And I think that's a problem. And if you stop them, maybe the way you stop them is by leaving and starting your own organization.

And that creates a competition of standards which we should probably talk a little bit about. I did want to mention one thing about smaller standard setting organizations.

Again we've been talking about sort of the larger groups. I can imagine again a coalition of firms banding together to try to push a particular standard. And in that particular coalition democratic decision making processing and the like may be irrelevant.

They may basically follow some central leader who has some hierarchical kind of decision making relationship. They can do lots of trades

within the group that you wouldn't normally do in a normal standard setting organization.

And perhaps one can think about these smaller organizations as the exit option for disgruntled coalitions of people playing in the bigger standard setting group. And I would like I guess that people sort of think about that possibility as well as thinking about the big standards.

GAIL LEVINE: Thank you.

AMY MARASCO: First with regard to the consideration of having a conflict of interest policy for standard setting organizations or projects, I think it would be difficult to imagine a standard setting process where you didn't have people who were interested in the outcome being the ones to help formulate what is the successful solution.

Those are very often the people who have the necessary expertise and the resources to go and to work on these standards because they do have an interest in this.

And I think that basically certainly the ANSI process encourages people who have an interest in the standards to participate in the standards development process.

Under our process though we believe there are a lot of due process safeguards with how the standard is formulated and finalized. Basically we require a balance of interests. And those interests are dependent on the nature of the standard.

But certainly it's not just all competing manufacturers. There are other interests at the table. And a consensus has to be reached. And then there are -- there's a public review period.

And there's also an appeals process. So there are safeguards built into the process so that it's very difficult for someone to game the system without it being certainly noticed by everybody and an alarm can be raised and it can be brought to the proper attention.

So under the ANSI process we find that

it's very difficult for the standard setting process to be gamed without the safeguards that are built in causing the issue to rise to the surface.

Now, I know some people say, well, the ANSI process maybe sometimes isn't as fast as consortia so we cut down on some of the due process requirements in order to speed up the process. And that can be true some of the time. But again it's not true all of the time.

I think that really what drives the length of time that it takes a standard to be developed is not only the procedural requirements but also just the degree to which the standard is controversial or whether a consensus can be arrived on -- arrived at easily.

Very often what builds time into the standard setting process is the fact that the group can't come to a consensus on what the outcome should be.

CARL CARGILL: Several points if I can bring it up now if it's safe. With respect to

what Dennis said, the concept of the small organization as the ultimate refuge, that's open source.

What you described was open source: a single individual or small cadre taking input from a large number of disaffected people to create a viable alternative to standards. That's an open source methodology.

And that's exactly what -- if you look at all of the open source activities from Samba to Linux, they have the guru who takes inputs from a vast community but makes the decision. It's -- so what you are looking at is a rejection of the formal process in exchange for speed and various other things.

Agreeing with Amy, which happens, the benefit the consortia have is that consortia have marketing. So they announce they are going to achieve a result and they may take the same amount of time, but at least they have announced up front there's a result so there's market expectation of result.

Secondly, consortia tend to be like minded people. So, yes, by definition there is a conflict of interest in consortia based activity because we're there to get something done, to standardize something for the industry.

And so a conflict of interest, yes, we would all have to sign it and say we're all conflicted. But that's why we were there. So consortia can act more quickly because everyone's there to accomplish the same thing generally.

It's a self-selecting audience. But rather than look at the input of the process, what I'd like to focus on just for a moment is the output of the process.

If the standards focus is to provide competition in the market by letting multiple parties create it and use it, you don't much care how many people play when it's created as long as there are multiple people who can implement it on the outside.

If one person creates a standard that's implemented by a thousand other people in

competition with one another, you succeeded. If a thousand people make a standard implemented by one person, you failed.

One has thorough, complete openness, and due process. It's just it has failed as a standard. So rather than look at the process, look at the outcome of the process because that's what's important for the industry.

The process may be completely open, equitable, and ultimately unfair. So what you're looking for is what does a process produce. And from a business point of view that's what I'm interested in, is what do you get from the process. Is the process fair so that multiple people can play? Do you increase competition?

ERNEST GELLHORN: Well, I take an awful lot. I accept that amendment. Basically we're starting from different assumptions it seems to me. When you're talking consortia, I assume you're talking generally in situations in which market power may not be present or is unlikely to be present.

If on the other hand market power is present, then it seems to me you have an inherent difficult antitrust question because you're having the competitors with market power getting together to set the standard.

And you put I think or we ought to be putting on you a heavy burden to demonstrate that it is in fact merits based rather than a cartel of like minded groups getting together to be in a position to exclude outsiders.

To the extent to which you adopt techniques such as open source I think you're absolutely right. You reduce the risks and potential for abuse. On the other hand, I guess I take a different position than Amy does in terms of the questions of conflict and balance of interest.

I think the consensus process itself to the extent to which it gives interested parties a position to veto results either by supermajority requirements or, second, by the actual vote of the participants or, third, by the

ability to submit a negative and send the process back to start all over again, are all process points at which difficult issues can arise.

I'm not going to say they are automatically bad. That's not my point. It is rather that's when you need to start being very careful.

And why do I say that? Because I start out from the assumption that the standard setting operation, whether it's consortia or a standard setting group, is potentially one that runs into conflict with antitrust.

PETER GRINDLEY: I'd like to say something about process as well as the rules of IP. I'm glad that we're now talking about how the process that goes on in standard setting institutions can work with the IP policy and perhaps disadvantage some IP owners at the -- for the benefit of others.

The case I've got in mind is the ETSI case, and I don't want to go into too many great details about this.

But just to bring out some basic points about how -- two points; how the voting -- essentially the voting rights can affect the intellectual policy -- intellectual property positions of the members, and how that either benefits one group to the disbenefit of another or can imply the effective exclusion of one party versus another.

The case in point is essentially about Qualcomm that controlled the technology for basic CDMA mobile phone technology and whether it was able to have a voice in ETSI which was setting essentially the European standards for third generation mobile.

Now, the voting rights -- and I should say that this is obviously a very important strategic -- of great strategic importance to all the participants whether it's uses or manufacturers, because the ETSI is -- I guess it can be described -- it is actually a consortium but it has some potential power to set standards throughout Europe if they're not de facto

adopted.

So it was very effective with GSM, the original TDMA standard. But there was a question about to what extent any mandatory power would be used with third generation.

Now, the point about potential exclusion in the process is that the voting procedure at ETSI is based on share of European market. So it obviously is biased or benefits the European incumbents or firms that are very involved in the European market.

Votes are assigned according to market share. If I can remember some of the details, it can apply -- subsidiaries can also be members depending on their market share and also have voting rights.

So a company that's operating in Europe can pretty much -- or companies that are operating in Europe can pretty much dominate which standard is chosen or the voting in the individual committees.

In addition I guess there's another

aspect to this and it gets -- as we get into it, it gets -- it seems to bring in so many points about process that it's -- I wish I had had time to put together a proper presentation on this.

But it also affects the voting rights of users versus manufacturers. The users, the national PTTs had block voting rights or had preassigned voting rights so that the combination of the national PTTs and the essentially European incumbents would dominate almost any vote procedure.

This is not to say that they didn't have disagreements between themselves about which was the right standard. Qualcomm is almost the exact opposite. But it's obviously very interested in what's going on in the standards situation in Europe for something as important as third generation.

But it has almost no sales in Europe. Of the literally hundreds of votes -- and I think it's maybe 400 votes. Maybe I got that number wrong -- but that are totally involved in the

voting, Qualcomm had two.

It has one vote just for being a member, no market share, so it has very little share. The fact was that Qualcomm was unable to effectively influence the standard. So that's the main story.

An interesting corollary of that is if it takes part then the intellectual property rules of ETSI were such that it was obliged to license on reasonable terms.

One interesting point about this is that the IP, the technology that Qualcomm controls is so basic to CDMA that it was effectively impossible to avoid this by definition of a standard.

So although attempts were actually made to define a standard that didn't read on the Qualcomm patents, it turned out to be pretty much impossible.

So Qualcomm is there in a situation or a situation can arise where a firm can either choose to not participate or if it does

participate it runs the risk that its very valuable IP, which may in fact not even be affected by which choice of standard, can be involved in an enforced licensing situation.

Now, the alternative I guess facing Qualcomm is, well, why not just not participate? Why not go to one of the other standards groups that may be available?

And we've talked about the fact that there are many standard setting organizations that are alternative and that if one doesn't fulfill the needs of a particular company then the market can speak and it can go to another group.

Well, if the -- I think the proviso with that is that if the standards organization is so large that it effectively covers the bulk of the industry or it's so established, then there may not be anywhere else to go.

So the only choice is to self-exclude. That was not very attractive in this case, the standard being so important to Qualcomm's future

and to the future of 3G standards worldwide that self-exclusion was not an option.

So it then was forced to assert its patent rights and eventually conclude licensing agreements with other members, essentially with Ericsson. So in a sense this is a cautionary tale, but it just pinpoints I think the way that process can be very important and the kind of problems that can lead to.

MARK LEMLEY: I agree with the process concerns and so on. So I won't say anything about that. I do disagree with the -- it seems to be with respect to the substance that where you start out depends on whether you think standardization is pro- or anticompetitive.

Now, I take it that that is an industry specific and maybe even within industry specific determination.

Certainly if somebody came -- if all of the people in the fashion industry came together and they said, you know, we have too much variation in fashion and we've really got to

standardize this, the agencies properly should look askance at that because they would say what's the substantive benefit of cooperation here, of having a single standard, relative to competition. And the answer is it's not much.

By contrast in the industries we have primarily been talking about, in the computer and the telecommunications, in the semiconductor industries, where most of these organizations seem to congregate, the value of standardization it seems to me is a lot greater, right, because of the value of interoperability as Carl mentioned earlier.

And indeed in many of these circumstances because of network effects you will have standardization whether you choose to do it or not.

And the only question is whether you have standardization within a group that allows different companies to compete to make products that embody the standard, or whether you have de facto standardization, right?

And the operating system market is an excellent example of that. You don't have to -- you don't have to create a standard setting organization. But you should not assume in all of these industries that you will get competition as the alternative.

So it seems to me that rather than a presumption standard setting organizations are always good, standard setting organizations are always bad, the real question is what's the economic value of standards itself and what's the likelihood that the industry would standardize with or without it.

And I guess I start from the presumption that in most of the industries in which these standards are of concern some kind of standardization turns out to be important.

DONALD DEUTSCH: I want to elaborate on the discussion of de facto standard. I think the reality is whatever organization creates a standard it's the marketplace that determines the success of the effort.

It is not uncommon for the marketplace to have spoken prior to the initiation of a standardization effort. A technology -- in my field, computer software, a technology is embraced by the industry so that everyone is building the technology.

The technology is defined by one player, let's say. Now, the choice is do we want to include the player. And I think Professor Gellhorn suggested that that could be anticompetitive in some ways. And once again I disclaim any legal knowledge in this area.

But I can tell you I know of a number of instances where there was a great deal of enthusiasm about establishing the standardization activity with the major player at the table because the other players then feel, okay, they created the initial specification; we would rather be at the table helping to create the next specification, the follow-on specification, rather than waiting for them to release their product and I have to hurry up and revise mine

because there's a de facto standard in the marketplace.

So in many cases it is very procompetitive to get that dominant player to the table because what it does is it allows the industry to chart the future direction of the technology rather than a single player to chart that direction and the rest of the industry trying to always catch up one step behind.

MICHAEL ANTALICS: Let me just make one observation. I think -- I agree with that. I think the danger comes not so much in the standardization as agreements perhaps among participants as to who they will deal with down the road.

That's where you could face the antitrust problems, if there was an agreement only to cross-license each other, for example, or to deal with each other in some fashion. That's where the real danger comes, there as opposed to the standardization itself.

GAIL LEVINE: Mike, is that a very

common practice? Do you see that very often, those kinds of agreements to only cross-license to each other?

MICHAEL ANTALICS: Well, if we did we would have more cases at the Federal Trade Commission probably. No. The danger comes when you have firms -- would come where you would have firms with some market power that could exclude, you know, kind of the next generation rival or somebody with some, you know, unique attributes where they can keep their little club.

That's where you would run into a problem. No. I don't think it's real common, to answer your question.

DENNIS YAO: Another question: Is it natural to think of the participants within a standard setting organization to be in various cliques or groups depending upon their business relationships outside of the organization?

And if so, how does that affect the process and the kinds of deals that can be worked out that can make a particular standard emerge?

CARL CARGILL: The question is are there cliques. Of course there are because we clique by basis of location, industry background, education. You always have the hallway conversations.

However, since, oh, say, I think it was the Allied Tube case, the people who -- such as myself who managed the standards infrastructure have made it very clear that people who go to these meetings do not engage in anticompetitive behavior.

And we give our people instructions on how to avoid those situations. If people start to talk about price, you announce you are leaving. You ask for it to be minuted. You knock something over so everyone notices, and then you leave.

I mean the rule is you just don't leave quietly. You leave so everybody knows you have left so you are clear on this. We are very, very clear. Dell had another effect on it. It brought it back.

It's made it into a discipline. There is a possibility always of the Adam Smith competitors getting together to do evil. It's very hard to find that because most of the people are gun shy.

Remember, one of the great lines is, well, don't worry about it; you're civilly and criminally liable personally. And an engineer with a lot of stock options is really careful about that.

And so they go to talk technology. And when it's other than technology, it's about family, friends, other things. It's not about their company's business. That's very, very rarely do you get them talking about business.

DENNIS YAO: I guess in response to that, I didn't mean that they would get together and talk about anticompetitive things.

I was thinking that since you have various relationships with other firms, you have strategic alliances with them, that in those strategic alliance discussions possibly outside

of the standard setting venue there would be discussions.

Gee, you know, this standard is sort of better for us because we're trying to develop this particular thing jointly. So let's support this, and also other people who are connected to you, why don't you encourage them to support it to. So I wasn't thinking that that by itself was anticompetitive or any sort of problem.

But it's a natural -- it's a context for thinking about the process of the standard setting, which is there is a standard setting thing going on, and then there are these groups talk together each other for other reasons for which the standards matter, something like this.

DONALD DEUTSCH: I'm prepared to respond to Professor Yao's question by saying it's even worse than you imagine. But wait a second.

The fact is if you walk into a standards meeting in the information technology industry, you walk into a standards meeting and

you look around the table at the 20, 25, 30 people who are there, chances are you have a relationship with most if not all of them in some area.

The term I believe which has been used is co-opetition. We compete with these people. We compete with these people. You know, very aggressively, but we also have cooperative arrangements with just about everything.

And I think that's the reality of the IT industry. So because it's even more pervasive than you might have thought, I think I do not believe that it is the anticompetitive kind of force that you might imagine, because, yeah, I've got all kinds of relationships with Sun, I have all kinds of relationships with IBM.

We're on different sides of some issues. We're on the same side with some issues. That's just the reality of business today.

PANELIST: There is also a distinction between getting together and having common interests to create a product that you both have

an interest in that's going to increase output and an agreement that's going to in some fashion keep others from having access to that standard.

TOR WINSTON: One thing we may want to turn to here, you mentioned cliques. And I think that leads to our next topic that we'd like to discuss for the last remaining time here. And that is the issue of exclusion.

And I know that, Don, you said that you prefer to deal in organizations where there's a pretty inclusive environment. That might contrast with some of the consortia that you deal in, Carl.

And I was wondering if we could just sort of explore some of the issues that exclusion might present to the antitrust authority. Whoever?

DONALD DEUTSCH: First of all, I stated earlier that Oracle vastly prefers and believes that the best situation is a forum where all stake holders are welcome at the table. That doesn't mean they have to be at the table. But

they should be welcome at the table.

Are there situations where the exclusion of a stake holder might be justified? I would expect -- in general I would say that would be truly unfortunate, because I think -- for a couple of reasons.

One is if the stake holder is excluded I think there may be some legal issues. And again I'm not able to speak on those, okay, but it would cause me some concern, and I would have to turn to legal counsel.

But the second is I think there's a much higher probability that the standard is not going to be successful if a major stake holder is not there.

But that doesn't mean that there aren't some hopefully very rare situations where maybe someone should be excluded. And the one situation that I can think of would be a case where a participant is -- comes to the table solely for the purpose of obstructing the activity.

I don't think such a decision can be made lightly. But I can imagine future situations, and I have observed situations in the past where the participation of a certain party was clearly an obstructionist intent.

And in that case you better have some mechanism, a very high bar, but some mechanism to get on with the job. Now, I guess this is another case where I probably disagree with Carl, but that's probably because Carl hasn't really done any technical standards work for a long time.

But that's why you have Robert's rules, okay, so he votes -- you know the obstructionist votes one way; everyone votes the other way; you get on with it.

But, you know, whether that's exclusion or not or what the mechanism is, I don't know. But that would be the one case that came to mind where such a situation might be justified.

GAIL LEVINE: I want to just ask you

one quick follow-up on about the idea of the need to exclude the firm who has come to the table just to sabotage the standard setting organization's activities.

