DEPARTMENT OF JUSTICE ANTITRUST DIVISION
and FEDERAL TRADE COMMISSION

Hearings on:

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

Cross-Licensing and Patent Pools

Wednesday, April 17, 2002
Great Hall of the U.S. Department of Justice
333 Pennsylvania Avenue, N.W.
Washington, D.C.

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PARTICIPATING PANELISTS (Continued):

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Lawrence M. Sung, Assistant Professor of Law, University of Maryland, Baltimore

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Frances Marshall, Department of Justice

Mary Sullivan, Department of Justice

Bill Cohen, Federal Trade Commission

Ray Chen, U.S. Patent and Trademark Office

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MORNING SESSION

(9:00 a.m.)

BOB POTTER: Good morning. It is a pleasure today to welcome you to the Great Hall of the Department of Justice. It is one of those truly great venues in government. We have some big shoes for our panelists to fill today.

I hope this morning you heard the weather forecast. Today for the weather we have August in April. And I think our air conditioning is working well, and hopefully it will make us comfortable during the session.

We are here to kick off what is really the second stage of the joint Department of Justice/Federal Trade Commission hearings on intellectual property and antitrust. Thus far the FTC has hosted a number of hearings on the basic premises of intellectual property.

And I think the hearings thus far have shown that intellectual property law provides some important incentives for innovation by establishing enforceable property rights.

Today and for tomorrow and the next coming weeks the Department of Justice will host a number of hearings that will focus more specifically and directly on the intersection of antitrust and intellectual property.

I fully expect the hearings will focus on some of the questions that the agencies increasingly are dealing with as we examine antitrust issues that are affected by intellectual property rights.

At the outset I want to thank our colleagues from the Federal Trade Commission for their truly admirable efforts thus far. I also want to thank the Patent and Trademark Office. The PTO's participation in these hearings has been extremely helpful as we go through this process.

Frankly I suspect that PTO is relieved that the hearings are now focusing more specifically on the antitrust issues and less on the general intellectual property issues. We antitrust enforcers would like to take sole credit for recognizing the need to delve into the antitrust intellectual property arena.

However, we cannot do so. Other private and governmental groups have recognized the increasing importance and need to focus on this area. I'm going to mention this briefly here, but I apologize in advance because I know I will leave a number of others out that are focusing on these issues as well.

I would mention the National Academy of Sciences which is currently examining intellectual property policy and sponsoring research on the operation of the patent system.

I would also mention the antitrust section of the American Bar Association which in its transition report identified the need for the agencies to focus on the intersection of intellectual property and antitrust law. And finally I would be remiss if I left out our friends down the street in Congress who focus on these issues on a continual basis.

In fact less than six months ago the

House Subcommittee on Courts, the Internet, and Intellectual Property of the House Committee on the Judiciary held a hearing to consider whether the antitrust laws should be modified to explicitly state that the existence of an intellectual property right does not presumptively establish market power.

Of course the agencies, as you can see from reading our IP guidelines, do not adopt this presumption. Indeed virtually no knowledgeable observer does.

Frankly I very much hope that the questions we delve into go well beyond those questions to get to the really harder questions that we are facing as agencies in dealing with antitrust and intellectual property.

Before I make a very brief overview of the upcoming sessions, I would just like to make a couple of very general observations that will be short about antitrust and intellectual property law.

It is now accepted lore that antitrust

and intellectual property share a common objective or end, and that is promoting innovation and thereby enhancing consumer welfare. And of course some assert they get to that objective by taking opposite means to reach that end.

Intellectual property rights allow the owners of such rights to in a sense restrict competition. Antitrust focuses on removing unreasonable restrictions on competition. Does that mean that these two bodies of law are irreconcilable? No. Of course I don't think it means that.

But it does cause some potential conflicts in particular factual situations. And I think our panelists will delve into some of these as we go forward.

As I examine what I consider to be "typical" approaches of intellectual property experts and antitrust law experts and how they look at these issues, I have been struck by what I refer as the sort of ex ante versus ex post approach. And frankly I'm concerned about it.

Typically I think intellectual property experts are focused solely on an ex ante approach and are not concerned with potential competition problems down the road. Antitrust experts however by their very nature typically examine these issues ex post.

And that is the intellectual property right already exists and now there is an allegation of competitive harm. I think part of the very nature of antitrust is that experts want to solve that competitive harm.

However -- and I think this is important -- the enforcers must not lose sight of the fact that ex post decisions while they may be perfectly well in a vacuum to solve a competitive problem can change ex ante incentives in ways that may ultimately harm instead of help competition and innovation.

Finally, in my general observations I would note that I think it is important as we go forward that panelists and others understand what we mean by using certain terms of art.

I think in reviewing this area of the law I have sometimes been left with the impression that different people are using the same term with different meanings. Just to give one example, I have heard it said that a patent grants its owner a monopoly.

While that is correct if one defines monopoly as the right to exclude others from making, using, or selling the patent invention for a period of time, it is incorrect if one defines monopoly in a classic antitrust sense of the power in a relevant market to maintain prices above a competitive level.

And the reason of course is that even patented inventions may have close substitutes that can preclude the exertion of market power. Now turning to the hearings, today's session is going to focus on the antitrust issues that arise in cross-licensing and patent pool contexts.

With the increasing number of patents we are seeing increasing numbers of cross-licensing agreements and patent pools. We have a very distinguished group of panelists who are raring to go that will be introduced shortly.