What kind of behavior is that kind of -- what kind of behavior amounts to sabotaging or attempting to sabotage the standard setting organization's work?

DONALD DEUTSCH: That's really hard to answer, and it's probably very situation specific. So, you know, I'm not even sure that I could make any kind of general statement. I'm not talking about the case of someone who comes to the table and tries to kill your standard with technical kindness.

And we see this all the time. You know, we found a problem. We fixed the problem. We found another problem. At some point you have process in place that says, okay, enough is enough; let's go with it.

I'm really talking about something that's much more egregious than that. And it has

to do with the actions of the individuals that are at a table. It may have to do with legal actions that are taken. But I'm talking about a pretty high bar. And I'm afraid I don't have much more specific to say.

GAIL LEVINE: Carl first and then let's get back to Mark.

CARL CARGILL: Because I do deal with the administrative things because that's -- unlike Don I don't go to technical committees.

The administrative committees, you see a person who will request recapitulation of the previous meeting. In other words, in the previous meeting we had this, but I'd like to reopen that question.

And the phrase reopen the question is repeated ten, twelve, fourteen times in each meeting because many times the process doesn't allow you to close it down. It's like, no, we've killed that snake; move on to the next one.

But you can't because you're trying to be open. And I'm new so I'd like to reopen this

question and can we discuss it again. And how about this? Can we vote on that? And you have this constant series of small, little questions or, wait, is this really within the scope of this organization.

So you get questions like that. And it's a tremendously effective blocking -- unless the committee will finally say, look, we've killed that. We're getting on with it. What's the next one? No. That's silly. You know why you are doing it. Just let it go.

And the process protects in many cases. It gives the chairman or the chairperson the right to say you're disruptive. That's where the process is really effective in the administrative committee.

So the process there -- and I agree with Amy. The process does protect on that end. That's where the process has its fundamental value of maintaining an order.

So yeah, there are ways to do it. It's not that difficult. It's what you do with

any meeting you don't want to have go forward. You can block it by kindly death.

MARK LEMLEY: Well, I want to make sure we bring this back to the issue of antitrust salience, right? I mean there are lots of ways that people can do things which are pesky and annoying and maybe even technologically unfortunate that are not antitrust violations.

And so it seems to me that we're really talking -- when Ernie Gellhorn is talking about process concerns, they are of a somewhat different order. They are of ways to use the standard setting process to capture a market that it could not otherwise capture.

So the only set of circumstances in which it seems to me we ought to be concerned particularly as an antitrust matter about obstruction are where they fit into that category.

Now, ironically enough where the -- where the concern of abuse or takeover is an intellectual property hold-up concern, then it

seems to me with respect to most standard setting groups, those that require some form of licensing either on RAND or on royalty free terms, you are much better off having the person suspected of holding up the process in the organization and therefore bound to the licensing terms than you are to have them outside.

And so the real threat to the standardization process from somebody who wants to engage in hold-up are the people you're not going to see in the organization because they are going to stay outside and bring their patents to bear only after the standard is adopted.

And I don't know that there's much a standard setting organization can do about that problem. And I'm not sure frankly there's much antitrust can do about that problem. That may be a problem we have to solve with somewhat more rational rules respecting intellectual property and its use.

GAIL LEVINE: I know you've been trying to talk and the air conditioning has kept

blowing your card down.

DAVID TEECE: Just briefly, I think when you ask the question about exclusion or openness you have to -- and I think Mark Lemley is framing it this way too -- ask from what perspective.

I think there are issues from the point of view of how you manage or organize a standard setting organization. In many cases things can proceed more quickly and quality standards can get put in place more quickly if in fact you do exclude certain parties.

In some instances it may be the other way around. The question though for this group is is there antitrust -- is there a role for antitrust here. And I really have to scratch my head hard to find a role for antitrust.

I mean I think that standards organizations need to think these issues through from the perspective of how can I get good quality standards in place in the marketplace quickly. And that is tricky.

But, you know, layering antitrust on top of this, there aren't clear answers I think from an antitrust point of view. And therefore if you lay it on you create additional uncertainties which in fact come back to bite you in the sense that it slow it is standard setting process, adds cost, and delays competition.

RICHARD RAPP: I guess I'm puzzled. And the reason that I'm puzzled by what David and Mark have to say is that I have this kind of informal mental antitrust danger index.

And contrasting the first part of the morning's discussion about disclosure and so forth with the second part, I say to myself that the morning was all about single firm behavior and fundamentally opportunism.

And there has been a very healthy debate among antitrust economists and lawyers about whether opportunism is really an antitrust issue.

And now talking about exclusion in its various forms after the break we seem to be

talking about multifirm behavior, excluding individuals from standard setting committees, excluding participants from the standard setting process, collusive underpayment, all of which are variations on this theme.

And I'm saying to myself that's where antitrust belongs. That's where thinking about it in terms of enforcement policy we want to have scrutiny, not interference, but scrutiny rather than in the earlier set of circumstances we discussed by and large single firm issues. So I think I'm in disagreement.

GAIL LEVINE: Carl? Oh, excuse me. Do you have something that responds directly to that? Okay. Go ahead.

DAVID TEECE: Obviously whenever there are multiple parties you have to always be vigilant. And I suppose the scrutiny issue I would agree with in some loose sense.

But should you have regulation and specific rules? I think that's what the issue is. And it's hard for me to think of a specific

rule that is unequivocally going to advance competition rather than slow it down. If you can think of one, let's discuss it.

GAIL LEVINE: I wanted to return for a moment to a point that, Don, you raised early on in this conversation about the need to have all the relevant stake holders at the table when a conversation about standard setting begins.

What's the universe of relevant stake holders? Who are the stake holders when a given standard is going to be discussed?

DONALD DEUTSCH: First of all, let me qualify what I said. And that is, the stake holders should have the opportunity to be at the table. They may choose not to come to the table. That should be their choice.

Second of all, I think in a lot of cases that is a self-determined thing, that someone decides I have an interest in this. Frankly a statement was made this morning about how the standards fora were user dominated. And that's inconsistent with my experience in the

technology standards area.

But it may be true on other parts of this elephant. So if you define the entire array of stake holders from producers of the technology to users of the technology -- and there's different classes of users in the case of information technology.

We may define a standard in our core product area that is an interface that's used by people who produce products that run on top of our products.

And they have end users, okay, customers. Frankly in the United States the user participation in the voluntary standards activity is less robust than one of the speakers thought it was. And I think the reason is their stake is smaller and there's a cost of participation. There's a cost of going to the meetings.

There is a cost of reading the documents and preparing to say something intelligent about what's going on. And so, you know, my answer goes back to it's a self-defined

level of interest.

And all I look for is a forum that allows everyone who determines they have some interest to come to the table. And that would be rules that allow that. That would also be a publicly visible activity so that they know there's a table to come to.

TOR WINSTON: So one thing that I thought might be good to discuss a little farther is the issue of that we're not dealing with standard setting in a vacuum here. Firms have lots of opportunities to seek standards in other fora rather than just standard setting organizations.

I was wondering if we could sort of revisit some of these issues in terms of the disclosure issues or the procedural issues and talk about how those issues affect a firm's willingness to participate and to come to the table and agree in a standard setting organization, rather than sort of taking that activity elsewhere, and also then how might

scrutiny or guidance from authorities affect how those decisions are made.

MARK LEMLEY: I'm not sure if this is particularly responsive, but I'll give you one specific example.

There are standard setting organization out there which not only don't determine what a reasonable and non-discriminatory license might be as a group matter, but aggressively discourage people from having any discussion whatsoever about what a license price might be.

And as far as I can tell the reason they do this is because they are concerned that if they sit down in a room and discuss price, right, here the license price, they will be subject to antitrust scrutiny.

Now, it seem to me there are some pretty good reasons to want to encourage people to have some idea of what price they are going to pay before they adopt a standard.

And so the -- one implication of at

least an antitrust fear, whether or not it is a justified fear, is that it discourages people from actually gathering the information they need to have to decide whether or not a particular standard is cost effective.

AMY MARASCO: I would just say that in response to that you have on behalf of some of the standards developing organizations out there both legal fears and then practical implications.

I think the legal fears that you get from some of them are what you described, the concern that there may be an antitrust problem or a contributory patent infringement problem.

There is a case pending right now in the District of Connecticut where a standard setting body tried to step in more and ascertain what were essential patents; could they be worked around; what would the terms and conditions be, and is now a defendant in a lawsuit up there.

So that does not encourage standards developers to want to undertake that responsibility.

I would also say as a practical matter the people that are attending most of these standard setting activities are technical experts, and they are the right people to be there to help determine what is the right technical solution to the standards issue.

However, I would say that most of them do not have legal or business backgrounds. So for them to be in a position where they would be debating terms and conditions may not be just as a practical matter truly feasible.

I think that -- I don't know that there are really any standard setting bodies that would say there is a problem with a patent holder disclosing if they want to what their proposed terms and conditions may be.

It's just that I believe that some standards developers do not want to be a forum for any negotiation or further discussion of those terms and conditions.

DENNIS YAO: I wanted to remark about patents versus trade secrets in this regard. So

if you've got a patent it's easy to talk about perhaps in a foreign setting -- in a standard setting forum.

If you have a trade secret it may be a lot harder to talk about. You don't have the natural protection. And so you may not be willing to talk about it. Now, consider a situation in which you're forced to disclose patents and license them according to the rules.

Would that cause one as a firm to possibly change the mix of things that you would choose to patent versus keep secret? And would that create a problem? This is sort of a general question to the practitioners.

I wouldn't -- if you're thinking about patents that occurred before the standard was really being thought about, of course it wouldn't have any effect. This would really affect ongoing efforts at the firms during the time in which the standard was being considered. Comments?

GAIL LEVINE: Carl, did you want to

respond to that? I know you've been --

CARL CARGILL: One of the -- you bring up one of the core questions we have which is when do you want to disclose; how much do you trust what -- I mean. You're looking for a level of trust and a level of need.

If you have -- it comes down to if you have a trade secret that's not patented and not protected. If within the standards organization there is a move to standardize -- let's put it in a real case, the IETF, Internet Engineering Task Force.

I have an engineer who goes, has a great idea. There is a four-month window in which his idea or her idea is valuable. Now the question becomes do you take it back, patent it, go through the patent process? Or do you just say blurt it out and hope that good things happen?

It's a dynamic tension. There is -- it's very hard to do a very clear rule. You say trade secrets are more -- no. Trade secrets are

blurted out all the time.

If you go to the IETF the first thing you get is a statement: Know well that anything you say here is open; anything you say within the this context is open. So if you blurt something out, it's out. If it's a trade secret, you may have lost it. So that's one of the questions.

There's no easy solution to it because again it's intellectual property that has an ascribed value. If it's a really neat thing that only works in a network and you patent it and keep it to yourself, you have a really neat stupid thing because it's got no utility whatsoever.

So in many cases standards gain utility from being exposed or technology gains utility from being exposed. And again that goes back to what -- the purpose of this is to grow the market, ultimately grow the market, grow market size.

It's not to sit on the biggest pile of IPR, but to sit on the biggest market as a player

in the biggest market. And that's what you're looking for with all standards. It's we all work together so we can go to the market.

It's not a bigger piece of a small pie. It's a same size piece of a huge pie which is pretty cool. So that's a lot of what we're looking at. There was an earlier question I'd like to address very quickly on the idea of large firms getting together, all the stake holders getting together monopolizing.

One of the most successful attempts at that was open systems interconnect. It was not an attempt at it. Open systems interconnect was an attempt by I'd say the ten largest computer vendors to put together a style of computing that was for interconnecting computers to transfer data.

I was at DEC at the time DEC, IBM, Hewlett-Packard and a whole bunch of us spent -- I have estimated it at $4 billion. Mike Spring at Pittsburgh has estimated half a billion. So we have some variances in how much we spent on

just the standards.

The reason you don't hear about OSI anymore is because, well, JTC won and ISO was doing OSI. A little group called the Internet Engineering Task Force was doing something different.

And all the little vendors who couldn't afford to compete in the big standards organizations because we couldn't go to all the places put out TCP/IP.

That's why we have the internet, not the OSI-net, because the users said one is big and complicated. It's 300 standards, twelve bazillion lines of code. The market said, wow, internet works simple, just in time standards, cool.

It's just because you have all the players, just because you have all the players at the table doesn't mean you are going to succeed. Sometimes it's a really stupid idea standard.

But it shows that just because the big ones are there it doesn't mean you have success.

You have significant failures at times. And that was an expensive, ugly one.

GAIL LEVINE: Don?

DONALD DEUTSCH: Yeah. Gail, I'd like to go back to the question that I understood that you asked, and that is you wanted to go back and talk about disclosure and procedures.

And not wanting to be redundant, I want to go back to the statement I made of the tension between the potential cost for those that are required to disclose versus the potential risk for those who have to come to the table.

And I tried to characterize this as something which would cause individual standards fora to establish a level that is best for them to attract their community. I'd like to sort of take that a next step and point out that there is a market so to speak of standards development organizations.

If any of us think that W3C and open group and IETF and ANSI, ISO, IEC, ITU, and you name it, Oasis and I could go on and on and on

are not competing ECMA, okay, are not competing for standardization activity, we're extremely naive. These are organizations that want to retain their position and grow and be sustained over time.

And as such I believe that actually this whole area that we've been talking about all morning is an area whereby these organizations have an opportunity to become more attractive to their constituencies, because they are all trying to get us to come to the table with our next great idea.

And if they somehow come up with the right mix of cost to the discloser and risk to the people at the table, we're going to go there instead of somewhere else.

GAIL LEVINE: Mark, you had your name tent up for a while. And I don't know if the air blew it down or the moment passed.

MARK LEMLEY: No.

GAIL LEVINE: You're all right then?

MARK LEMLEY: Yes.

GAIL LEVINE: All right. Then, Don, I think I'll have given you the last word for our morning. I want to thank this truly impressive array of panelists for a very enlightening and very informative morning for me and for Tor and for Bob at the PTO. We really appreciate your efforts. So thank you.

(Applause.)

GAIL LEVINE: A few final housekeeping notes. On security, to leave this building and get out to where you can get some lunch we have escorts in the back of the room who can walk you that way. Please don't leave without an escort. We do need you to go with them.

When you leave, take your name tags off and leave them at the front door. It will help expedite you as you are trying to get back in. And please come back at 2:00.

Don't be surprised if at 2:00 you find this room occupied by 300 school children. They will leave in time for us to begin our 2:00 session. There is going to be a photo op for the

school children from out of town with the Attorney General. But you may need to bring a little bit of patience back with you after lunch. Thanks very much.

(Lunch recess.)

AFTERNOON SESSION

(2:00 p.m.)

CAROLYN GALBREATH: Good afternoon. I think we'll begin if people can take their seats. Good afternoon. My name is Carolyn Galbreath. I'm an attorney with the Antitrust Division in its San Francisco office.

I'd like to welcome you back to the afternoon session of the joint DOJ and FTC hearings on intellectual property and antitrust. This afternoon our session on standard setting practices will explore questions about licensing terms.

And we will focus our discussion on those particular terms and how they may or may not have anticompetitive consequences. I'd like to introduce my co-moderators here this afternoon.

Tor Winston is an economist with the Antitrust Division. And Gail Levine is deputy assistant general counsel for policy studies at the Federal Trade Commission. I'm also joined

today by moderator Robert Bahr from the U.S. Patent and Trademark Office.

I'd like to take a few moments and introduce our panel members to you. We have a distinguished group that have come to join us today and to explore these issues. And I'll introduce them in alphabetical order and then we will begin the afternoon session.

Stanley Besen is vice president of Charles River Associates. Dr. Besen is a consultant and an expert on telecommunications. He is author of Economics of Telecommunications Standards, along with Garth Sloaner, and is an author of a considerable number of articles in this area.

Daniel Gifford is the Robins, Kaplan, Miller & Ciresi Professor of Law at the University of Minnesota where for over 25 years he has taught antitrust law, unfair competition, and administrative law. Thank you for being here this afternoon.

Richard Holleman is a consultant in

industry standards and intellectual property. He is a former director of standards for IBM, and he's been developing standards in technology for 25 years. He's also currently the treasurer of the IEEE Standards Association.

Allen Lo is director of intellectual property for Juniper Networks where he's responsible for managing patent, trademark, copyright, and trade secret matters.

Prior to joining Juniper Networks Mr. Lo served as a patent examiner at the U.S. PTO. And he's taught at the Berkeley Center for Law and Technology in California.

Mark Patterson is an associate professor of law at Fordham in New York where he teaches competition and information -- hosts competition and information seminars and teaches antitrust law. He is a registered patent attorney and an electrical engineer.

Scott Peterson is corporate counsel for intellectual property at Hewlett-Packard Company. Mr. Peterson has practiced as an

intellectual property attorney for nearly 20 years and focused on computer related technologies.

Lauren Johnson Stiroh is a vice president at the National Economics Research Association. Dr. Stiroh has conducted research on standard setting and has published articles on standard setting and market power with Richard Rapp. Welcome.

Daniel Swanson is a partner at Gibson, Dunn & Crutcher where he is co-chair of the firm's antitrust practice group. He is vice chair of the international antitrust committee of the American Bar Association.

Dan Weitzner holds research and teaching appointments at MIT and is the director of the World Wide Web Consortium's technology and society activities. As such he is responsible for development of technology standards that enable the web.

Andrew Updegrove is a founding partner of Lucash, Gesmer & Updegrove. He has been

responsible for setting up more than 25 worldwide standard setting consortia. So welcome to all of our panelists this afternoon, and thank you for joining us for what we hope will be an informative and spirited afternoon of discussion.

Our focus will continue to be on those issues that may raise antitrust concerns in the area of licensing standards. Do economic efficiencies result from constraints placed upon consideration of license terms or rates as a part of the standard setting process?

Do practices used for licensing intellectual property that has been adopted as a standard create or promote the exercise of market power in ways that we might view as being anticompetitive?

And do standard licensing activities involving intellectual property raise section 1 concerns in certain contexts? And if so, what are those concerns?

As we begin today I think it's -- for those people who were not here this morning, it

might be good to recap. Professor Lemley pointed out the lack of standardization in what standards organizations call themselves and how they are organized.

And before we delve into the diversity of practices surrounding licensing of standards, it's probably good to seek some definitional clarity about the differences between standard setting organizations, standard developing organization, and consortia, and how they may each approach licensing matters in different ways.

Are there a range of requirements that are used by all of them? Or are there certain requirements that just some of these organizations seek to use? To assist us we've asked Richard Holleman to give us an overview of standard setting organizations.

And I'm going to turn after that to Andy Updegrove to talk about consortia, how they are organized, and particularly focus on their licensing terms and the way they seek to license

intellectual property involving standards. Richard?

RICHARD HOLLEMAN: Thank you, Carolyn. I appreciate your inviting me to be part of this panel. Perhaps I should say that first of all I'm not a lawyer. I'm not an economist. I'm just a standards guy who has been involved in standards and patent related matters for many years through many organizations.

And I see a lot of familiar faces here in the audience. And I appreciate the opportunity for sharing some of my views and comments on the subject.

I've been particularly active in IEEE and the Standards Association and the IEEE SA as we refer to it did file comments on the matter this morning. So those will be part of the record as well. I'm not here as the official IEEE representative, but I was involved in framing those comments.

In relation to the question of the licensing arrangements, if you will, in the

various standards organizations, I hate to keep using the words that came up over and over again this morning which is, if you will, differences, variety, flexibility.

I think perhaps some may view that in some ways as an attempt to deflect perhaps real issues and real matters. But I would tell you that that's really not the case. There is a huge variety.

And while we can group perhaps some of the licensing arrangement under broad areas of RAND, reasonable and non-discriminatory terms and conditions, royalty free, or even perhaps a patent holder who indicates that they have no intention of asserting a particular right that they might have, that's even yet a third category.

Once again there are considerable differences within those options. This morning there was discussion about royalty free. Even royalty free has some variations to it. In some people's minds royalty free license means you

don't have to get a license.

But yet there are certainly occasions where a royalty free license may be free of royalty, but a license is still needed because of other terms and conditions associated with that intellectual property. And I think that's overlooked sometimes and we gloss over the term royalty free.

So there is more value in these licenses that derives from disclosure of patents. There is more value than just the amount of money that may or may not be associated with a royalty. So I think that's an important point.

To go beyond that I would say that another distinction that I think is important to understand is -- and this came up this morning to a certain extent.

In this variety ranging from, if you will, the formal standards developing organizations and here in the U.S., let's say, operating under the ANSI umbrella, meaning the procedures for accredited standards bodies,

whether it be TIA or IEEE.

And the list goes on and on. From the range on the organizations that, if you will, use the ANSI procedures for patents and disclosure of patents all the way to what consortia or special interest groups may do in terms of their contractual arrangements with members, open a wide variety of licensing differences.

And here again at the risk of repeating the importance of understanding diversity and differences, it does really play an important role because of the way it impacts the market. And let me now just turn for a minute to how this is all integrated into the overall business process.

Standard setting for the most part is just one piece of the bigger business process that goes on in industry and which ranges all the way from, let's say, a product determination, requirements determination, to the design, to marketing, to implementation, to delivery, and hopefully to a lot of sales.

Standards can play a role in that. And certainly licensing and licensing negotiations are a piece of that total business process.

I guess what we hear and I certainly feel is a concern are the comments that have appeared as a result of the hearings that suggest that the standard setting piece of this become more embroiled -- and I use that word purposely -- embroiled in aspects that are beyond standard setting that are really in the licensing and licensing negotiation aspect of the business process.

And finally because I'm sure we will have more time to comment on these, just to sort of set the stage, it is important to keep in mind that when a patent holder discloses the fact that there is, let's say, an essential patent that it appears may be required when the standard is published, based on the state of the standard when the disclosure is made, for the most part at this point the standards committees do not want

to have terms and conditions of licensing put before them in the committee.

And I can speak for IEEE standards activities. That is certainly the case. And ANSI procedures do not call for that to be done.

But again we should keep in mind that what happens once that disclosure is made, those who have an interest in the activity certainly can contact the patent holder outside of the committee to determine what terms and conditions might be available. The patent holder can make these public.

And if you go to the websites that are available, IEEE, ITU, and soon there will be an ANSI website I believe, typically there's a contact name there, a name and a number. So individuals have the ability to call that patent holder, the company, the patent holder, and to inquire.

If it turns out -- and this usually happens rather quickly when it happens -- that it's determined there is not a willingness to be

forthcoming here, that the patent holder doesn't appear to be willing to enter into negotiations and it's felt that this is being unfairly withheld, that works its way back in to the standards committee pretty quickly.

And of course the committee has the option of perhaps seeking other approaches. They have the option of sort of outside the meeting entering into some conversations to see what's going on.

But the whole point is the technical people in the standards committee are the engineers and the technicians concerned and involved and qualified to develop the standard.

And for the most part these days they do not involve themselves in activities in the business process outside of that except for the standards development. So I think I will conclude with that. I feel rather strongly that the issues that are before us today are issues that are not new to the standards community.

They are certainly getting an airing

here, and awareness is being generated that probably there hasn't been before -- it's certainly not since maybe the late '70s on some other things -- which is good. But they are not new issues to the standards developers.

And I think that the processes and the procedures that are used along with the guidelines that exist, be they ANSI, be they IEEE and other standards developer guidelines that exist, provide a very efficient and effective foundation for the standards development process as it exists today.

So I hope that gives you an idea of basically a little bit about how the process, let's say, would normally work for many standards developing organizations. Thank you.

CAROLYN GALBREATH: Thank you very much. Just a matter of housekeeping for the panelists; we're hoping to engage in a dialogue this afternoon and have follow-up questions to the extent that they occur to people.

If you want to be recognized, just

please turn your name tent on its side, and we will recognize you and get those follow-up questions on the table. Professor Gifford?

DANIEL GIFFORD: I was just wondering if you could clarify from your experience. In your remarks at least as I -- your written remarks as I remember them, part of the scenario that is common is for the -- you say the patent owner to identify himself.

And then the potential licensee might approach the patent owner and negotiate the terms of a possible license. Now, how does that work out in terms of, say, a practice of reasonable and non-discriminatory license terms when the first potential licensee -- I know you say that non-discriminatory doesn't mean identical.

But how does that in fact, you know, roughly play out? The first potential licensee approaches the patent owner and gets an idea of their license terms. Can the second potential licensee anticipate that the license terms will be pretty much the same if we're in one of those

RAND contexts?

CAROLYN GALBREATH: Before we go on, could I ask that we speak into the microphone? I think we're having trouble hearing in the back. So you may want to just recap the question quickly, Richard, before you answer.

RICHARD HOLLEMAN: The question that was asked is when the first potential licensee approaches the patent holder and, let's say, is able to come up with reasonable terms and conditions and then a second or third subsequent licensee comes along.

Will they get the same reasonable? I hope you're not attempting to ask me to define reasonable and non-discriminatory.

CAROLYN GALBREATH: I think we'll get there later this afternoon.

RICHARD HOLLEMAN: Right, but not now. Embedded in the question I think is an important point. And that is that the system works on the basis that the licensor and the licensee as the two interested parties negotiate a license.

That license is not necessarily going to be the same from party to party to party. The objective is that those licenses will still be within the context of being reasonable, reasonable terms and conditions.

But you'll often hear the term reasonable sort of narrowly described to me as the same royalty rate. And that may not be the case because of all the other values involved in the exchange between the licensee and the licensor. Maybe it will be the same, okay? Maybe it won't.

Sometimes a patent holder will say here's a flat rate. And that's another variation on these licensing agreements for this patent, for this standard of flat rate.

But I think it's important to understand there are other items in the licensing agreement of value: exchange of other rights between each other, field of use whether narrow or broad, the term limits of the license.

And it's important to keep that in

mind. And we tend to narrow down RAND in terms of, well, that means royalty rates. And there is a lot more to it than that. Thank you.

CAROLYN GALBREATH: Thank you very much. And I think we are going to spend some time really going through those distinctions in greater detail so we can revisit those later on this afternoon.

I would like to turn though to Andy Updegrove and have him give us a few comments on how consortia may differ in the way that they approach licensing terms.

ANDREW UPDEGROVE: Let me give you my frame of reference first because it might be instructive in where I'm coming from. I've worked with something like 45 consortia and helped form most of them. And I almost never got a question about intellectual property rights until five or six years ago.

As most of you probably know there was a consent decree entered into by Dell Computer with the FTC. And at that point all of a sudden

everyone became energized to the fact that there was something going on here even they might not have necessarily understood it.

Not too surprising because it was a very difficult to understand consent decree. But they knew that they had to start paying attention. So since that day five or six years ago the number of questions that I've been receiving has gone up and up and up.

And in the last couple of years I've helped put together IPR policies for quite a number of consortia. Now, the thing that is probably most important for me to observe is that there is an enormous amount of confusion out there.

You would think maybe after this long and particularly given the fact that the ANSI policies have been out there for something like 20 years that there would be a reasonable amount of agreement on what an intellectual property policy should be for a standard setting body.

In fact that is only true down to a

superficial level. Almost all consortia would agree that don't bother contributing something unless you're willing to license any intellectual property rights.

Almost all of them would agree that if you want to be part of the process that you have to disclose at some point whether or not you have IPR, intellectual property rights, that might be infringed by an implementation of the standard. But when you get beyond that the degree of agreement falls off remarkably.

This is probably for a few principal reasons. One is that most of the people who are charged by their companies with starting a consortia are not lawyers. There is also very little continuity in the people who form consortia.

Typically they will come out of the business unit. It might be someone from marketing. It might be someone from the technical side.

And their acquaintance with

intellectual property policies may be slim to nil. So what they bring into the room when they begin to discuss something like an intellectual property policy, if they discuss it at all, is whatever frame of reference they have outside of that setting.

That frame of reference most principally is working within a proprietary company trying to maximize the value of your intellectual property rights and maximize your revenue by exploiting them.

This I would submit is entirely the opposite of what standard setting is about. Standard setting is about gaining by giving away. What you are trying to give away is ownership of the standards that are produced by your consortium.

The gain which you wish to achieve is that most obviously you can make prudent strategic decisions. You know that you are betting or you hope you are betting your corporate future on VHS and not Betamax.

If there are two standards out there or ten standards, how do you know which one to pick? Well, if the market leaders get together in a room and set a standard, that standard more likely than not will succeed and you can make a safe strategic decision.

If you take that intellectual property and hold it to your breast and charge people for it and make it look like you are exercising control, those people that you want to have implement it will be rightly suspicious and they won't want to implement your standard.

So a very difficult thing for people to grasp when they walk through the looking glass from selling proprietary products to setting non-proprietary standards is that everybody has changed. You have to change the way your mind is thinking.

No one gives you an orientation when you walk into that room to have that discussion. And in fact most people in the room don't get it. So the first problem you have is that people are

setting out on a process which is different than anything they do in the rest of their lives.

The second problem is that the standard setting organizations and consortia in particular look very much like commercial joint ventures. And I'm sure you are all familiar with them.

It might be five or six companies who get together to bid on a government contract, or they might get together to come up with a common solution that they can then sell products.

In that kind of a setting there are all types of behavior that make very good sense in that setting that are very destructive in a standard setting context. The best one I can think of is mandatory cross-licensing.

It is very typical in a joint venture to say that everyone in the joint venture will cross-license each other and if they go to a customer that they will demand a cross-license from their customer as well. And why not? Everyone's motivated to create whatever the

joint venture was created to build.

All the customers are motivated to buy it. So everyone has a joint economic interest to protect the intellectual property rights in that deliverable so that they can sell it. You don't want people suing for infringement.

Contrast this with a consortium. You typically have companies like HP, IBM, Oracle, big companies, small companies getting together and saying we want a market to evolve more quickly. And there are always many examples: Wireless, smart cards, blue tooth type standards.

People can't buy your products until there is enough confidence in the marketplace that that suite of products is going to be successful and become widely implemented. It doesn't do you much good to be the only person who owns a phone because it will never ring.

So if you get together and come up with a standard you can advance the marketplace and you can move into it more swiftly. That's very different.

In that kind of a setting what you want to do is you want to make it as easy and possible, as easy as possible for the people with the lowest economic motives to still adopt your standard so that standard will become pervasive in the marketplace.

If you walk into that with the same mind-set as in a joint venture, you won't be doing the things that are necessary to succeed. Another example, if you were to look at W3C right now, World Wide Web Consortium, many of you are aware that they are debating whether or not royalties should be levied in the case of anything having to do with the internet.

In the case of the internet you're talking about a global enabling technology used by billions of people. Everyone will benefit from the maximum involvement of anyone with technical skills.

To levy a royalty in that kind of milieu would be insane. In contrast if you are in a much more narrow commercial setting you

might need very badly certain companies to come into it whose corporate policy was we will not join a consortium if it's royalty free.

Many times I'll deal in a situation where people are coming out of a W3C meeting and because that's the only standard setting event they have been in they assume everything has to be royalty free.

Good answer there, bad answer here. So not to belabor it or to hold things up, but the problem that we see out there right now is that there's great awareness of the issue that an intellectual property policy is needed.

But there's tremendous confusion about what that policy should be and tremendous ignorance about what resolutions are appropriate in what situations.

Everyone will benefit if that level of education can be raised and if on the part of the government everyone has a clear idea of what you can do without getting into trouble.

CAROLYN GALBREATH: Thank you very

much. I think we have confirmed as perhaps we did this morning that there is no consistency and certainly that one size does not fit all.

And in an attempt to have us talk about the issues in a reasoned fashion, we have asked Dr. Stan Besen to put together a hypothetical. It's within available on the back. You may have it among the items that you have picked up this afternoon.

I'd like to turn now to Dr. Besen and to have him walk us through that very nice hypothetical which explains and really sets up the complexities involved with what we're going talking about for the rest of the afternoon. Thank you.

STANLEY BESEN: I think we have heard from both this morning and sort of the early part of the afternoon that this is a really complicated and difficult problem. And I don't want to suggest by my remarks that I disagree with that. That's entirely appropriate.

However, it's usually the case when

you have a really complicated problem it's often easier to sort of start with the simpler version of it, at least one that you can try to answer before sort of adding the complexities as you go along.

And so what I try to do here is to try to spell out a simple standards licensing problem, simple enough again so that I think we might come up with a relatively uncontroversial conclusion about what the right answer is, and then to sort of suggest some variations on the simpler theme as we -- to show what additional factors -- how additional factors not taking into account the hypothetical might affect the conclusion.

I want to start off with a number of very simplifying assumptions. First I'm going to assume that there are a number of technologies, each of which is the intellectual property of its sponsor.

All of the technologies are equally capable of performing the same function, so I

don't have to worry about this question of which is the best technology.

And only one of the technologies is needed to produce a final product. So I avoid the sort of patent thicket problem that Professor Lemley talked about this morning.

Second, none of the sponsors produces the product in which the technologies are used. That is, they are all suppliers of technology to the producers of that product. Obviously that's going to make a difference. We have already heard allusions to the problem.

But here I'm going to assume that they make their money simply by licensing their technology to people who produce final products. Third, I'm going to assume -- and this is probably in some ways the least defensible assumption here or the one that makes the problem simple in a way that makes it too simple.

I'm going to assume that all the investments in R & D to develop the various technologies have already been sunk. Fourth,

I'm going to assume that that de facto standardization is not possible for the some of the same reasons that Mr. Updegrove just mentioned.

One of the possible reasons is perhaps a multiplicity of competing technologies which cause so much confusion among consumers that they would be unwilling to risk being stranded with the wrong technology.

And no single producer of the final product can start a standards bandwagon on its own. So you've really got to get everybody to cooperate to do so. De facto standardization won't work.

Fourth, I'm going to assume that this is the last round of a standards competition involving these technologies. There's no possibility of further refinement. Obviously that makes things -- life a lot simpler.