They will be discussing the legal and economic analysis behind the cross-licensing and patent pooling. I would say this is certainly a timely panel.

In fact just opening up the paper yesterday I saw a press report of a settlement between Intel and Intergraph in their IP litigation that included among other terms a cross-license.

There was a New York Times article a couple of months ago on the expansion of IP rights. In that article they quoted an intellectual property counsel of a semiconductor maker on what the article termed the "frenzy of cross-licensing."

He was quoted as saying, "Pretty soon, if it continues, you'll find that everyone's going to have rights to everyone else's technology, so there's not going to be any competition."

While I'm not sure that that view is necessarily shared by others, today's panel is going to examine situations in which those agreements are procompetitive and those situations in which they may be anticompetitive.

They are going to ask questions like? What are the issues that the antitrust agency should focus on in reviewing cross-licensing or patent pool agreements?

To the extent that there is a potential for harm, can steps be taken in the structure or the requirements of the agreement to alleviate competition concerns without impeding the benefits to be achieved through the agreement?

Tomorrow we will have a panel on the increasingly important topic of standard setting. It is clear that standards based on intellectual property are becoming increasingly important in some sectors of the economy. It is also clear that standards often have important economic benefits for consumers. What are the antitrust issues associated with standard setting in this context?

Is disclosure, or more precisely the lack of disclosure, of IP rights an antitrust issue? Should we be concerned as antitrust enforcement agencies if market power is based on the adoption of industry standards that are based on intellectual property rights?

Following that on May 1st we will tackle the strategic use of licensing including whether an unconditional, unilateral refusal to license intellectual property should ever violate antitrust laws.

For those of you familiar with the case law, it is referred to as the Kodak and CSU decisions. Obviously imposing requirements to license intellectual property seems to conflict with the rights granted by the license.

Whatever one's view of Kodak and CSU, I think we will hear from our panel that some lower Courts have gone beyond CSU and concluded that the right to refuse to license means that a predicate condition to a license agreement can never state an antitrust violation.

Frankly, I expect many antitrust experts will seriously question the extension of CSU in that manner. Shortly thereafter we will have a session on tying, bundling, and grant backs. Are per se rules appropriate or not? Should there be different rules for different sectors of the economy?

Different industries and different economic times have not yet required an antitrust code that is as complicated as the tax code. Personally I hope they never do. And therefore I think there is a little bit of a burden to show that the antitrust laws need to be modified for specific industries.

That panel will also look at what we call the practical issues that the agencies face, investigations which involve conflicting IP claims. How can the agencies appropriately examine these issues short of having the equivalent of full-blown patent litigation?

How should we analyze a merger between two companies currently competing when the output of one of them is predicated on what is alleged to be an illegal infringement of intellectual property rights?

Later in May we will have two days of comparative law hearings in which will focus on other jurisdictions' approaches to intellectual property and antitrust. Again I want to welcome you to these sessions and look forward to a truly enlightening discussion of these important issues by our panelists.

Now I would like to introduce the co-moderator of today's session and a person who deserves tremendous credit for working so hard on behalf of the DOJ as the person responsible for these hearings, Frances Marshall.

FRANCES MARSHALL: Thank you, Bob. Good morning, and welcome everyone. We are very glad that you all have joined us for today's session and have gone through our security gauntlet.

Today, as Bob noted, we are discussing the benefits and competitive concerns of business arrangements used when firms seek to produce products that are likely to infringe multiple patents owned by multiple parties. And those two things are patent pools and cross-licensing agreements.

This morning we're going to start by examining some of the fundamental reasons why pools and cross-licenses are formed and examine some of the anticompetitive concerns raised by these arrangements as well as the benefits of them.

Then this afternoon we'll take a closer look at the case law that governs these arrangements, examine the FTC's VISX case and the guidelines that have emerged from the Department's business reviews of the patent pools that were issued in the late '90s.

Before we introduce our panelists, I'd like to go over just a few housekeeping details.

As you can see, we are located in the Great Hall of the main Justice building which creates certain security concerns.

The basic rule of thumb if you are not a DOJ employee is that you need to be escorted around the building. Our escorts, otherwise known as Antitrust Division paralegals, are wearing name tags highlighted in green.

And they should be available at the back of the room to escort you back out of the building if you need to leave the session. The restrooms are down the hall. We also have phones available upstairs. We have been told that cell phones don't work in this area, so the paralegals can take you upstairs as well.

As recompense for sort of holding you in here, we have as you noticed coffee, sodas, and water at the back of the room and today especially some breakfast pastries. This morning we will push through until 11:30 without a break and take a break for lunch and reconvene at 1:00 to continue our discussion.

I am today fortunate to have some very talented co-moderators for this session. Mary Sullivan is acting assistant chief of the Division's economic regulatory section.

And Bill Cohen is an assistant secretary general counsel for policy studies at the FTC. And we are joined by Ray Chen who is an assistant solicitor at the U.S. Patent and Trademark Office.

Now I'd like to introduce our panelists. I'm going to just say a few brief words about them so we can get going. You have in your handouts the full bio of everyone who's on the panel. In alphabetical order, please raise your hand as I introduce you.

I'm going to start with Garrard Beeney, a partner at the law firm of Sullivan & Cromwell. And he has represented patent holders in the formation of licensing pools including those related to MPEG-2, DVD, DVB-T, and the IEEE 1394 technologies. We are very glad to have you here.