I've assumed the technologies have -- all the technologies have the same technical capability. But I have to have some variation

among them. I'm just going to assume they have differences in the manufacturing costs.

Some technology -- if you use one technology, your manufacturing costs are lower than if you use another, et cetera, et cetera. So there are some variations across technologies, the manufacturing costs they imply even though they end up producing products that have the same value to consumers.

And finally I'm going to assume as an industry standards body -- and this is of course very important. The standards body consists only of producers of the final product and not the sponsors.

And I'm going to try to answer four questions in this simple hypothetical. Should the standards body choose a standard? Which technology should it choose? What rights should the standards body try to obtain from the winning sponsor? And what should the license fee be?

Those are my four questions, and I think I can answer them given my simple example.

The first question is, yes, the standards body should pick a standard.

In this particular case there would be no market but for the selection of a standard, too much confusion among consumers perhaps with the result that no market would develop.

Everybody is better off if there is a standard or at least no one is any worse off. Second, which technology should be chosen again I think is fairly uncontroversial here.

The technologies all can do the same thing. Obviously you want to choose the one with the lowest manufacturing cost. That's the only difference among them.

It is efficient to choose the technology that involves the lowest cost of producing this product that has the same value to all users regardless of which technology is employed.

What rights should you acquire in the process, or what rights should the standards body demand? It should demand the right to use the

winning technology -- and this is sort of this hold-up problem that we have talked about before.

The right to use the winning technology for the term of its intellectual property protection, presumably the term of the patent, at a license fee determined at the time the technology is chosen we can waffle on that a bit. We can come back later.

We can perhaps talk to the way Dick Holleman described how it might be done after but somehow taken into account. But in this particular case you would certainly want the license fee to be determined up front.

And finally the question is what should the fee be. I'm not sure if there is reasonable and non-discriminatory. Those are not terms economists use.

But the right answer to the question of what the standard -- the fee should be is some amount between zero which is the smallest amount that anyone will accept since the technologies are all -- R & D costs are all sunk.

Some amount between that amount and the difference in the manufacturing costs of the lowest cost, that is the technology you actually chose, and the second lowest cost technology.

So, for example, if the cost of the lowest cost technology -- manufacturing cost, if the lowest costs of technology are nine dollars a unit and the manufacturing costs of the next most efficient technology are ten dollars a unit, the fee should be somewhere between zero and a dollar.

That's the answer in this particular case. Now, what I have described here is a kind of at least metaphorical auction in which the various parties bid to be the -- the various sponsors bid to become the standard and in which they bid license fees and in which the winner is chosen based on a combination of the license fee and the manufacturing costs.

And the standard body picks the -- chooses that technology that has the lowest combined license fee and manufacturing costs.

Whether it's zero or the dollar in my example is really immaterial for the purpose of the analysis.

It might depend on the nature of the auction process, how good the standards body is at negotiating, et cetera, et cetera. But in any event you would want to choose the technology with the lowest manufacturing cost.

At the same time of course you want to exploit what has been described here before as the existence of ex ante competition. Before the standard is chosen there are a number of alternative technologies.

Their existence constrains the license fee that the successful bidder can obtain. And the standards body wants to exploit that by -- during this early process when it has competition.

Now, I think -- and I'll be curious as we go along here to find out whether those answers are as uncontroversial as I think they are. But let me try to suggest how one might

consider some variations on the theme and see what sort of complexities they give rise to.

The first is what if there are differences in the technical capabilities of the various technologies. What if they are not all the same? What if some of them are capable of producing better products than others?

Now, obviously the auction -- this metaphorical auction should take that into account. It doesn't mean they should ignore the costs. The manufacturing costs are still important.

If you were an economist you would say that you would want the technology chosen as the standard that has the largest surplus, the largest difference between the value of the product being produced and the cost of manufacturing it.

You would want -- you would certainly want to take the cost of manufacturing into account. That might mean by the way that conceivably you might end up choosing something

other than the best technology.

A technology only slightly better than another, but with much higher manufacturing costs may not be the best technology to choose. But in any event you would certainly want to take into account the ex ante competition in that case just as you would in the case where I assumed that all the technologies were the same.

What if sponsors are members of the standards body? That makes the world more difficult. In my initial example I assumed a kind of homogeneity of interest among all the standards body's members.

That's not necessarily going to be the case if some of the members of the standards body are in fact the sponsors. If I am a sponsor I care -- particularly if I'm a sponsor that doesn't produce the final product, I don't care about having the lowest cost technology chosen.

I care about having my technology chosen. And so in this particular case the producers of the final product are going to have

to be concerned about whether a standards body with this more heterogeneous membership will take into account their interests.

And that will of course depend on all manner of things including voting rules and influence and a whole bunch of other things which affect which standard is chosen.

But you don't get the nice, simple result where you have a congruence of interest among all the members of the standards body. What if sponsors produce the final product? This is a point that I think Mr. Updegrove alluded to before.

In fact if I'm the producer of the final product I might well be interested in having my -- I might be so interested in having my standard adopted I might be actually prepared to accept an even lower standard than in my hypothetical.

Why? Because maybe there is a manufacturing advantage that I have that comes from having my standard selected as opposed to

somebody else.

That is the bidding -- to be the standard will reflect in this particular case the desire on the part of sponsors who are also manufacturers to have the standard selected not just for license fees but because of whatever advantages they may have in their manufacturing process.

That's going to influence the outcome of the process. What if R & D costs are not sunk? I said this is the most difficult problem that one might address here.

Obviously if it costs -- if R & D is expensive as it often is and you're only in the business of licensing your technology, that's your only source of revenue, then really, really low license fees is not really a very good business to be in.

And the next time around you may well decide that producing technologies for the standards body that hoses you when you try to have your standard -- your technology included in

the standard is not such a great idea.

That might induce a standards body to become somewhat generous in order to encourage -- to develop a reputation for being an attractive place to develop technologies because you get paid a reasonable amount when the standard is -- when your technology is adopted in the standard.

I must say however that given all the other problems that we've talked about, the various hold-up problems that I've talked about, that's a kind of -- that's -- you have to worry about that problem as well.

I just want to suggest that the point that I think may have been sort of lost in the discussions this morning, which is licensing technology from somebody else, isn't the only alternative.

One thing you might well decide to do in fact if you think these other hold-up problems and others are a serious concern but you still want to make sure the R & D is in fact performed is to do it yourself.

And so that may explain the sort of -- the combination of R & D development and standard setting taking place together in which the industry or the users in this particular case, the producers of the final product themselves are involved both in the development of the R & D and in the standard setting process.

They sort of attempt to kind of get the best of both worlds and encourage R & D but at the same time not be subject to the hold-up problem. How are we doing on time? One more minute? Fine. I knew I could get it.

The last point I want to make is what if de facto standardization is possible. Well, in the hypothetical unless you submit your technology for the standards body to consider, you have no chance at all.

But if in fact the standards body -- the fee demanded and obtained -- or the fee demanded by the standards body is very low and the option of going the de facto route is available to you, you may decide to choose that

instead.

The standard body has to worry about the participation of sponsors in the standards process and if in fact they drive too hard a bargain.

Getting back to the question of what is fair and reasonable, they in fact may find themselves not having very many standards contributed to them for consideration. Let me stop here.

CAROLYN GALBREATH: Thank you. I'm wondering if we have comments from the panelists about the hypothetical. And if we don't, then we can continue. Andy?

ANDREW UPDEGROVE: Let me start by talking about how typical the example would be because that might be very illustrative.

Most people who used to game specifications were people like the client I had 15 years ago that made fire boots and basically tried to get on the standard setting panel and write a spec that described their fire boot and

their fire boot only.

When you're looking at computers and telecom you're talking more typically about interoperability or business processes where it's not as susceptible to the type of gain that your example is really oriented towards.

So people are trying to come up with a specification that doesn't so much instantiate a particular product but enables lots of things to happen in connection with each other.

So I guess the first point is very few submissions to standard setting bodies are of products by people who intend to charge royalties in connection with them. The royalty issue turns up more typically by people who happen to hold patents that an adopted standard infringes.

So the first thing is that most people who are going to respond to a call aren't people who want to make that product and collect royalties on it. They are people who want a head start from already being at that starting point.

They don't want to saddle competitors

with royalties because what they want is a big market for that product. And they're satisfied with a head start.

So the first comment is for better or worse it would be a rather uncommon setting in my experience where you had people submitting in order to reap a royalty upon adoption. The second thing is when it comes to picking there are many different criteria that might go into that.

A technology submitted by a nobody as compared to a technology submitted by a market leader, for better or worse there might be some deference given to the submission of the market leader because they knew that there would be an enormous number of products coming out very quickly.

They knew that they would be well marketed gaining credibility for the standard. They knew that the submitter had wide respect for their technology. So consciously or unconsciously if the goal is to get wide adoption

of the standard they might favor the gorilla over -- to mix metaphors, Goliath over David.

They might also look at the ease of implementation as compared to the cost of implementation. They might look to the degree to which it would work easily with legacy systems as compared to requiring expensive secondary modifications or additional products to go along with it.

So cost is relative and in a broader cost than manufacture. And when one assumes that the goal is the wide adoption of the standard, cost is one factor but not the only factor in achieving the ultimate goal.

As far as rights, I think the clearest way to say it is you want any right necessary to allow any player at any point in the chain to be able to as simply and easily as possible create and market that product with the fewest impediments to its normal mode of business.

I mean I could belabor it, but it's a broad range. So whatever it takes to make anyone

want to create and sell that product and be able to use all their normal marketing partners without them having to go back and individually get a license, it's a long list.

So let me just leave it at that I think. Should they pick the standard? They should pick the standard, but only if it satisfies that wider array of demands in order to reach the goal. It may be that all of these are cheap and all of them are unsatisfactory for reasons beyond cost. They may need more submissions.

CAROLYN GALBREATH: Thank you. Mark Patterson?

MARK PATTERSON: I approach these -- think about these problems more from an ex post perspective than an ex ante one, thinking of them after the standard has been selected and then what do we do when a patentee, say, wants to demand a high licensing fee.

At that point from after the fact ex post we can sort of try to judge why we think

what the patentee is doing is unfair, what, say, anticompetitive motives the patentee might have for demanding licensing fees that we think are unfair or that discriminate unfairly.

And I guess what I would wonder -- what I would like to ask is ex ante can you even anticipate those? Could we even imagine that we could have an auction? It would be simple enough I guess if you wanted to demand a simple royalty fee as a percentage of profits or something like that.

But to the extent that you're going to allow any discrimination -- and there are good reasons to allow some discrimination -- I'm not sure you could specify the circumstances -- the kinds of discriminations that we would think would be okay and the kinds that we would think would be not.

So -- and if we can't specify those, then I wonder if it's even sort of theoretically possible to conduct an auction.

CAROLYN GALBREATH: Dan Weitzner?

DANIEL WEITZNER: Thanks. For reasons that I'll explain more probably later, I was actually just going to remark on how completely foreign that hypothetical sounds which is -- I think just to maybe point out that the internet and the web are weird.

But I think it's just striking that that sort of calculus which all seems quite reasonable, if you can use that term, you know, is very different.

I just want to point out two ways in which I think it's in some sense foreign from the kind of internet/web interoperability standards environment that I think Andy started to allude to.

One is that I have a hard time extrapolating from the simple set of choices that say you've got four, pick one, here are the known advantages and disadvantages or the known costs.

My experience of internet and web standards is that they really involve a negotiation about how to fit a whole bunch of

existing products and requirements together.

So I guess I'm wondering the degree to which you've taken into account this interoperability factor which is really a multivariant consideration. Lots of different people have lots of different systems.

The idea of setting a standard is to get together so they can all work together and do the things they want to be able to do together. I'd be interested in your thoughts about how that gets sorted out at an auction.

And I guess the second is this ex post versus ex ante distinction. I do just think it's quite difficult early in the process to understand the full cost implications of these choices.

I think you probably could at some point look back and estimate what the costs of different options that weren't chosen would have been. But I'm interested in how you could use this sort of auction model in a practical way when you suffer from that sort of uncertainty

which I think often characterizes the choices.

CAROLYN GALBREATH: Perhaps we'll let Dr. Besen respond and then we'll go to Richard Holleman. If you could, move closer to the mike.

STANLEY BESEN: Yes, the world is more complicated than the model. I'll concede that. I think I agree with many of the things that were said, but not all of them. I'm a little puzzled about this issue that says, well, nobody is really in this to get license fees.

If that were the case, I sort of wonder why we're here. And maybe that's the right answer. But I thought people were actually worried about the question of hold-ups and excessive license fees and all the rest. If that never happens, we probably can all go home.

ANDREW UPDEGROVE: A very important distinction, the distinction being that submitters typically are not. People submitting technology typically are not.

The real debate most often, as I said, relates to a member of the consortium who raises

their hand and says that reads on my patent; I didn't come in here necessarily to see you take something out of my pocket.

So it's a very real issue. But statistically it doesn't tend to be a submitter issue. It tends to be an incidental or unanticipated issue.

STANLEY BESEN: Fair enough. The other question that I think Danny referred to is sort of the multiple patent problem which economists think of as the complements problem. Think of the worst possible example.

There are two technologies, both of which are absolutely essential to the interoperability of a particular product. And they are in different people's hands. We really don't -- what economists can say about that is that's a really hard problem.

Okay. It's nonsense that each of the entities in effect wants to demand -- in fact thinks it can demand the entire surplus. But as somebody suggested earlier, if everybody tries to

get the entire surplus it's in nobody's interest to manufacture the product in the first place.

And sort of working out the problem of multiple complementary patents I think is -- or intellectual property is actually a much harder problem than the one I described here where in fact the technology are substitutes and off choice of one or another.

CAROLYN GALBREATH: Okay. And Richard Holleman.

RICHARD HOLLEMAN: Yes. Thank you. I would have a number of questions about Stan's hypothetical. But I would limit it to just a couple of comments.

One, what concerns me I think most fundamentally about it is the fact that it's built on an assumption that something other than reasonable terms and conditions has to be done, something other than what is the common practice has to be implemented.

And let me give an example. And Carolyn when we had a meeting to prep for this

panel said whenever you can give some real live example kinds of things. Sort of a bake off approach is not something that's foreign to standards development.

I can recall in the JPEG area where there were not necessarily exactly similar technologies, but technologies competing for the algorithm for coding for a JPEG. And so they had a technical analysis done.

And the competing technologies were considered and reviewed. And the committee felt that for the sake of compatibility, interoperability if they were going to have a standard they had to make a selection.

So they made a selection based on their -- based on their best technical judgment. And the selection involved patent rights.

And those patent rights were offered on a reasonable terms and conditions basis which was acceptable to the committee. It did not require getting into an auction, certainly much less in the standards committee, but an auction

in terms of royalties.

And then my second comment beyond that is I think there is in existence a fairly good range of what reasonable means, both based on common practice in industry plus based on case law that has taken place.

So we get the impression that this is a completely foreign term that is dangling from the ether that anybody can interpret it any way they want. And actually in practice I think it's really a long ways from that. There are some ranges that have been accepted.

And the idea of seeking ex ante, post, and these auctions and so forth, my basic question is -- comment is I don't see any real compelling need or problems that would drive us that way since there have not been a lot of problems where the standards bodies have been called up and said -- and been presented with the fact that you have a standard and the patent holder is attempting to extract unreasonable terms and conditions for that.

I'm not saying it hasn't occurred. But if you take the thousands and thousands of standards that are out there, to the extent it's there it's de minimis in my view. Thank you.

CAROLYN GALBREATH: Tor?

TOR WINSTON: I just wanted to say thank you to Stan Besen for his hypothetical. I think it points out a lot of sort of the complexities that we're dealing with. And it's definitely a complex issue.

Really what I'd like to do is open up Mr. Holleman's question to the entire panel and potentially the people that we have from industry here. Is this a problem? Is a commitment to these RAND terms and such a problem? And maybe we could have Stan Besen comment on that as well.

STANLEY BESEN: I don't know how typical these are, but I always keep this little clipping in my drawer to have a real world example where something like this seems to have happened.

Somebody actually demanded

unreasonable terms, Dick, if you can imagine this. The article starts -- the head line is IBM Unisys reduce fees for modem compression. It says: IBM and Unisys under pressure from modem manufacturers, a CCITT committee, and the aggressive licensing policy of British Telecom have cut their patent fees for a compression algorithm needed to build a V.42 bis modem, the next major growth area for that market.

The example -- this thing talks about these guys asking for really high fees, the committee saying we think they're too high, and they negotiate lower fees.

RICHARD HOLLEMAN: I can respond to that fairly quickly if you'd like. That happened to concern a standard called V.42 bis out of the CCITT. And the activity that's described took place outside of the standards committee.

What was disclosed in the standards committee was that these three companies had patents that may be essential, and there was concern.

Outside of the committee and independent of each other, okay, each of the companies gave consideration to the importance of the standard, their own intellectual property, and what they felt, okay, would be a reasonable thing for them to do.

The result of those considerations by each of those companies ended up being an offer of a flat fee. In lieu of the normal current -- then current royalty bearing rates, let's say one percent and so forth -- and this happens constantly.