Jeffery Fromm over on this side is the Senior Managing Counsel at Hewlett-Packard Company. He has practiced as an intellectual property attorney since 1982 with a focus on computer, printer, and imaging technologies. Thank you for being here today.

Baryn Futa down here is manager, CEO, and founder of MPEG LA. In 1997 MPEG LA began licensing a worldwide portfolio of patents that are essential for MPEG-2.

Peter Grindley is a senior managing economist at LECG in London. We are so happy he has come all this way to be with us. Dr. Grindley has broad experience in economic consulting in the areas of valuation, intellectual property, licensing, competition policy, and business strategy, especially in high-tech industries.

Christopher Kelly, sitting down at the end of our table here, is special counsel to Kaye Scholer on intellectual property, e-commerce, and technology and competition. This is a long name, Chris.

CHRISTOPHER KELLY: No, no. Just special counsel.

FRANCES MARSHALL: Special counsel, all right, at Kaye Scholer in Washington, D.C. It's really a pleasure to welcome Chris back to the Department.

At the end of his illustrious career at the Division he was special counsel for intellectual property and worked extensively on patent pooling and a few letters we will be discussing later today.

Howard Morse over at this side is an antitrust partner in the Washington office of Drinker, Biddle & Reath, and he's co-chair of the firm's antitrust group.

And before he joined Drinker in 1998, he was assistant director of the Federal Trade Commission Bureau of Competition where he oversaw antitrust investigations and litigation in a variety of industries.

Sitting I believe near this end is

James Kulbaski. He's a partner at Oblon, Spivak, McClelland, Maier & Neustadt. And he has developed a practice of obtaining patents that read on industry standards and working with patent pool evaluators of essentiality to have patents accepted into patent pools.

Josh Lerner over here is the Jacob H. Schiff Professor of Investment Banking at Harvard Business School. And his research focuses on the structure and role of venture capital organizations.

And he also examines policies concerning intellectual property protection, particularly patents and their impact on growth in high technology industries.

We are very happy to have Josh with us today. And I'm trying to make this fast because Josh has to unfortunately leave at about 10:30 this morning.

David McGowan down here at the end of the table is an associate professor of law at the University of Minnesota. Thank you for coming today. And he teaches and writes in the areas of securities regulation, contracts, corporations, professional responsibility, and on the intersection of antitrust law and intellectual property.

Josh Newberg is down here. He is assistant professor at the Robert H. Smith School of Business at the University of Maryland at College Park. And prior to entering academia he served in the FTC's Bureau of Competition and was an attorney-advisor to Commissioner Starek there.

Jonathan Putnam also down at this end of the table is an assistant professor of law, economics, and intellectual property at the University of Toronto. And he has a wide variety of research interests which include the measurement of value of intellectual property rights, the optimal design of IP incentive mechanisms, and the role of information disclosure in IP incentives.

And Lawrence Sung is also right here and is assistant professor of law at the

University of Maryland School of Law in Baltimore where he heads the intellectual property law program and teaches courses including patent law, biotechnology law, and licensing and technology transfer.

Did I miss anyone? Okay. Great. Our session today will be a combination of presentations and discussions. We are going to try to limit our panelists to 15 minutes in their presentation so we can get through everybody today.

And during the discussion periods we are going to try -- and we have yet to see if the panelists would put up their name tents to be recognized. With this format I'm not sure how we will see people. We may have to raise our hands.

For those of you in the audience we are going to try an experiment with a method of getting your questions to the panelists. There should be some blank index cards in the back of the room.

If you want to jot down any questions

you have on them and give them to an escort at the lunch break or in the afternoon, and if we have time we will pose those questions to the panelists at the end of our session today. With that, let's get started.

MARY SULLIVAN: I would like to give an introduction to Josh Lerner. He's going to be presenting basically some of the policy implications from his current research study on patent pools.

And I'd also like to say that Josh has made intellectual property one of the major areas of his academic research. So he's really an expert in the area.

Since I've been working with him to put this together, I've learned that while patent pools have been around for a long time, research on patent pools has not been around for a long time.

So right now what we're learning from academic studies on patent pools is sort of -- we're learning a lot that has to do with our policy and what we're doing in the Antitrust Division and FTC. So a lot of Josh's comments today are going to be pulled from his current research study.

And I'd also like to say Josh is going to get 25 minutes I think instead of 15. And the other thing I'd like to say is so we'll have time to get comments from the panelists, we're really going to try to hold everybody to their time limit. So if I start to sound a little pushy at the end, don't take offense. Okay? Josh?

JOSH LERNER: Thank you for that introduction. I guess I should really begin by first of all apologizing for having to leave early. We have -- I went to college at Yale, and we had this motto "For God, for country, and for Yale."

And it seems to work a little bit like that at Harvard Business School, which is when the dean says do something, you sort of jump up and do it.

And we got our orders to go out and

entertain the alumni in San Diego tonight. So we said by all means. Even though we certainly want to help Mr. Ashcroft and the administration we also have to keep the dean somewhat happy with us as well.

So I'm also going to sort of begin with a little bit of a commercial as well for those who are interested. When I got invited to come speak here, we were aiming for completing this project by the end of May. When I'm here to present a seminar at the Antitrust Division on May 28th we'll actually have the completed paper.

But Mary made a very compelling argument that given that I spent the last year and a half doing very little else except for reading through patent pooling agreements from the nineteenth and early twentieth centuries, I really ought to speak here as well.