A company like IBM has a general licensing policy in terms of royalty rates. Given a situation it may offer something royalty free, a one time charge, a recurring flat fee.

And in this particular case as I recall it was a one time fee of -- I think one of them said about $20,000. The other one said 20,000, 20,000. I think that may be close, right, Stan? No. You and I didn't talk about this ahead of time, right? Okay.

And on that basis I would tell you that standard became very successful. V.42 bis has been an extremely successful standard. The point for me on that, Stan, is that's an example of the licensing aspects of standards working in an appropriate way and in this case in an international arena, in an international arena.

And I think it's also important to keep in mind that what we talk about in the U.S. has severe consequences internationally since for the most part the intellectual property involved in standards is born in the United States.

So we do have to be very careful about that. So I think it's a good example of the process working effectively. Thank you.

TOR WINSTON: Allen?

ALLEN LO: Let me share the perspective of a company that -- or at least a class of companies I believe that have emerged in the last few years that are significantly impacted by RAND terms and this practice of RAND.

And just by providing some context,

the company that I work for I believe is sort of a member of a class of emerging companies that didn't exist ten years ago and came into existence to provide products or solutions for the internet.

And as has been discussed earlier, the internet as a global network, as a single network imposes at least one requirement which is interoperabilities. In order to be part of that network you need to have products that comply with standards so that you can communicate with all other products within that network.

And to me if anything has changed in the last ten years or so since the internet, that is a significant point.

To paraphrase what I think Professor Gellhorn said this morning, just because there is a lack of litigation -- and I'm not sure that is the case. But just because there might be a lack of litigation doesn't mean that there isn't a problem.

What RAND does is basically remove the

responsibility of determining licensing terms away from the standards body and provides a standards body with some comfort level that there won't be a hold-up problem but then shifts that burden of determining those fees or those terms to the parties, and the parties being the patent holders and the companies that will be implementing the standards.

In the class of companies that I'm referring to, these emerging companies, one characteristic is that because they are fairly young companies they typically have less mature patent portfolios which means that when it comes to patent holders wanting to license on RAND terms, reasonable and non-discriminatory, what actually happens is in practice is that the patent holder will approach the company and provide -- offer a license.

And my experience has been that almost universally they want royalties. So this isn't a situation where they are looking to do cross-licensing or any other kind of terms.

They want money.

And the company that's in the position of taking the license or being offered the license really has no leverage to negotiate anything that's fair and reasonable from the terms of that company because it doesn't have a mature patent portfolio and because it has to implement these standards.

What the effect is is two things. One is the patent holder is in the ultimate position to dictate what those terms are going to be, what those RAND terms are going to be.

Often times from my experience it is a percentage of revenue which when you look at one percent or whatever percentage, that amounts to quite a bit of money. And because of the leverage disparity I don't think -- in my opinion at least by definition you can't reach reasonable terms.

The other effect is that because standards are complex it is almost always the case that there will be multiple patents with

multiple patent holders that claim to have patent rights that are essential to practicing that standard.

And one of the things of by shifting the responsibility of dictating RAND terms away from a central authority to more of an ad hoc type of situation, what you end up with is a situation where RAND terms may appear reasonable in the context of one particular patent or in the context of negotiating with one particular patent holder.

But when a company has to deal with multiple patent holders that may hold -- that hold multiple patents, the cumulative effect is that the product -- the company that's taking the license has to take -- if they accept these terms they may end up having to pay 20, 30 percent of revenue just on patents, which I think is not -- certainly from the company's standpoint who's taking the license is not reasonable by any means.

The ultimate effect I believe is that

these companies with the less mature patent portfolio and the inability to negotiate anything reasonable have a significant disadvantage to other companies that may also be implementing standards that have large patent portfolios who are able to negotiate either reasonable or cross-license royalty free.

So when I look at RAND and in particular your comment, Mr. Holleman, about non-discriminatory not being the same as identical, it seems to me that if -- I'm not sure what non-discriminatory would mean if it didn't mean identical.

If large companies have the benefit of being able to cross-license for free and practice the standards, shouldn't the small company as well?

CAROLYN GALBREATH: Thank you.

RICHARD HOLLEMAN: Should I respond to just that last point or would you rather I not, Carolyn?

CAROLYN GALBREATH: I think it might

be a good idea if we could proceed with a couple of other people and then do a wrap-up. I'd like to recognize Scott Peterson next. And then, Dan Swanson, if you would like to follow that would be great.

SCOTT PETERSON: So curiously although I -- my experience is in a company quite different from Allen's, a very large company. Hewlett-Packard Company is a very large company with a very large patent portfolio. We experience much of the same things that he experiences.

So his characterization of this as being a problem that may be peculiar to young companies, small companies, companies that don't have large patent portfolios, I wouldn't restrict it in that way.

We experience some of the very challenges that he articulates that flow from the uncertainty of what RAND means and the expectation that RAND is an appropriately specific concept that you can then decide

what that means in some sort of a one-on-one-negotiation after the standard has been adopted.

Let me describe a problem -- the problem in a particular way from a little different perspective from his. Reasonable and non-discriminatory is not well defined for lots of good reasons.

It's extremely context dependent. So we're here with no definition of it for excellent reasons. It's not something that you want to write a formula for because it's extraordinarily context dependent. How do you determine what RAND is depends on many, many details.

One of the details has to do with the patent, by gosh. And in fact one of the wonders of the patent law is that the value that is returned to the inventor is in fact intended to be scoped according to their invention by this curious little thing.

You give them a monopoly and you allow them to negotiate whatever terms they might want.

And for someone who has a pioneering patent, by gosh, they get -- they can get a pretty good deal. That patent is going to be extremely valuable to people.

The majority of patents actually are not at all like that. The majority of patents are of much more mundane consequences. Many, many patents offer very little competitive advantage. One is maybe slightly better than others.

One may be one of three or four or more ways of doing a particular thing and therefore the licensing value of that might be extremely small.

Well, one of the wonders of this standards world is that when a patent becomes a patent that is essential to practicing a standard and you have a group of companies who are often time the competitors in that marketplace get together and agree that in order to enlarge the market in which we're all participating and something which will be valuable and important

for consumers and the producers alike to agree on the particular way, it's very common for them to pick one of these little unimportant details.

It didn't matter which one it was. But one of these will get chosen. Well, that might be covered by a patent, a patent which more likely than not is a patent whose value prior to its being anointed in this way was of very small value because in fact the majority of patents are of relatively small value.

As I say, the number that are the real gems are a fraction. So now we get back to figuring out what reasonable and non-discriminatory means.

So we have a negotiation. We have a negotiation however after this anointed event has occurred. So now one is negotiating a license for what has now become effectively a pioneering patent because it's essentially in an economic sense the equivalent because you can't participate in this particular market area.

If the standard achieves its goal and

is successful, you won't be able to participate in the products that play and interoperate in that marketplace without that patent.

So that patent has now taken on a significance far beyond the innovation that it represented. So what is it that you're negotiating here?

It seems to me that at that point in time the patent owner is in a very -- is in a wonderful position because they now have something, an asset which was of no consequence the other day, and now is of great consequence. Should they be rewarded for that? How should this all play out?

If in fact they are rewarded as if it was a pioneering patent, this seems to me to be a terrible distortion of the patent system because in fact the patent system was -- is providing people with monopolies, but monopolies that are proportioned in terms of their economic control, proportioned to the innovation.

The value here is not proportioned to

the innovation. The value is proportioned to the importance of the standard, a detail that flows from the collective action of all these folks.

So this is a long way of saying that I'm very concerned about the challenges of doing negotiation after the standard has been selected as a way of determining what was reasonable. I guess another -- well, let me stop there.

CAROLYN GALBREATH: Okay. Thank you. Dan, do you have a few comments? I was actually going to call on Dan Swanson, but go right ahead.

DANIEL SWANSON: We need some standardization of the Dans, I think. Let me first thank Dick Holleman for retrieving my name tag although I must say Dick whispered to me when he did that if he held onto it he could lock me out of any speaking role in the process today.

I just want to state for a moment in defense of Stan -- although Stan needs no defense. I should disclose although disclosure was the subject of the earlier panel this morning that I am both an antitrust lawyer and an

economist.

And aside from the fact that that is a recognized disability and proof positive of economies of scope in boredom -- and the economists among you can laugh and the rest of you can laugh when you look it up.

But it is two sets of lenses through which I look at and evaluate all of the empirical data that we're hearing here today. I hear Stan talking the way that economists talk about auctions.

And I hear many of the panelists who have practical industry experience taking some exception to that and suggesting that that's not the way the real world works.

Now, being confronted with the fact that the real work doesn't work that way is not a real effective argument with an economist. And yet I'm here as I say to defend the proposition that we still ought to think in the way that Stan has analyzed this matter very helpfully in his hypothetical.

As an antitrust matter as we think about enforcement we're typically confronted by a practice that takes place on the part of a licensor who has intellectual property that has been implicated by a standard.

And setting aside what that conduct is and whether or not it satisfies the requirements for anticompetitiveness and antitrust law, one of the first questions we like to ask in antitrust is does that licensor, does that defendant have market power.

And the market power inquiry is a very formalistic way sometimes it seems. But it's a very common sense way of asking the question is the market set up in such a way that anticompetitive activity is likely to be self-correcting and transient or long lived and persistent.

And so a defendant, a licensor in those circumstances is quite possibly going to be in possession of market power.

And if that's all we look at that

point in the antitrust sense, if that's all we look at at that point ex post, after the standard has been selected, then that's the end of the analysis. Then we move on to asking whether or not the conduct is anticompetitive.

But typically a licensor at that point will say, well, hold on; whether or not you think I have market power now, before I was chosen there was a whole lot of competition; there were a whole lot of options; I had to compete in the standard selection ensued from a very competitive process.

And you need to take that into account in deciding whether or not to intervene, whether or not the antitrust laws have a proper role to play. As economists we tend to think about ex ante competition of the sort that that scenario suggests as being in its ultimate form a kind of auction.

In other words, if we expect there to be effective ex ante competition in the extreme, we'd like to see it take place in the most

heightened circumstances which would be represented by a kind of Demzets auction where you auction off the right for this ostensible market power.

As antitrust practitioners we need to ask ourselves if that is the competitive extreme that policy ought to favor. What does antitrust law have to say about the ability of standard setting organizations and individual players in the market to attain that auction like extreme of competition?

So I think that although we acknowledge and realize that auctions don't necessarily take place, their format may be constrained by antitrust rules that we're going to be talking about today at some length later on.

Nonetheless it seems like a reasonable way to think about it in terms of economics because that ought to be the objective. It ought to be the objective of competition to constrain a technology before it obtains market power.

That's the point I think that Scott is making, that afterwards you're dealing potentially with a different animal. But if you're dealing with it after it has been constrained in an ex ante process, antitrust may have a whole different view of it.

CAROLYN GALBREATH: Thank you very much. I think that before we get into resolving what RAND means here this afternoon or why we just shouldn't have royalty free licenses all the time, which will be kind of the next two topics, that it might be appropriate to take about a ten-minute break.

If we could be back here rather promptly, we have a lot to cover this afternoon. But I think it might be good to stretch a bit as well. Thanks.

(Recess.)

CAROLYN GALBREATH: So I think we'd like to start the time after the break by just turning to the question of royalty free and when royalty free is necessary and why members who

would want to practice a standard would think that royalty free is necessary.

This is something that the W3C has been considering, and we're going to ask Dan Weitzner to just describe a little bit about the process that they've been going through debating the various virtues and vices of royalty free and the possibility of RAND terms.

DANIEL WEITZNER: What I thought I could usefully do here is just try to walk through the path that W3C has followed through this issue. It's been now a relatively long path. We've been talking about this for almost four years in one configuration or another.

And I guess one caveat that I would attach to this is that if I've learned anything about the way I think W3C needs to look at patent policy issues as against the way they're considered in other organizations it's that every situation really is different and that there are unique attributes of the web technically.

There are a unique set of goals that

the web seeks to accomplish. And I think there are unique market conditions when it comes to the web that really have informed all of our work.

So I'll ask that whatever extreme statements I might make you take them in the context of the web, notwithstanding what some people who are really devoted to the web think. I don't think the web is the whole world.

But I think that -- so I just want to start with what I do think is unique about the web. As Andrew started to say, the goal of the web from the beginning really has been to create a universal worldwide ubiquitiously accessible information space.

It has been to create something that simply hasn't existed before in that way, a way for computers all around the world regardless of what operating system they use, regardless of what part of the world they are in, regardless of how they happen to connect to the internet, to have all of these diverse devices connect together.

And I would say that in looking back at the technological history of the web what's striking is that I think that to the extent that the web has achieved any of those goals partially, the web has achieved the goals of -- or has approached universality by adopting extraordinarily simple, some would even say simplistic, technology.

HTML which is the way that people at least initially write web pages is really simple. And people who know a lot about computer languages for defining what pages, what documents ought to look like, look at HTML and say, well, this is about the dumbest thing you could possibly imagine; there is much better technology out there for doing this.

But the fact is that -- and the same actually goes for many parts of the web. Those who designed it like to say that it's elegant. And I think they have some basis for saying that.

But really what the web is is a set of very simple standards that can be used widely.

And the value of the standards, the quality of the standards is measured I would say first and foremost by the degree to which they can be adopted and implemented on a ubiquitous basis.

When we started talking about the issues of patent policy at W3C, what the discussion triggered was a kind of retrospective look at how the web and how the World Wide Web Consortium actually got to where it is.

And this is one of these cases where you have two groups of people looking at the same situation and seeing almost opposite sets of facts as far as they can tell.

The people who actually were involved in the development of the web looked at the process of developing the initial web standards and found really -- or saw what they did as collaborative work, as standards work that was really standards design, collaborative standards design starting more or less with blank pieces of paper or blank screens, if you will, and working together to develop standards.

So when we talk in the kind of abstract context of IPR and standards about giving away IPR, people who were involved in the early days of the web I don't think saw it as giving away anything. They saw it as building something together and then giving it to everyone else.

But there was not as there is today very detailed sets of specifications that have been worked on for years and then brought to a standards body. The standards body really started more or less from scratch.

And even when that was not the case -- and certainly today, a lot of the work we do is based on quite a lot of careful and expensive technical design work from a number of our members.

Even today a lot of the work that gets done with that work is a process of integrating those designs into the existing architecture of the web, figuring out how to get those basic designs to work well.

So still the environment of W3C is really an environment of quite a lot of collaborative technical work done in the working groups.

I think it's different in many ways from some of the more formal standards bodies that tend to develop requirements and then take submissions of different technologies and vote on them, and whatever they vote on is what they do and things move on.

That really isn't the way that things happen at W3C. All of this -- the issues of patents at W3C came to a head after we had a series of experiences with particular standards we were developing running into patent questions.

Starting in about 1998, a project that we had been working on for a while called P3P, the platform for privacy preferences, has been going along.

And in the middle of the process one of the members of the working group came forward first privately to other members of the group

and then finally publicly and said that they had patents that they believe were essential for implementing P3P and were prepared to offer some sort of reasonable non-discriminatory terms.

They never publicly disclosed what those terms might be. They also interestingly enough proposed to offer either very low cost or royalty free licenses, zero dollar licenses, if implementers would agree to use other technologies that this particular patent holder was interested in promoting, technologies that were not part of the standard.

We candidly at W3C had no idea how to deal with this problem. We had no -- well, we had ideas, but we had no process in place for dealing with this problem.

What we ended up doing after quite a lot of conversation with the patent holder to try to reach some sort of agreement, after conversations with various members, after conversations with antitrust lawyers, decided that what we were going to do in the first

instance was have an evaluation done of the patents in question, see to what extent implementations of P3P might read on those patents, and see to what extent those patents -- see to what extent the claims that were of interest were or were not valid.

We ended up after spending a fair amount of money as you can imagine and a fair amount of time producing an analysis which we made public which as far as we could tell gave most implementers a level of comfort in feeling that they could proceed in implementing P3P without being concerned about the licensing requests from the patent holder.

That was about three years ago. Just two days ago we actually announced that P3P is now a final web standard. And so far there has been no more problem from -- or no more -- no one has heard from that patent holder since.

So what this experience and some other experiences prompted us to do was to -- and prompted our members to call for really was a

comprehensive look at patent policy at W3C, what was the right policy for us, what would make sense.

We produced a policy back last summer which was an effort to balance RAND approaches with royalty free approaches. It said that every time we would start a new technical activity we would decide whether it would be a royalty free activity or a RAND activity.

And that proposal actually took quite a while to get together. Many of the members of the working group that actually produced the proposal are here. Bob Holleman was one of the charter members of the working group.

He retired though before he could finish leaving us in the lurch. But Scott Peterson and a couple folks in the audience and on the earlier panels have been involved in the group. We thought we had produced a, quote, reasonable proposal.

What we heard from members of the public, the open source community, many

independent developers, and many of our members was, I think to quote Andy again, that we were insane. Now, Andy said that with a lot more certainty and authority than I think others might have been able to muster.