So in some sense this is perhaps a little less far along than we would like. But what I'd like to do with sort of the relatively limited time we have is give at least a flavor for some of the work that we are doing looking into patent pools and draw some preliminary conclusions from this work.

For anybody who's interested if you want to give me your card or send me an E-mail, I'd be delighted to share with you the paper which will hopefully be ready in three or four weeks.

I also should mention that this is joint work with Jean Tirole who is an economic theorist based at the University of Toulouse and MIT. And essentially what we have done is try to look systematically from an economist's perspective at patent pools.

And certainly one of the things which very much motivated us was while there was clearly a lot of recognition in terms of the legal community and people like Rob Merchas and many others who have testified before this series, we have sort looked at and sort of explored in terms of thinking about these issues, there's been much less in terms of economists writing and thinking and really digging into this stuff.

What we tried to do is both sort of align the more traditional, theoretical modeling with the sort of much more dirty process of actually looking at the pools themselves.

I think we basically managed to collect somewhere on the order of 65 pools which go back to 1895 or so and up to the current day and which we have sort of dug out of various courthouses and federal repositories and different places.

It's such an interesting topic I'd like to talk at length about some of these old pools and some of their structure and how they've evolved.

But instead I'll just sort of highlight some of the top level policy considerations, particularly sort of the theoretical side because I think that's sort of all we can do in the limited time we have available.

I guess I should also acknowledge that we have been spending a fair amount of time out in the field talking to various organizations. And for instance, Baryn's colleagues have been tremendously helpful in terms of understanding some of the dynamics of the MPEG as well as many of the firms that participated in the exercise.

In terms of the goals of this project we -- first of all, just to understand from a -- not so much from a legal perspective, but from an economic perspective, what are some of the trade-offs and considerations that firms think about as they go through a process of going and considering forming patent pools.

But secondly we wanted to really very much try to create -- try to visit some of the issues that policy makers have to deal with as these things are increasingly coming in the door.

Are the kinds of criteria, kinds of approaches which are being taken that are being used in the reviews, in particular this sort of idea that only essential patents are to be included in the pools, that pool members have a right to do separate licensing, that essentially even though you are part of a pool one of the criteria that's used in reviews is sort of highlighting that the individual pool members still can go out and do individual agreements, and that there be, you know, some non-discriminatory licensing of the pools, are these kinds of criteria that are the right ones to be using or are they in some sense too stringent or perhaps not profitable?

I ought to just mention one thing because this is certainly one of the sort of pieces of ambivalence out in the literature where there isn't really sort of a clear and systematic definition of what constitutes a patent pool.

Essntially we can think about many different things. I'll come back to this point at the end when I talk about some of the policy considerations. But certainly I think of basically two flavors of pools.

In particular we highlight examples,

first of all, where open pools -- where there is licensing to third parties where there's at least two or more firms that come together to form one of these organizations.

And then there's also what we term closed pools where it's basically organizations coming and contributing intellectual property, not licensing it to third parties but basically simply using it for their own use.

And certainly both the analyses that we did theoretically and empirically, we said in these cases we have to have at least three or more firms participating to sort of get away from the many routine cross-licensing agreements where you just simply have two firms sharing their intellectual property with each other.

Now, one of the sort of dreadful things about economics is that there's always models. There are lots of assumptions and equations and so forth.

And I resisted the temptation to go into too much depth in terms of trying to talk through how we did this because simply I knew it would be deadly boring especially with lots of lawyers who invited us.

But we are just sort of reinforcing the worst stereotypes about ourselves as a profession. So we'll sort of give just a little bit of a sense of some of the assumptions using in this process.

Basically we start off with a very sort of simple setting whether it's basically -- you know, given a number of patents each one of which is owned by a separate firm, and essentially it's all fixed.

So we are avoiding all the problems that real life patent pools have to deal with where you sort of have shades of gray where maybe some patents are included in it, but Lucent or somebody else is holding out and not taking part in the pool and so forth.

And furthermore we sort of avoid the complications that certainly were very -- sort of make Baryn's life on the MPEG board difficult of having not only people be intellectual property owners, but also users.

So you have perhaps an organization like Sony which was using the intellectual property behind MPEG having perhaps a somewhat different set of incentives than Columbia University who wasn't obviously, you know, manufacturing.

So we're assuming a very simple and stylized kind of setting here and seeing then what sort of comes out of it. We also assume that essentially there are a lot of users out there. We all benefit from using the pools, the patents.

And essentially we're assuming they can benefit from the use of some of them. The more they have, the more they benefit from them although it is perhaps not a sort of smooth -- a sort of straight line. And we also assume there might be some diversity in terms of the users where some may benefit more than others.

Now, again just to sort of give the

intuition behind what we are looking at to sort of make the results a little less -- sort of pulling them out of a black box, what we essentially do is sort of look at the challenge that a patent holder faces in a setting where there is a patent pool or where there isn't a patent pool, and try to look at some of the sort of trade-offs that are at work.

We first consider a sort of situation where essentially if you are a user you have to go -- and there's no pool, you have to go out and license individually, essentially go and approach each of the firms and negotiate a license with them.

We look at the sort of decision of a corporation which owns one of these patents, the patent holder in terms of how they think through this process.

And what we highlight is there are two choices, two issues that are going into their mind as they are setting the licensing rate as they're trying to decide how high a rate do we license our individual patent at.