But the debate that got set off when we proposed that there might be some circumstances in which web standards could involve RAND technologies I think really was instructive.

And I want to just indicate very quickly some of the reasons why I think both the commercial and non-commercial community involved in the web reacted so strongly. Certainly there were some ideological objections.

There are some people who believe software ought to be free, period, should never be patented, think that software patents are some sort of dramatic mistake. So they looked at this and said that we were supporting the software patent regime; we shouldn't do it.

I think there were others who felt

that the quality of some of the patents that had been granted over the last few years with respect to web technology really isn't quite up to par and that to allow people who have these patents of questionable validity to interject themselves into a standards process and possibly gain royalties from them just really was unfair.

I think though that the majority of the objections from members of the public and from many, many W3C members really came because of the uncertainty of what this would mean. It's relatively striking to me that, you know, as we talk about RAND on this panel Stan Besen says it's a term that economists don't use.

Bob Holleman is not quite sure he wants to define it -- Dick Holleman. I'm sorry. You know, Scott and the fellow from Juniper are not sure that it's really quite a good term.

It is a term -- whether or not it actually is susceptible to a useful definition, it is a term that I think raises considerable anxiety and confusion among people who feel that

they will have to depend on it to gain access to intellectual property on reasonable terms.

And I think if nothing else it opens up the possibility that there will be some long process that they will have to engage in to negotiate these reasonable terms.

By the time they have done that, their position in the market may be considerably disadvantaged. So the timing of this was difficult -- was seen as difficult.

I should also say that a number of our other members, particularly members who have histories of working in the traditional standard setting organizations and are comfortable with the notion of RAND licensing had quite the other alternative -- the other response.

When we proposed anything having to do with royalty free standards at all they thought we were crazy. So the process that we've been in has been trying to get people who have really quite different views of this world together on some sort of policy.

I want to -- I have some other remarks about the specifics of what we mean by royalty free as we have worked that out with respect to the web. But maybe there will be time for that later. I'm happy to either discuss it now or bring it up later.

CAROLYN GALBREATH: Why don't we have you weave it in as we go along this afternoon. And I guess your comments point up to -- point us back to comments that we had before the break. I think Scott Peterson coined the phrase negotiation after anointment.

You have brought up the fact that for some people the uncertainty associated with RAND terms is something that is a disincentive. And I think what we'd like to turn to now is the question of when the RAND is sufficient, and is there some range of understanding as to what RAND means.

And then if it's not sufficient, what are the other alternatives, and are those alternatives things that should give us concern

as antitrust enforcers or not. So with that if we have comments from the panel that would be great. Andy?

ANDREW UPDEGROVE: I just wanted to first of all qualify my insanity. My comment was more pedagogical rather than ideological. I don't have an ideological viewpoint about the web being free.

But I try to have a brutally pragmatic view about what it takes for something to succeed. And if one were talking about an aspect of the web that related to licensing by a comparatively small number of major players, then the web is no different from anything else.

Conversely if it were something that would touch a million people, from a practical point of view maybe even free or with a royalty it would still be an awkward encumbrance to put upon something that should be like a utility.

The one point I did want to make though that relates to a number of these things is W3C and IETF and organizations like that can

do pretty much what they want and know that what they do may be controversial but it will be successful because they are the anointed, you know, gatekeeper that people look to to do what needs to be done.

But there are many, many, many consortia that don't occupy that enviable position. Many consortium movements are by people who want to pioneer a new technology or a new service or a group of vendors that want to promote a particular way of doing things.

For most consortia standard setting is hard work. It's really hard work. It doesn't fall into your lap. So when you look at these things you have to kind of herd cats and get people to agree to things that will allow success and not hamstring it.

You have competitors to worry about. You may have other consortia, you know, who have their own competing standards to push. You have the indifference of the marketplace. You may credibility.

People are always cheap shotting things that you come out with saying, oh, that doesn't work; that's just hype; that's just promotion. There's inertia.

So whenever you try to bring about something new, the people who are trying to create the standards need to keep in mind that you really have to make it easy. And sometimes consortia members are their own worst enemies.

So RAND terms are something that you should be extending yourselves to promote. The last thing I wanted to say is on the topic of non-discriminatory licensing. It's important to remember that one aspect of that means available not just to people on the same basis or some relatively free basis, but available to everyone.

It may go out saying but it is important. But what you are committing is to license everyone including your head to head competitors and not up the ante for them on a discriminatory basis. I think everyone agrees that from that basis it at least means that.

After that it may get to be more variable.

CAROLYN GALBREATH: I see we have a lot of comments. Dr. Stiroh, let's go with you next.

LAUREN STIROH: In listening to some of the comments from industry people about the confusion over what RAND means and understanding that it means different things to different people, and that there may be confusion even within one standard setting body over what that means, I think that there maybe could be more agreement over what it doesn't mean.

And I must say that I'm not an industry person. I'm coming at this from the point of view of an economist. But my opinion of what it wouldn't mean is royalty free in all circumstances.

There may be circumstances where that is reasonable. But to impose it as a blanket requirement certainly seems to me to be unreasonable. I think that one of the costs of having something like that is that we don't know

what we don't have.

It must be acknowledged that if you can't be compensated for your innovations you don't have the same incentive to bring them to the standard setting body. If you don't bring them, they don't get incorporated.

You said that what we have with the World Wide Web is something that is easy and understandable. I don't know if I'm quoting you directly.

But we don't know what we don't have because -- and it may be that because of the royalty free nature of it there were things that were excluded that we could have had. And that's a cost that is probably immeasurable but one that we have to acknowledge exists.

CAROLYN GALBREATH: Dick Holleman, why don't we turn to you. And then we'll get back to Dan Weitzner.

RICHARD HOLLEMAN: Just to respond, I had a couple of comments for Andy. But Lauren's comment I think is very appropriate in that the

royalty free as the requirement in any group does have the potential of perhaps excluding what might be the best technology.

And if not carefully handled it could be considered perhaps a legal issue from a restraint of trade consideration as well. So I would certainly support that. The one comment I wanted to make harkening back to Andy's remark, particularly just before the break about -- I think it was a little too harsh.

The standards people are not into standards development for the licensing benefit. I think that's got to be looked at in a little broader way which is I believe typically companies, their participants get involved because it is an activity in which they have a business interest.

And often that relates to either a present or a future product or service of that company. There may be intellectual property associated with that, the overall goal being let's get a standard that helps promote our

business through the sale and promotion of our products.

There are times where intellectual property becomes a dimension of that. And to the extent it does then they are interested in the reasonable licensing revenue that can derive from that. And I perhaps am clarifying perhaps Andy's comment really in a broader sense.

So people do get involved because they have a business interest. Part of that business interest can be, okay, the objective of deriving reasonable royalty from their intellectual property.

Allen's concern -- and I think this goes to RAND, a point Carolyn wanted to focus on. Where you have multiple patents on an individual standard, there are some real world examples of where the industry felt this was significant enough to take some other action, that being patent pool types of activities.

MPEG, the MPEG LA license authority was sort of born out of that. But I would point

out that didn't happen in the standards bodies. That didn't happen in the standards activities.

The standards participants in developing the standard and the disclosure that took place saw that there was this multiplicity of patents that was coming forward. Outside of the ISO standards process they decided to try to do something.

And they independently embarked upon the patent pool. Same thing happened on 1394, commonly called Firewire in that regard. So that's -- I think that's one example.

Where you're talking about a concern, Andy, for a product and the product has to comply with multiple standards, let's say one from EIA, one from ISO, one from the ITU, one from IEEE, that's a difficulty in terms of the cost of doing business.

I mean everyone is faced with that difficulty because of what the product needs to succeed in the marketplace. I really get concerned when I hear the expression of

cross-licensing means the parties are getting everything for free.

There is value that is exchanged in cross-licensing and there's risk. So even for small companies you shouldn't, you know, feel that, well, they're giving each other everything at no cost to themselves because there may not be money flowing across the boundary.

There is an awful lot of IP that's being put on the table. And sometimes that IP is used by the other party in more successful ways than the patent holder has even used it themselves and to better advantage. So there is value exchange there even in the so-called large company portfolios. Thank you.

CAROLYN GALBREATH: Dan, would you like to respond to this.

DANIEL WEITZNER: Yeah, two points. One is to Andy's point about the degree to which W3C can do what we want or are -- I know you didn't mean that. But the degree to which we have flexibility here.

And I think it goes back to a point that Don Deutsch made this morning, that there is clearly competition among standard setting organizations. Clearly people who want to promote a certain technology as a standard have a wide range of choices.

And I believe that the choices that any standard setting organization makes about its IPR policy is going to be a differentiator. We happen to believe that the approach we're heading towards will differentiate us in a positive way and will provide value to our members as a whole.

But no doubt, you know, I would be surprised if we didn't have at least one member who leaves W3C if we in fact adopt a royalty free policy.

And I think we have already seen suggestions that there is some work that could have been done at W3C that isn't being done at W3C because of concerns about licensing policy.

And I think that that's an inevitable result of this. I mean no one has -- no

standards body today whether formal or de facto or consortium or whatever else has any kind of lock on any particular technology.

I think there are certainly startup advantages that different ones have, but I don't think that those necessarily last very long. And I think that the conversation that started in general in the standards world about what's royalty free and what's RAND is about different bodies differentiating themselves in some part.

The second point to the question about we don't know what we don't have in the web, I think it's hypothetically true that you never know what you're not going to get if you don't say you're willing to pay for it.

But I actually think in the case of the web it's not true. I think we actually do know what we don't have. What we don't have is a whole bunch of proprietary hypertext systems which existed before the web which didn't work, which didn't achieve the universal reach that the web achieved.

Now I'm not going to say that that is entirely because of licensing terms. But I think that was a factor. I think the fact that the basic web protocols were put out at zero cost with no licensing terms at all was essential to the development of the web.

Sure, there may well have been features that might have been put on the table. But I can tell you that I'm really just not aware of any feature that someone wanted to bring to the web and came and said, well, we'd really like to bring this to the web if you would only agree to a certain licensing term.

It just hasn't happened. And the reason I think that hasn't happened is essentially because I think patent holders are smart and understand what people are willing to pay for and able to pay for and what they are not.

And I think the web is an environment where at the level of the basic standards it's hard to pay. Now, I think that there is a lot of

licensed technology associated with the web.

The audio and the video technology that everyone loves is licensed technology, is RAND technology if that. And that's managed to find its way onto the web certainly. But it doesn't have the universal reach that the core web protocols do.

GAIL LEVINE: Can I jump in with a follow-up question for you, Dan?

DANIEL WEITZNER: Yeah.

GAIL LEVINE: We want to take the conversation to the universal level. And that means talking about not just the web but other markets outside the web. But before we do that, I wanted to ask you to help us understand what makes the web special.

I remember at the beginning of your comments you said the web is unique because of certain market conditions. And maybe those are the market conditions that make royalty free licensing work in your context.

Can you tell us what those conditions

are so that we can distinguish the web world from the other contexts that we've been talking about today?

DANIEL WEITZNER: Well, I think that you can distinguish some from just the actual development history of the web. As I said, the standards, the protocols initially were very simple and had no fees attached to them.

And the web really only got its start, if you will, because it was inexpensive and easy for lots of people all around the world to put up a website, to run a web server, to have a web browser.

And those were available at no cost, and in many cases based on more or less either volunteer labor or in other cases government subsidized labor. And that's true of lots of important parts of the internet.

I think that what is going to make the web unique going forward I think is a real question. I do -- you know, I think the fact that the web is for the most part only in

software is a distinguishing factor, and often software that doesn't cost any money.

You look at some of the key pieces of web software that everyone depends on, web server software. The most popular web server is the Apache web server. It costs no money. You can download it. You can run it on any computer. And I think that's really different than, say, the software that makes a telephone switch work.

You can't download that for free. You can't pick up a telephone switch, you know, on the corner and just hook it up. So those are I think the kind of things that have certainly made the web historically different.

I think what continues to make the web different is the development of web technology continues to rely on very broad implementation across lots of different platforms so that we can learn how to build the best technology into the web.

We rely on having lots of independent developers out there as well as lots of our large

members' research organizations testing, trying things out before they become final standards. I think that many other technology arenas don't have that kind of worldwide test lab.

It makes the web frustrating often times because some of it is really still in beta as people are using it. But I think it also has contributed to the way that the technology has developed.

It doesn't just kind of emerge out of a research lab working. It's subject to a very wide array of testing that is able to happen in part because of the licensing conditions that exist on the web.

CAROLYN GALBREATH: And if we are going then back to the question of when is RAND sufficient, maybe we could talk about this outside of the web and outside of the internet. Dan Swanson, you had some comments.

DANIEL SWANSON: Thanks, Carolyn. Just a few observations about RAND and royalty free licensing. One of the things that antitrust

law acknowledges it's not very good at, meaning antitrust enforcers and antitrust courts, our court system, and antitrust practitioners, is figuring out what a reasonable price should be.

That was something that people were very good at in the Middle Ages. You know there is a great medieval concept of a reasonable price, a fair price, a just price. But the insights of modern economics tell us that prices are determined in markets and are the result of supply and demand.

It's not something that's typically easy for a Court sitting as a regulatory body to determine and to effectively administer. Courts are very, very loath to take the role of markets. And I would certainly suggest they should have that attitude.

So from the standpoint of imposing constraints on the possible subsequent development of market power as the result of anointment or selection as a part of a standard, obviously one wants to give incentives to

standard setting organizations.

One wants to bestow them with the power to put limits, effective limits that will restrain that exercise after the technology is chosen. And the whole trick is doing that in a way that's consistent with antitrust law.

Now, again we're not good at figuring out ex post when a challenge comes up what the price should have been. You know, there are econometric methods to do it. There are a whole variety of ways to try to do it. But generally Courts just don't do that for the web.

So what I would suggest at least, what I've suggested in my paper is we look at objective indicators.

We're really best at enforcement when we have objective market private indicators of what reasonableness amounts to: actual transactions between private parties at a time before the standard has been selected; private licensing that takes place before standard selection, before anointment;

And as a somewhat secondary substitute, the actions consistent with antitrust constraints of standard setting bodies to invite potential licensors to give meaning to RAND, to submit model terms, to provide elaboration on what their intent is as they go out into the marketplace. Now, those are not perfect.

They may be unsatisfactory in many instances. They are not going to deal with all the uncertainties. But again when we're thinking ex post of how we enforce the antitrust laws, if there is a role for their enforcement, I think you need to focus on those processes and procedures to give rise to objective benchmarks.

Now, one thing that economists generally know and antitrust lawyers suspect is that zero is rarely a reasonable price. You don't see that popping up in markets too much.

You know, that's why economists know there is no such thing as a free lunch. It's great to get a zero price if you are a buyer. But the flip side of that is it's not so great if

you are a seller.

And in the intellectual property realm obviously the reason why we have intellectual property protection is to give those who have engaged in costly efforts to create intellectual property sufficient protection to give them the expectation that they will get a return for that, some return greater than zero.

So from an economic standpoint reverting to royalty free licensing doesn't seem like a likely -- necessarily likely approach in a general range of phenomenon.

And as an antitrust lawyer one of the things that's bred in the bones for us is a great suspicion of arguments to say, well, we had to set the price at X because it was really very, very important to do so, unique circumstances.

Of course we have a whole cartel literature, a whole legal -- set of legal precedents that rejected the notion early on that you could justify a price if it's otherwise set in a naked way in violation of the antitrust

laws.

My favorite example of that -- and then I'll finish and let others speak -- is a case from the European Union where a cartel was found out, was pursued by the European authorities, and the case went up through the legal system.

And at one point one of the companies indicated that their defense was, A, they hadn't done it, but if they had done it -- this was an Italian company -- they were compelled to do so by the circumstances of Italian society at that time because of the Red Brigades, that things were so uncontrollable that they actually had to fix prices, although they denied they had fixed prices.

So the European court of first instance made short shrift of that as American courts would. Again I'm using a somewhat whimsical example here.

But it's intended to reflect the notion that our antitrust sensibilities are -- we

don't typically look at justifications if the pricing system has been interfered with. We expect to see that process take place.

We look for objective indicators of what that process yields. We don't expect to see zero. We don't expect to see fixed prices higher than zero. But we do like to look at objective benchmarks that will guide us in antitrust enforcement that will not be forcing us to revert back to medieval notions of fair or just prices.

CAROLYN GALBREATH: Thank you. Allen Lo, you had some comments.

ALLEN LO: The greatest concern that I have about RAND terms is the inability or the unmanageability of being able to fairly and objectively assess what those RAND terms are. And you've mentioned perhaps some, suggested some criteria, some objective criteria for doing that.

But it's been my experience that even when a patent holder has offered to license a patent or patents on RAND terms that not only do the standards bodies and the other companies that

want to take -- potentially take that license not know what that means, but more times than not the patent owner itself doesn't know what that means.

In most cases it's typically the patent owner that approaches the company that's implementing the standard to say, okay, you've been now implementing this; it's time to pay up.

In some cases the company looking to implement the standard in good faith will approach the patent holder and say, okay, you've said you're going to offer these on reasonable and non-discriminatory terms; what does that mean.