First there is sort of the worry that is called the competition margin, the competition problem which is essentially that because these patents are all sort of somewhat related it may be that if we charge just a really exorbitant rate then basically firms won't license our own.

They will basically sort of license eight other patents out there and just skip ours because ours is -- sort of we can work around the fact that we don't have this patent in the mix.

And then there is a sort of second consideration which we call the demand margin, which is sort of a much -- sort of a more sort of classic sort of supply and demand problem which is we know that if we charge a high rate and people license it from us then there will just simply be less licensing for all the patents in the bunch just simply because you'll use it.

People will just simply make less of it. So if we're licensing a technology used to make CDs and we charge an exorbitantly high rate for our product, even if they license it from us they will have to -- record companies will have to price their CDs higher and there will be less CDs sold and so forth.

And we then consider the question of when we -- having a patent pool and letting these people who sort of do this process jointly benefit out there, and when the people are better off without the patent pool, to try to get a sense of some of the trade-offs that are involved and some of the issues and challenges in the process.

And what we end up finding is that certainly in this admittedly simple and stylized setting there are certainly many cases where -- there are many cases where patent pools increased welfare.

And in particular as I'll talk about in a second where we get to the implications, when this sort of latter condition holds, when this demand margin is a critical problem -- I'll talk about in a second what demand margin really means and how we might think about looking for it and testing for it -- you can be quite confident that a patent pool would end up increasing or enhancing the welfare of everyone in the pool.

The other situation is less clear, and it may be that pools either help the welfare or harm the welfare. It is a little less easy to make any kind of implications.

But there are sort of three lessons that we end up drawing from the modeling exercise. The first is that the patents in the pools don't necessarily need to be strict complements.

In other words where they are not really -- you know, where there's no real element of substituting for each other to enhance welfare.

In fact in many -- when we sort of really look at patents and ask the questions as the opening marks alluded, we don't often see cases where patents are either pure complements of each other or pure substitutes in terms of doing these active things.

Instead mostly we have sort of shades of gray where there are some elements of complements and some elements of substitutes. And we show that certainly in many cases when you are in that middle ground patent pools can indeed enhance social welfare.

Of course, if the patents are direct substitutes for each other, they are basically just alternative ways of doing the same thing, it's almost going to be certain that they're going to harm welfare in that case.

Secondly as I sort of alluded to before, one of the sort of really critical tests relates to this notion of demand margin, which is -- perhaps the way to sort of think about it or the way that we are sort of thinking about articulating this is basically saying if I'm a firm and I end up raising the price for my patent, does the demand for my patent end up dropping as much as it does for the other patents in the pool.

So if we're thinking about a situation where individual firms are basically licensing their patents as separate entities -- and I'm essentially then -- I raise my price by three percent, this is a situation where basically demand for not just my patent but all the patents in the pool ends up dropping.

As we showed, while this is not sort of a traditional test that has been used, it ends up sort of identifying certain cases where patents -- I'm sorry, where patent pools unambiguously enhance the social welfare.

The third implication that I just wanted to highlight briefly is that in many senses we end up coming to the conclusion that while the idea of demand margin might be something that would be hard to think about in terms of doing a test, the kinds of criteria that DOJ is using today in terms of doing review seem to be quite reasonable in terms of their approaches.

And we'll just sort of use one

example which is the criterion around independent licenses, that basically firms need to be able to have the right to go out and license the patents separately instead of being forced to license as part of the patent pool.

What we show is that if we are in that sort of good state of the world where that demand margin is holding, then we basically get a situation where that requirement, that restriction is something that firms won't object to.

So essentially if that is a requirement that is made of firms and we are in this sort of state where patent pools are unquestionably beneficial, then that's going to be something that the pool members won't find to be a requirement that's costly or troublesome.

And if you are in the other state of the world it might be much more in terms of kickback or objection on the part of the firms to these requirements.

And we similarly show in a number of

other sets of criteria that in many senses it seems there is a quite a sound footing for a number of tests that the DOJ has used in terms of looking at these pools even though of course they clearly didn't have the benefit of the model at the time they were doing it.

Now, I guess I should acknowledge of course that we are certainly -- and we make no pretense about this -- still at an early stage in terms of this process. And there's certainly a lot of things that we don't examine here that we clearly need to which are incredibly important in the real world.

One of these of course is the impact of having substitutes, other patents which are outside the pool which are members. And we can think about sort of MPEG again and Lucent's decision not to be part of the pool. Certainly we might think that that ended up affecting some of the impact in terms of some of the process.

Simply we might think about sort of some of the dynamic issues, what happens if you have sort of subsequent inventions happening by third parties who aren't part of the pool, what might be some of those issues.

And there's also a variety of other areas. We're getting into situations now where firms are able to slip in patents that aren't truly essential and in fact don't have a lot to do with the nature of the pool.

What might be some of the implications there? And similarly what are the implications of the various provisions that have been used over the years such as grant backs and other types of things?

Before I come to the conclusion I just wanted to sort of highlight one caution which is that in some sense we have been sort of very much modeling and we've been studying patent pools as sort of clean organizations where you basically have a number of organizations coming together and sharing their intellectual property.

But certainly in terms of the field based research in a series of interviews we have had with various standard setting bodies in looking at cross-licensing arrangements and other things, one of the things we have certainly seen is examples of organizations with arrangements, with collaborations which aren't labeled patent pools and aren't really formally structured as patent pools.

Maybe they are just a series of cross-licensing agreements between firms. But in many senses they are playing the same function as pools in essentially that -- you essentially -- even if you are not labeling something as a pool and taking it up before DOJ for review, it seems in many cases you can accomplish some of the same kinds of things.

In a way they have sort of really raised sort of an issue which has been raised by financial economists often in terms of discussing regulations where they say in many cases it makes sense not to regulate particular financial institutions or particular financial instruments, but instead to regulate financial functions.

Even though that is kind of hard to do, similarly it may be that it's important to be cautious that many of the same things that can be accomplished through pools can be accomplished by other means including things which perhaps look much more benign, like standard setting organizations and so forth.

And so just to wrap up within my allotted time, certainly patent pools are a phenomenon for which economists -- there has been relatively little study, even though it is clear that there is considerable policy importance particularly given the growth of these arrangements over time.

This effort is to really try to dig into and try to understand these dynamics both from the theoretical side which I have highlighted as well as the empirical side.

And what we have tried to do and what we have ended up doing is at least suggesting some of the rationales for some of the approaches that DOJ has taken.

And what we hope will also come out of it is some suggestions regarding further avenues or further questions that the DOJ may want to be asking and looking at for future pools. So with that I'll conclude. Thank you.

(Applause.)

FRANCES MARSHALL: Thanks, Josh. Since you did end a couple of minutes early, I think I'll take the opportunity to ask some follow-up questions if that's okay once you get back to your seat.

I'm intrigued by one of the statements you made in one of the results of your study which concerns our requirement that the firms of the pool have the option of licensing their patents independently from the pool.

And your statement was that if the demand margins are binding then this requirement should not be burdensome to firms. Are you referring to firms in the pool?

JOSH LERNER: Exactly. So what I was suggesting there was essentially one can sort of look and see where that kind of requirement to sort of do -- the sort of stipulation that you have to be able to make independent licensing might end up leading to a situation which lowers the confidence for the firms which are participating in the exercise.

One of the sort of relatively neat things that comes out of the modeling exercise is it shows -- this task ends up seeming to be quite a reasonable one in terms of highlighting that in the context where -- the contexts where this doesn't hurt profitability are very likely to be the same kinds of contexts in which these demand margin conditions hold.

So as such it's a reasonable screening approach. One can think that it gets more complicated then that.

In particular in some of the other cases it still might be -- people might still find it worthwhile to have this condition even though it's -- even though we have gotten -- the patent pool may be hurting the social welfare.

But certainly as a first pass as one screening criterion is it is a very reasonable approach.

FRANCES MARSHALL: Thank you. I have another question. Sorry. Chris?

CHRISTOPHER KELLY: Can you hear me? Do I need to be on mike? Josh, I just wanted to make sure I understood a couple of the fundamental points you were making. And the first one is just a distinction between the competition margin and the demand margin.

Is another way of characterizing it saying that the competition margin is the patentee's concern about its own -- the viability of its own patent whereas the demand margin is focusing more on profitability of the asset and the use of the standard?

JOSH LERNER: I think that's sort of a neat kind of formulation.

CHRISTOPHER KELLY: So the demand margin would be especially important. When you are using the assumptions I think you have to bring the downstream manufacturers into the pool.

JOSH LERNER: Exactly. And I think that while clearly it's a little hard to just kind of speculate -- it's not quite as far down and so forth. In the sort of preliminary stuff where you have to relax some of the assumptions it seems things are very much less --

CHRISTOPHER KELLY: Have you seen many pools where they are made up of only patentees who don't have something sitting in the manufacturing world at stake?

JOSH LERNER: The answer is you can certainly think of examples like that. This is sort of -- now I feel like it's if you have a Trivial Pursuit game with a patent pool option.

We looked at a traffic cab pool from 1946 where they did have a series of firms essentially which had no interest in manufacturing traffic cabs who nonetheless ended up collaborating with each other.

But certainly when you look at the oddity of patent pools it's largely been driven by firms which have, you know, have a variety of goals. But certainly one of them is using them for their own purposes.

And clearly there are other motivations as well which aren't captured here. Certainly in terms of our field research, being at Harvard Business we always have a compulsion to want to go out and discover what's really going on in the world.

It gets distressing when it doesn't match up with your theory. But that's the way the real world is.

Certainly when we have gone out and talked to companies like various MPEG members, what one sees is there is a very complex array of motivations, for instance getting -- sort of speeding the adoption of MPEG as the standard.

Sort of facilitating the standard setting process seems to be an important motivation certainly at many of firms mentioning this topic. There is a lot more stuff going on in this problem. Even in our best world we will only be able to capture a fraction of the real world. I guess one more.

CHRISTOPHER KELLY: You mentioned that a pool is likely to -- if I got it right, in a situation where if you raise the price of one patent the demand for the other patents may drop, wouldn't that suggest that the patents were complements?

JOSH LERNER: I think the answer is certainly in a case where there are strict complements -- certainly there is sort of a big middle ground.

I think one of the things that motivates us is inasmuch as there has been any writing by economists on the subject there is a tendency to start thinking about either a very strict world of strict substitutes or strict complements.

I think that everything we seem to know about the real world is the stuff is really in between. It doesn't really fall to the one or the other extreme.

WILLIAM COHEN: I think there is a

point I was trying to look for -- if you can, try to encapsulate for us an intuitive understanding of why the demand binding constraint is thought to be a determiner of welfare.