In every situation that I'm aware of the patent holder hasn't really decided what that means and is unwilling to give anything more specific than to say it means what it says, reasonable and non-discriminatory.

You can figure that out and you can wait a year or two until I come knocking on your door and I'll tell you what that means. But the position that it places companies in is to have

that uncertainty while it's commercializing its product.

And when the patent owner then approaches the company it's in an exposed position where it basically has to accept those terms that the patent holder dictates.

Or if it doesn't accept the RAND terms, then you have the hold-up situation where if you get sued there are no more reasonable and non-discriminatory terms. The license was not accepted.

And so now you face potential damages from a patent infringement standpoint, potential willful infringement damages, as well as the risk of an injunction. To me what this all results in is a couple things. One is it encourages this type of behavior.

And now it has gotten to a point where every company that participates at least in the industry that I'm in is madly filing as many patents as possible on standards or drafting new claims to older patent applications that they had

filed a few years ago to make them read on standards so that they will have something to protect themselves with when they get approached.

And I don't think that this is the kind of -- this kind of behavior seems to then exacerbate the problem and continue it to a point where eventually the risk is that it becomes completely debilitating.

GAIL LEVINE: Allen, can I ask you a follow-up question to that? And the point you've raised is a really perplexing and challenging problem. It's basically the problem of the ex post setting of RAND.

Given the costs that you face when you try to do it ex post, what's the solution to your mind? How would you solve the problem?

ALLEN LO: In my mind the simplest solution would be royalty free. I mean that's the only way that you have certainty, and that's the only way that you can know up front and not have to then deal with a lot of the issues that were discussed this morning about notice and just

the administration of these kinds of policies.

I understand that there is -- Dick Holleman's point about value in patent portfolios. In my mind when I look at patents, patents are really nothing more than the right to sue. When you take a license, you don't get access to any more technology than what's already out there.

What you get is the freedom to not have to worry that this person who has this patent is going to sue you. And when you talk about cross-licensing royalty free, the value that you're returning to somebody else is that you are also agreeing that you are not going to sue them back.

And so while that is value, I don't see that as being the kind of value that really is the same as transferring technology or really enabling somebody to create a product.

It's really just an agreement to say we're not going to sue each other. And to me that's the kind of environment that really --

that is much more procompetitive than leaving it to RAND terms.

GAIL LEVINE: And I guess if royalty free is the answer, how would you respond to Lauren Stiroh's point that if you insist on royalty free you'll never know what you don't have; you'll never know what you might have gotten had you not insisted on royalty free licenses?

ALLEN LO: I should probably qualify that. It may depend on the industry. It may depend on the technology and whether there is absolute market power in having a patent over a standard, and if the standard is absolutely necessary to play in a particular area as I believe it is in the case of perhaps the web and the internet.

Then I don't know that we have any other choice. It could be though in other areas that RAND terms make sense. And as Dick Holleman has said, these have been things that have been around for a while and they -- if it's not broken

don't fix it.

What seems to be different today than perhaps 10, 15, 20 years ago is this notion that certain standards are really indispensable and we can't live without them. I believe that there is adequate motivation to innovate in the areas of the internet and the web that will naturally cause people to want to standardize.

In the case of -- in the networking area one of the things that motivates companies to want to standardize is that customers will not buy often times product that implements a protocol unless they know it will be standard, standardized, and that know that this will become the standard, because they don't want to have to then risk implementing, using that product and then finding out later that that's not the right product.

So there is a lot of pressure by customers to naturally cause vendors or companies producing product to standardize around some sort of specification. And quite frankly they create

a lot of the pressure for the companies to collaborate and to do that.

There is another natural reason for companies who want to do that, which is that they don't want to be the ones implementing proprietary protocols later to find out that someone else has standardized around something else and now they're competitively behind because they've implemented something that no one else has. And in the internet that's something that's just not going to have any utility.

CAROLYN GALBREATH: Thank you. I don't want to stop the discussion in any way, but I would like to get from the concept of royalty free and when RAND may not be sufficient which we've heard about, to the other possibilities of perhaps defining RAND up front and whether that should raise concerns for us as antitrust enforcers.

So if we can go to Professor Gifford and get comments -- and if you could, maybe weave your ideas into that question that I've just

posed, and then we'll just continue down the row and hope to get some of those issues out on the table.

DANIEL GIFFORD: Well, I guess I've got a couple of thoughts in my mind. One, I think we have just heard -- actually we have heard several times today that one of the problems with RAND is it means different things to different people.

And, you know, reasonable and non-discriminatory terms may work really well with one set of actors, and may not work as well with another set of actors because a second set of actors may have different expectations or different perspectives. And what's reasonable to one person may not be reasonable to another.

But I think perhaps that all goes to as we were just saying objective, something objective. Where can we get something objective? And maybe we can get something objective by getting everything -- I mean all of this is informational problems I think.

I mean everything that -- all the difficulties we're encountering, well, all right, we say we lack information. We don't know what the patent owner is going to ask for revenue tomorrow. There are informational problems, and those are basically institutional problems.

You know, how can we structure our institutions in such a way as to facilitate people acting intelligently and seeking their own interests in a way that induces value for everyone. And, you know, part of these hearings I think are so that the antitrust laws don't get in the way.

I mean that was one -- I thought that was one of the ideas, is that we were going to see what ways the government enforcement agencies could find to facilitate resolution of the problems that people have.

And maybe part of that is to, you know, either, one, get out of the way, or, two, assure people that when they are taking -- engaging in behavior that is socially beneficial

they won't see themselves as risking antitrust liability. I guess those are my current remarks.

CAROLYN GALBREATH: Dr. Besen?

STANLEY BESEN: We've been talking almost exclusively about the R part of RAND. And I want to say a word about the N-D part.

CAROLYN GALBREATH: Thank you.

STANLEY BESEN: And I guess just a few points. First of all, I think one should recognize that for economists discrimination is not necessarily a bad thing.

In fact there are sort of well known propositions in economics that show the circumstances in which discriminatory pricing is actually efficiency enhancing. So that's sort of point one.

Second, we even know there are cases in which certain goods might not be produced at all but for the existence of discrimination. So in fact it may not only be efficiency enhancing but may be actually indispensable to the creation of the product, which brings me to the specific

example here.

I happen to know of a case in which an entity, a large entity got a lower license fee than did subsequent adopters. And it got it largely because its early adoption was critical to the evolution of the standard.

Once this firm adopted the standard, other firms followed. Question for the panel: Is it discriminatory to give that entity a lower license fee than people who came later when the risks are smaller and their importance to the selection of the standard is less?

CAROLYN GALBREATH: Would anybody like to take that? Dr. Stiroh?

RICHARD HOLLEMAN: I'll take on any questions. I think it is an important point that Stan brings up. And I think the current practice is -- and I harken back to what I've said earlier. The whole idea of -- and I use discriminatory in a different sense.

From a standards point of view it's making a license available to whomever requests

a license under reasonable terms and conditions makes you non-discriminatory.

But using it in the context of a discriminatory license or royalty, I think the whole premise is it's reasonable if the two parties agree that it's reasonable.

And the fact that I may charge two dollars for you to cross my bridge because you are the first one to go across and you wanted to be first to get across it and I charge everybody else five dollars who comes later, those people don't necessarily -- or we cannot assume that the five dollar per person charge is unfair discrimination.

Let me use that. Unfair discrimination given Stan's reference to discriminatory is not necessarily bad if you want to use discriminatory that way. So it goes back to this reasonableness.

The test is not that it's the same royalty rate for everybody. And I would agree with Stan. I think value propositions could be

created between the licensor and the licensee that say we both feel this is reasonable.

But the one I negotiate today is going to be different perhaps than the one I negotiate tomorrow. But both parties will feel that the license is reasonable. And that's what I think is difficult in terms of trying to focus on a universal guideline or a universal objective.

And then if you then take this back to what we talked about this morning -- and I'm diverting a little bit in terms of disclosure -- and you apply the whole disclosure concern against that, particularly applications, not just issued patents, and you throw that into the mix, there is even a further uncertainty.

And while there are people who would like to think this is an industrial strength process and the proposals about, well, we ought to look at value and maybe determine what's right or not right, in the back of my head I say they seem to be talking about the SDOs doing this.

And this whole process as I'm using

the term, it's not industrial strength. It works to suit the situation and the objectives of the group that's involved, the parties that are involved. And I think that applies to reasonable and discriminatory the way that Stan asked the question. Thank you.

CAROLYN GALBREATH: I'd like to go to Lauren Stiroh and Mark Patterson just briefly and then move on to some of the other questions that we want to get to this afternoon.

LAUREN STIROH: I wanted to address a comment to some of the points that we heard earlier about when there are guidelines, pre- and post guidelines, elements of an actual license that we can look at, and something that Allen said about there being uncertainty about what you expect.

And then Dan Gifford mentioned that there are informational constraints. I think just one point that I want to make briefly is that the times when antitrust concerns and market power matter are, as we heard earlier, the times

when there are alternatives.

There is more than one equally valuable alternative. One is chosen. There are sunk costs, and it becomes the standard. And the market power of that technology is much greater than it was before. In those instances we do have information.

We know what the alternative was because it had to come forward in the standard setting arena. And so we do have information to use as a guideline across industries that would put some bounds on what the R in RAND has to be or can't exceed.

CAROLYN GALBREATH: Thank you. Mark?

MARK PATTERSON: I just wanted to respond to Stan Besen's question. I guess if you're thinking that one could discriminate on the basis of the risk taken by the licensee, it would make -- you would want to ask what are the risks.

If the risks they are taking are related to whether the standard will be adopted

by all the people out there in the world that are -- you know that are thinking of adopting the standard, then I don't think that's related to the patentee at all.

I don't know that the patentee should be able to discriminate on the basis of risks that are related to the standard adoption which is something the patentee does not necessarily -- has not necessarily created nor is entitled to.

DANIEL WEITZNER: Can I just make one comment in response to Professor Gifford? This is on the process question about defining RAND.

I just wanted to mention that one of the actually few items that there was broad agreement on in our patent policy discussion is that we did need a venue inside W3C for discussing issues related to licensing models at least if not licensing terms precisely.

So we have this entity called a patent advisory group which is a group that is part of W3C that's comprised of the organization's members' kind of main representatives to W3C.

It's not the technical working group members because everyone agreed they don't know how to talk about this stuff or they don't want to be out -- they are not allowed to talk about this stuff.

But we did come to the conclusion that there had to be a venue for sorting this out. How far the discussions in that group go certainly raised questions that would be -- that would be relevant here. The group is not the price advisory group. So we didn't anticipate that price would be discussed per se.

But I think in agreeing that we wanted to allow our members a venue in which they could talk about which way to go on an adoption of certain technology and what the licensing terms might be, I think it's only natural to assume that price is going to be a factor at least in their own consideration.

So we've at least taken one step in the direction of saying there has to be a way to talk about these in the process.

CAROLYN GALBREATH: Thanks, Dan. That actually gets us right where I wanted to be, which is in response to Professor Gifford's question should antitrust get out of the way.

If antitrust gets out of the way would negotiations over what RAND terms mean solve the problem that we've been talking about today, or would it raise other problems for the people that would be talking about these issues that should or might give us concerns as antitrust enforcers? And I'll just throw that open to the panel.

DANIEL SWANSON: I was going to say the answer to the question is antitrust should get out of the way of my clients. But that may not be --

PANELIST: Then they wouldn't be your clients.

DANIEL SWANSON: I'd be popular for a while. I think, Gail, the answer I would give is, no, antitrust doesn't need to get out of the way to the point of repealing the law against price fixing.

And I think you can glean from my earlier comments that I think that we can observe our normal sensibilities here even though there may be lots of uniqueness in some sectors of course in antitrust we're fully capable of taking into account, but that we want to adhere to our normal sensibilities of avoiding, you know, collusion on price, on royalty rates, on terms and the like.

Now, how do you accomplish what we've all talked about, which is to avoid the power that comes from anointing?

Professor Patterson's superb paper talks about that in some sense from a patent law perspective. What is the entitlement under the patent law that flows from the standard selection itself?

In the antitrust sense I don't think we have an antitrust policy that intellectual property holders aren't entitled to enhance the value of their intellectual property if they happen to be lucky enough to be anointed as a

standard without sufficient competition that otherwise could have taken place.

You know, antitrust recognizes that even monopolies that come about through happenstance and good fortune are entitled to exist and in fact to charge a monopoly price.

So I think the antitrust policies are not to deprive a lucky intellectual property holder of their returns, but certainly not to stand in the way of the ultimate consumers and their immediate representatives, the direct purchasers, licensees of the technologies to keep the system as competitive as can be with the kind of polar case being the auction scenario.

Now, can you do that in a way that's consistent with antitrust strictures against price fixing? And I think the answer is yes. And certainly I'm sure -- I know a lot of lawyers who try to advise in this area to try to accomplish this goal.

First of all, although it would be certainly direct and speedy to have the standard

setting organization negotiate on behalf of all of its members to the extent that there are putative licensees, that I would say is at one end which probably poses way too many antitrust problems.

And I don't think that the strictures that exist that constrain that are likely to be changing even as a result of these hearings, although I could be wrong. At the other end of course is the case that we've heard about where no one talks about pricing at all.

No one talks about terms. No one talks about royalty rates. No one even solicits information about those. And that doesn't seem too sensible at least from an economic standpoint and from an antitrust policy standpoint. We always want to see more competition if we can at least not impede its coming about.

So I end up in the middle. Is it possibly consistent with antitrust to create incentives for contending technology owners to supply the economic data that informed

individuals would want to have in order to make a decision, balancing that against all of the great technical data that standard setting organizations are superb with no antitrust risk whatsoever at generating and testing and comparing and the like, to compare the economic side of the coin to the technical side of the coin.

And how do you do that consistent with the antitrust laws? Well, I think you can ask a candidate technology owner to indicate things like will you license, commit to licensing on RAND terms? Will you provide us with what your model or representative terms are?

And I think in some sense to answer Stan's question, one way from an antitrust standpoint to provide protection later on if you want to discriminate is to see here is the range and here are the factors at that stage.

And to essentially get again my theme of getting objective benchmarks, to get that information brought out in the process, now what

do you do with that? That's where the antitrust problem comes in.

If all of the members take that information and start chatting with each other saying it's too high -- typically they are not going to be saying it's too low. That's what the other side says. Then that seems to get us back into the antitrust danger area again.

But I'm not sure. I don't think that you need to talk about it in order to get the effect that is desired. And that is the kind of auction environment where the submitters know that their chances of success, their chances of being anointed depend upon the individual evaluation of this economic data.

As long as it is presented, available to the various participants and members they can make each of them an individual determination. They may want to talk about it. But they can always call up the putative licensor.

They don't have to talk to each other about it. Again it may not be a solution that

ends up being one that works in all scenarios. I've seen it work. So I do believe it can work. I believe it poses limited antitrust risks.

I don't think antitrust chills that type of a process. And it can kind of align the antitrust policies with the economic incentives that, you know, we should want to see take place.

CAROLYN GALBREATH: Thank you. We'll go to Lauren Stiroh.

LAUREN STIROH: I'm in agreement with what Dan said. And I think that one thing I would like to add to that is that we don't necessarily have to throw antitrust and antitrust lawyers out. But what we might want to do is add economists in.

And if we don't want to bring price discussion right into antitrust -- which I don't want to say to throw that out completely because I think as an economist that is the solution. Bring the price discussion right in.

But we could get to the same point not by discussing price but by discussing cost. As I

mentioned earlier, the cases where this matters is where you have two alternatives and the bounds are going to be set by the difference in the advantage of the chosen over the next best alternative.

Those costs are known or could be determined. And so the discussion could be over costs and upper and lower bounds rather than having an explicit auction although I'm certainly not opposed to having an explicit auction. I think as an economist that's an excellent solution.

CAROLYN GALBREATH: Andy Updegrove?

ANDREW UPDEGROVE: There are a number of thoughts I have, but let me just make one very explicit suggestion because it's right up your ally.

There is a thing called the National Cooperative Research and Production Act which has a very rough and variable overlay standard setting organization to standard setting organization. It's very easy to comply with,

very low barrier to entry.

Any consortia can do it at little to no cost. The suggestion is that I think what you're hearing is a lot of creative energy about we all identify a problem. Everyone involved in the process is nervous and scared.

There are clearly some procompetitive goals to be secured. But there is a lot of searching about how to go about it. It seems to me that RAND terms specifically and standard setting generally are exactly the type of situation that the NCRPA could cover and should cover.

It just happened to have come along to answer somewhat different problems rather than this having been in the cross hairs. I would think that that would be a splendid thing for the FTC and the DOJ to promote and while they were at it to try and do two small corrections.

One is that standard setting organizations by definition are international when you're in the areas that you're talking

about. There is no such thing as an American telecom issue or an American worldwide web issue.

It may be U.S.-centric, but by definition it extends beyond the borders. That means that you need to have the rest of the world involved for U.S. interests to succeed.

Doubtless as a result of the political pressures on the NCRPA when it came out, there is a provision in there which says that a non-U.S. member or non-U.S. participant in whatever process is under review, is only protected if that -- the country in which they are domiciled has an equivalent law giving equivalent protections to American companies engaging in similar behavior in those countries.

Well, we can all think of a few Senators that might have, you know, suggested that. But needless to say there couldn't be any country in the world that happens to relate to.

If what we're really trying to do is try and help U.S. companies succeed and not having competing standards efforts in other

countries, it seems to me that it would be great to extend this explicitly to standard setting, remove that restriction.

There is one other thing that I think would be helpful. As currently written there is a requirement, somewhat vague, but easiest to interpret as saying that the NCRPA will only apply if a consortium or standard setting body begins complying within 90 days of formation.

Very frequently organizations get going on an informal basis as a forum, interest group, or whatever. They may later incorporate but it's not at all certain that they haven't lost the opportunity.

It would be great if one could at least say that you could file with prospective effect for actions taken prospectively. It's not obvious to me why that would undermine the original goals of it.

You wouldn't immunize prior conduct, but you could prospectively. I think that that -- you know, other than legislative time

obviously would be a clear win that would be of assistance in this situation as well as standard setting generally.

CAROLYN GALBREATH: Thank you. We're coming very quickly to the close of our time here today. And I'd like to outline where I think we should probably go to wrap this up the way we want to.

Typically as antitrust enforcers we do think about things like market power when we look at anticompetitive consequences from a particular set of actions.

And so I'd like to turn for a few moments to that and just to how we should look at market power after a standard has been set. I think that Lauren Stiroh and Dan Swanson have a few ideas for us about that.

And then I'd like to turn to Mark Patterson who has come up with some ideas about the way we could actually figure out what RAND means or what pricing means in terms of a standard. And I'd like him to take the floor

and just give us a few moments of his ideas about that.

And then for the end of the day I'd like Professor Gifford to if he could just wrap up for us with perhaps a minute or two of comments about where we've been today and what he thinks and maybe what the panel thinks as well are the most interesting and challenging questions that we've come out of this process with. So with that perhaps I'll turn it over to Dr. Stiroh and then Dan Swanson.

LAUREN STIROH: I will start by echoing some things that we heard this morning, that what I think would be worthwhile is to distinguish between the market power that comes from the technology on its own and the market power that comes just from the standard, the act of setting a standard that elevates a technology above the competitors.

What might be a useful definition is to say that the market power that just comes from the standard is undue market power. And it's the

exercise of that market power that the antitrust authorities might be interested in.

What I'd like to emphasize though is that not all of the market power is necessarily going to come from the standard.

And it's certainly possible that a technology will have some value outside of the standard setting arena, and that what we want to ensure is that what we -- when we have a reasonable and non-discriminatory license that it reflects the value of the technology out of the standard setting body.

It doesn't strip it of the value that it had had it never come into the standard setting arena, and that whatever RAND rule we end up with maintains the incentives for people to bring their technologies into the standard setting arena.

And so where I come out on the issue of market power is that the market power that's due to the technology is what the technology could have earned in a competitive environment if

it were going to compete to become a de facto standard rather than be chosen in whatever time frame the standard setting body is operating within.

But if it were to compete over the long run to become a standard, what value would it attain then, taking into account the costs it would incur in trying to become the standard but also the value that it has compared to the alternatives that eventually make it be the one chosen alternative.

CAROLYN GALBREATH: Thank you. Dan Swanson?

DANIEL SWANSON: This issue of market power obviously is a theme that is in my paper and I've returned to it a number of times in my comments today.

The first observation I'd make is that I think we've reached the point in the evolution of doctrine where we all agree, without collusion I might add, that market power does not arise merely by virtue of the existence of intellectual

property protection. That I think is relatively non-controversial at this point in our history.

Maybe a somewhat more controversial question is whether or not market power that is protected by a standard or a standard that is protected by -- I'm sorry -- whether or not intellectual property that is embedded in a standard somehow is treated differently in a sense.

In the first instance, is there any reason why we would want to as a matter of presumption take a different course than the one that we take with intellectual property generally today in the modern antitrust economics world and be willing to indulge a presumption that if intellectual property is embedded in a proprietary standard that in that case we will assume that there is some measure of market power. And I think that's not a good idea.

It's I suppose an empirical issue. And certainly if it is or to the extent it is I don't think that there is a consensus that that

assumption or presumption would be warranted by what we know to date.

Andy Updegrove and I were talking before we started the panel, and Andy was pointing out -- as he has pointed out today any number of instances where even what one might think of as powerful technologies or powerful patents have been trumped even though they have been embedded in standard by other standards or other technologies held perhaps by less notable or well known licensors.

So I don't think we want to change our view that it's a matter of the factual circumstances of the individual technology market at issue. Having said that, I return to the scenario that I think confronts antitrust enforcement somewhat vitally.

And that is you are always going to be asking these questions when you are confronted by a claim of anticompetitive conduct by a licensor who has been anointed whose intellectual property is in a standard.

And at that point either ex post there is an argument that that licensor does have market power or there isn't. Now, if there isn't, presumably there's no issue at all, because it usually doesn't go the other way around.

You have market power and you lose it. Really what happens -- what we're concerned with is you don't have it but then you gain it. So if there is market power at the ex post stage, we might give up and say that's enough to go on and engage in our analysis of conduct. Some of this sometimes becomes a bit semantic.

But I would still think of this more properly as a question of analyzing market power. But if we don't take that tack then we might ask ourselves was there an earlier phase where before selection there was competition, sufficient competition for antitrust purposes for us to conclude that market power at that point did not exist.

And if we conclude that's the case,

under what circumstances ought we to make that time frame the relevant time frame for making the legal antitrust assessment, the kind of jurisdictional assessment of whether or not market power exists.

And it seems to me that one could do that. And doing so would be consistent with the case law that is evolving after the Supreme Court's Kodak decision by reasonable from analogy to those cases.

And examining whether or not there are private or market constraints that are imposed during the period of ex ante competition that have not been transgressed and that therefore would tell us if that were the case, that although there might be ex post market power, it's not an antitrust problem because it has been constrained in the ex ante world by the private market system.

And therefore what's happening is not actually an exercise of market power. What are the circumstances where one can reach the

conclusion for purposes of antitrust enforcement that ex ante institutions have constrained a licensor sufficiently so as to ignore arguable ex post market power?

Well, one is going to be the type of Kodak consideration of sophistication and a relative degree of information and knowledge on the part of the participants in the process. Now, one can debate about whether or not perfect knowledge is required.

A lot of very respectable economists have opined in very persuasive writings at least that persuade me that perfect information isn't required. And the courts I think have seemed to agree with that.

The post-Kodak Circuit Court decisions like PSI and others have seemed to agree with that. So one condition is sophistication, knowledge, not perfect knowledge, reasonable knowledge.

The second condition is an actual constraint, a license that is involved in the

particular circumstances, or -- and this is the question -- a RAND commitment on the part of this putative defendant.

And so if that RAND commitment is going to suffice to qualify this defendant for the get out of jail free card that would arise if he could convince the antitrust enforcer that in fact a commitment was meaningful enough so as to deprive him of the ability to exercise any ex post market power, if we're going to go down that road, then what we really need to do is look at whether or not the record exists to show that there was content to that RAND commitment ex ante.

And that's why to my mind in some sense this puts it all back in the lap of the eventual possible defendant. If you're a licensor, if you want to be anointed, but you also want to be protected from possible antitrust enforcement later on, then it should be in your interest to give contents to RAND.

It should be in your interest to

supply model terms, to be competitive obviously, to enter into licenses with those licensees who want to license before the standard selection process is at a conclusion.

And if you do so, the benefit of that is it may serve as key evidence later on that you're not transgressing the limits that were set at a time when the market was competitive.

So if the claim later is you're charging a license fee that is too high, a royalty rate that is too high, you can point back and say, well, look; I provided the standard setting organization model terms that were in fact even higher, and those were good enough back then for me to be selected as the standard; I must not be exercising market power now.

So that at least would be one possible approach to analyzing the relationship between ex post and ex ante -- ex ante competition, ex post market power that's consistent with what we see in the treatment of franchise contracts and aftermarket situations and the like, all of

which have been very extensively analyzed in light of the Supreme Court's decision in Kodak.

CAROLYN GALBREATH: Thanks very much. And I think we'll turn now to Mark Patterson. Mark, if you could give us the benefit of your thinking on this and walk us through how you think that valuation might be done.

MARK PATTERSON: I think given the time I'll just try to give a few comments from what are in my paper. It may be a little incoherent, but rest assured the paper is powerfully compelling. I have a couple of points in the paper, maybe one conceptual point and two practical points perhaps.

The conceptual point is I think we could maybe benefit in this area by thinking of standards as intellectual property themselves. They are typically not patentable for any of a variety of reasons.

But they have much the same economic characteristics as traditional intellectual property and so need maybe protection in the same

way they may be expensive to produce but the value may be easily expropriated by, say, an IP owner who wants to license at unreasonable terms perhaps.

So I suggest we think about the patent standard situation similar to a blocking patent situation where you have a basic patent and then a follow-on improvement patent. And there can be bargaining breakdowns there that prevent the parties from agreeing on terms.

And so what I try to do in the paper is go through some situations where I think there's some objective evidence that you could try to ascertain the value of the standard and the value of the patent in a way that would help solve the bargaining problem.

And my points here are not that different from those of others on the panel who have made roughly the same point. I do try to talk about the situations in which some objective evidence might be available.

For instance, people here made

distinctions between standards that reduce the cost of complying with the -- or patents that reduce the costs of complying with the standard and patents or inventions that have independent technical value.

If what the invention does is reduce the cost of complying with the standard, there is probably a fairly good objective measure of how much cost reduction is provided.

And there may be fairly good objective measures of alternatives to the costs of meeting -- complying with the standard in alternative ways if those alternatives do exist or might have existed. If an alternative standard might have been created, one could use it as an alternative.

And therefore you could compare the cost reduction in the various situations to decide on some objective measure of what the patentee might be entitled to. And this would give some content to reasonableness.

It might in fact overstate what the

patentee is entitled to because in a typical bargaining situation they probably wouldn't get all that value. In the situation where an invention provides a technical benefit over and above the standard, there may also be some objective measures.

As Dan Swanson said a few minutes ago, you could look at prestandardization licensing terms. And one court at least, the Townsend Court in Townsend versus Rockwell has sort of seems to look at that.

It points to licensing terms that had been offered by the patentee as if that was a measure of -- before the standardization as if that was a measure that we might want to look to. The problem was in that case that those -- and Dan may actually mention this in his paper too.

Those terms were offered to the standard setting organization. So they contemplated the standardization. What you would really need to look at are terms that actual licensing transactions occurred at before the

standardization.

Now, often that information isn't going to be available, but sometimes it will. There may also be alternative inventions that one could use to make some measurements of the relative value.

I talked briefly in the paper about the GIF controversy where the GIF graphics format turned out to be covered by a patent on an algorithm for data compression. And there were efforts to create -- subsequently to create alternative methods that were only partly successful.

But even if there is only a partial success you could maybe use that to get some sort of evidence of the actual technical value provided by the standard. Then I also talk about the situation where one might argue that a patented invention basically enables the creation of the standard.

There are some inventions that are just directed towards interoperability. And it

might then be that the interoperability that the standard provides is only made possible because of this invention.

And in that case I think you can make a reasonable argument that the patentee is entitled to whatever they can get. They are basically entitled to the value of, you know, the entire market power created by the standard because they arguably created it.

I talk about two examples of this. I say, you know, in this case you might want to look at the claims of the patent and see exactly what the nature of the invention is. And I talk about the claims of the Dell patent that was at issue in the FTC's case.

And you could make an argument I think maybe that those -- that that invention was directed at something that helped make interoperability more possible, in which case you could imagine that Dell might be more entitled to the returns from the standardization than another example I give which is the Rambus patent which

doesn't seem to relate to the interoperability that was at issue in the standard in the Rambus case.

Then I talk about -- I talk also in the paper about de facto standards. And my take on de facto standards -- and here I do disagree with some of the people on the panel -- is that they should be treated just like de jure standards.

There's no particular reason why -- even in a de facto context the market is going to function to adopt what it thinks is the approach that provides the best balance of, you know, technical aspects and cost.

But once it does adopt it a lot of the value of the intellectual property that becomes the de facto standard is still created by parties that are not the patentee, created by the parties that adopt the standard.

And they can increase the demand tremendously. And that's not something that I believe the patentee or, say, even the copyright

owner should be entitled to.

Finally I want to say a little something about lock-in standards. Some of you may be familiar with the IMS Health case that the European commission is currently pursuing. It involves a copyrighted standard maybe.

It's unclear exactly whether the value of this comes from interoperability which might make it a standard like those we have talked about today, or whether it just comes from the fact that a bunch of large users adopted it and invested in adapting their internal systems to using it.

I think in those cases again the investment there and the value is created by -- not by the copyright owner in that case but by those who have invested in training, materials, and that sort of thing. And so the patentee or in that case the copyright owner shouldn't be entitled to that.

Now, I do agree with Dan Swanson that ex ante some of these things could be -- there

can be ex ante constraints on the creation of sort of lock-in or other forms of ex post power. And this comes to my second practical point.

I think it only is possible for the ex ante bargaining, say, to reduce these problems if people know what the ex post rules are going to be. Currently because RAND is undefined and reasonable is undefined no one knows what the rules are going to be ex post, say, if Allen Lo's company just wanted to decide to infringe.

It's completely unclear what a court might award as damages. It's very hard to bargain ex ante if nobody has any idea what the background legal rules are. So I think it's important that we get some idea conceptually of what the damages ought to be.

I think that will help enable ex ante incentives and make bargaining much more likely and solve some of these problems.

I also think that having the patentee or the IP owner's like prospect of returns confined to its technical contribution would have

another desirable effect, and that is to reduce the kind of rent seeking behavior and non-disclosure that currently happens.

The reason that there is non-disclosure is because you think you can sneak up on somebody and ambush them. If the rules are that even ex post in an ambush situation you can't get more than your technical contribution, there's just no point in non-disclosure. And so that might promote the standard setting process as well.

CAROLYN GALBREATH: Thank you very much. In the couple of minutes that we have left I think we'll turn to Professor Gifford for just some wrap-ups.

DANIEL GIFFORD: Okay, a rapid wrap-up. Well, let me just touch base with a number of issues that came up today. At one point we were asking the question about whether unfair and discriminatory rates raises an antitrust concern or whether it raised only opportunism.

And in the process of discussing that we touched base perhaps largely from Rich Holleman about all the different kinds of licenses there might be and different kinds of terms, for example, a percentage of your receipts, or maybe even a percentage of profits.

Nobody even mentioned that. That's a really complex one, lump sum licenses, repeated lump sum licenses. But, you know, maybe we ultimately got at a point where that earlier distinction kind of evaporated for purposes of our discussion when we took up the question of bargaining.

You know, is it possible that we can bargain ex ante in a way that solves most of those problems in the sense that when we're dealing before the fact and if there are competing technologies then the standards organization at least in theory -- you know, when we started working this out it got much more complex.

The standard organization could

be -- perhaps it was suggested an agent for the potential licensees. And does that raise an antitrust problem? Well, you know, maybe it does. There are a lot of lawyers that look at per se rules governing prices, agreements on prices and discussions of prices.

But, you know, I do hasten to point out that the Sherman Act condemns as interpreted in 1911 unreasonable restraints. So if in point of fact people with knowledge are bargaining in an arm's length way, it's not clear that we're engaging in any kind of thing that could be called an unreasonable restraint.

Going back to the standards, one of the problems in standards generally, not pretty much in the kind of standards that we're talking about, to the interoperability standards, but in the older, old fashioned kind of Rust Belt standards, they were largely permissive.

And you'll recall we talked at various times today about I think it was Allied Tube where there was a question about the kind of

conduits. And the people that were presenting -- urging the technology for polyvinyl chloride conduits, they were blocked by the standards organization.

And that was a real problem with the standards organization. I wonder if there is an analogy to the way, you know, some people may perhaps even misconceive what the Sherman Act says.

And maybe they will say, well, we want to do something that will get the information all on the table and bargain about it in an arm's length way and this might be the efficient result; does the Sherman Act prevent us from doing that?

And these are all complex, but I hope our discussion this afternoon -- indeed I expect that our discussion this afternoon and all those other discussions will cause the enforcement agencies to say, well, look; is there anything that we can do to facilitate an understanding of the antitrust laws that is such that it does not

deter efficient conduct? So that's my summary.

CAROLYN GALBREATH: Thank you very much. With that I'd like to note that there are many people in the audience who might have things to say. And we are still certainly accepting written comments from members of the audience and members of the public.

The debate on these issues will go on for some time I'm sure. We will continue to be enlightened by it. I've found this afternoon's panel very enlightening and I'd like to thank every one of the panel members for their stellar contributions. And we should give them a large round of applause. Thank you.

(Applause.)

(Evening recess.)