JOSH LERNER: I admit that I like the earlier formulation. Essentially the individual members are concerned more about the welfare of the pool than they are about their individual patents.

But I think that you are also right in saying that we have more work to do to sort of get it down to the proper sound bite. And also I can say is by May 28th I hope to back it up.

WILLIAM COHEN: Thank you.

FRANCES MARSHALL: Good answer. Okay. Let's turn to Peter Grindley's presentation now. Peter is going to be making some comparisons between cross-licensing and patent pools.

And Peter has a lot of practical experience in working with areas, intellectual property matters. And a lot of his comments today are going to be drawn from some studies he did of cross-licensing agreements in the semiconductor industry.

(Due to technical difficulty with the audio, a portion of this morning's hearing was unavailable for transcription. The transcript resumes with the latter portion of Lawrence Sung's presentation.)

LAWRENCE SUNG: -- whereby they don't have a lawyer. And most scientists now will say, talk to my technology transfer department.

Or in fact most scientists may say, talk to my attorney; I have a private attorney that handles all of my material transfer agreements, talks about confidentiality, about how we go forward with this because I've been told that intellectual property protection is important.

And indeed for the sector itself it is important because you're talking about a very long product development cycle. And they need to be able to sell or capitalize on their intellectual property protection as though it's another asset for them because otherwise you would not have investment in that area.

So these are just some of the considerations that I want to share with you about another industry sector that may raise consciousness, but also ask you to refocus how guidelines are being presented for analyzing potential cross-licenses and patent pool arrangements.

Cross-licensing has happened quite extensively within the biotechnology sector but compared with some other industries it is rather nascent in the way the business development has occurred.

And the reason I say that is because if you looked at the past five to even ten years of development in the biotechnology sector, the base model five or ten years ago was to have a big pharma-company essentially buy up all the little pharmaceutical, little biotechnology startups that were on the market and that way clear their product development cycles.

Increasingly the biotechnology sector is moving very much like other sectors in having a lot of different startups who are not willing to simply be purchased outright, but are looking for a longer range or at least intermediate range business cycle of their own, which is to retool and say, we are no longer, for example, just a genomics company; we too want to get into the drug discovery market.

And that is going to change the scope of the biotechnology sector ultimately and bring it I think more in line with how we see other sectors developing also. Thank you very much.

(Applause.)

FRANCES MARSHALL: Thank you, Lawrence. I think we will now move directly to David McGowan, who is going to talk to us about some of the enforcement issues that the antitrust authorities should be concerned about when looking at cross-licensing agreements and patent pools.

DAVID MCGOWAN: I should say I've been

living an itinerant existence because I have a semester off and I've been going various places to do some research.

So what I've given you in the hard copy form is a fairly sparse outline. And I decided to succumb to herd behavior and do PowerPoints, which I only got done on the plane here yesterday.

So I apologize to my fellow panelists that you don't have the PowerPoints. They follow the substantive points of the outline fairly closely.

I am very much aware that you have been sitting there a long time and I am the last speaker before lunch. And that imposes certain obligations on me even though we have a discussion period in between. And so I will try my best to be brief and hopefully somewhat entertaining to keep things going.

There's a saying among legal academics that the way to succeed in law school as professor is to be kind to your colleagues and unkind to the Supreme Court, which goes along with the adage that says no one ever got tenure saying why the law was right.

This is an exception to those adages or this topic is an exception because my basic view is that with respect to pools the DOJ's been doing a good job. The criteria that are being used are sensible. They're being employed in a reasonable manner. There are always things that people can talk about.

But there's enough carping about what's wrong with intellectual property policy and what's wrong with antitrust law that I think we should take a moment to recognize -- and this may be just a bit of Chris Kelly -- that this is an area where things have gone pretty well.

I noticed that Justice Holmes is out there on the fresco, and I'm always worried when I give an antitrust talk when I think of Holmes because he thought the whole enterprise of antitrust was worthless. Issues to consider, I want to talk about three things.

The first is basically pools is an aspect of managing the intersection between antitrust and intellectual property. I won't spend a lot of time on that.

But I want to talk just a little bit about where the goals for enforcement relative to pools fit into the overall perspective of the antitrust/intellectual property intersection. The second is something that I try and persuade my students of and I never succeed. But you all are professionals.

You've been working for a while. And I hope this is not a hard sell. Comparative advantage is the only kind. That is my basic rule for both enforcement decisions and decisions about cases. I want to talk a little bit about pools compared to competition for the market and standard setting organizations.

This is a point that Josh Lerner touched on earlier, which is that pooling is one way of doing something. There are other ways of doing something. And if you enforce as aggressively as against pools, what I want to talk about is the problems that you will create for yourself in other fields.

What we have is a type of problem. And different solutions and different enforcement procedures will affect that problem in different ways. There is no solution. It's not as though you take an aspirin and the headache goes away.

It's a problem to be managed, not solved. And finally I'll talk a little bit about the criteria for assessing pools. So first off, managing the intersection.

Bob Potter said at the outset that there is to some degree a tendency of intellectual property lawyers and the IP statutes and the IP orientation, way of thinking, to think very much ex ante and think about returns, incentives to invest, and not think about the effects on the market as a whole of the IP rights that are granted.

There is a corresponding tendency among antitrust enforcers and among antitrust lawyers to think about ex post effects. Those are essentially functions of the tools that you're given to work with.

When I think about intellectual property -- and I'm not an economist so let me put in all my caveats now -- I think about finance, financial economics. It's a rate of return analysis. When I think about antitrust, I think about price theory and industrial organizations. I think about game theory.

These are different tools. You can say that they're complementary, and that's fine. They are in a sense. We have the same end. But I don't think that we should deny the fact that there are different analytical ways of thinking about these problems.

There is a risk, yes, that antitrust can enforce itself so strongly that it undercuts incentives to invest and disrupts the rate of return calculation embodied in the IP laws.

There is a corresponding risk that the IP folks and the people who grant intellectual property rights can send out such a slew of rights that there are overall welfare effects that are undesirable.

We're not going to get out of this. This is a difference in approaches. It is a difference in emphases. It is a difference in tools.

And that's why I see it as a problem that has to be managed. Pools are one way -- and I think this is fairly obvious. I'm not going to cover the beginning of my outline which I think is fairly obvious ground.

If one takes the hypothesis that we have a lot of patents, probably patents that people are surprised -- I heard on Saturday on the radio a patent for a method of swinging a tire in a playground. It is the swinging on the vertical axis relative to -- I can't remember what it was. It was a seven-year-old inventor.

If you think that there is a proliferation of patents, there is a thicket of patents, pools are one way of clearing that.

There are a variety of ways of dealing with the problems.

But I do want to say at the outset that what we're doing when we talk about enforcement as against pools is operating at that intersection. And we have to be very careful that the problem is not viewed wholly from one perspective or the other.

We can't totally have antitrust deferring to the rate of return methodology and say it increases incentives, ergo legal -- providing your first born child a security performance on an agreement lowers the risk of the agreement either. It does not follow that that is a valid security.

Nor can we go all the other way. So let me talk about in context -- get down to a little bit more practical aspects, pooling as compared to other approaches.

I'm going to take the example which is what most of the -- what we've been talking about, and particularly the DVD related pools --

of a pool where you're pooling technology to develop a standard. You've got a product where standardization is desirable.

DVD players are the combination of content, encryption technology, and hardware. The encryption technology we know exists so that a fifteen-year-old somewhere in Norway can decrypt it and post it on the internet and then we bring the DMCA in.

Pooling may employ -- in this type of situation pooling may employ a choice to compete within an agreed upon standard. If you don't do that, what happens? We're going to pool our intellectual property. We're going to arrange a series of IP rights so that we can create a product that implements a standard.

If you don't do that, what do you do? You might have proprietary competition for the market. Let's call this Microsoft. We will compete with firms enforcing their rights, asserting their rights, each firm as against the other. We'll have a lot of low price competition.

We'll have a lot of very aggressive first stage competition and a winner-take-all type of scenario. All right. That's one thing we could do. We could go through a standard setting organization. Instead of pooling we should say we're going to bureaucratize this in some sort of a formal way.

We're going to go to ISO, IEC, all of those organizations. You can have a hybrid. MPEG-2 has a hybrid aspect to it as I recall. There is an ISO standard involved.

If you push on one of these methods, if you make antitrust riskier on one than the other, you will see a tendency -- this is a polycentric problem -- to pick different types of problems based on the method you choose.

So, for example, if you make enforcement of pools a priority and you enforce pools very aggressively and you take the position we're only going to -- we will bring an enforcement action against any pool we think is at all suboptimal, all right, now you have competition for the market.

And you get your single firm antitrust issues: Intel/Intergraph, Image Technical, In Re: ISO Refusal to License, and related issues. What do you get when you get competition for the market in a market that has strong network effects associated with it? You get models. A predicted dominant firm comes in, and fine.

Now our enforcement task is -- instead of looking at the pool our enforcement task is: Is Intel asserting its intellectual property too strongly.

We can spend the entire decade of the 1990s litigating with Microsoft over its practices. And we're going to buy into that set of issues because that's the model of competition we've shifted to. That's a possibility.

Standard setting organizations, you've got Allied Tube. You've got Sanitary Engineers. You've got experience with misconduct in standard setting organizations. There's the possible market effect from adoption as a standard. You've got that whole set of cases. You can go down that route also.

The point that I want to emphasize here is that when you have the particular structure I'm talking about, you've got a market with strong network effects, standardization is desirable, utility of the good increases with consumption, you have a set of antitrust problems. Costs get sunk up front.

Marginal cost is low. There are going to be issues. There are going to be worries. They may take different forms. But they're there. And it's not as though by going after pools -- you say I've gone after pools and I'm aggressively enforcing pools and that's going to solve the problem.

It will create different problems. That's part of the management of the entire intersection. So I've been asked today to talk about and look at this problem from an enforcement point of view, putting my enforcer's hat on. And really this should be Chris doing this because I'm not an enforcer.

I was a lawyer in practice. And I'm now an academic. But this is what I think about. What are my goals ideally? What am I thinking about when I think about pools?

I'm thinking about a cooperative space that's large enough for intellectual property rights to be arranged to facilitate production at the lowest combined cost of transaction and administrative costs.

And there's going to be some interplay between the demands you place on a pool and how much you try and push it and the cost of the pool. Cost and demand are inversely related, meaning the costlier you make a pool to run, the more you load it up, the less desirable it may appear.

So there's going to be an equilibrium there, which facilitates one path of competition without foreclosing others either by licensors or licensees, and which does not skew competition through discrimination. That's my ideal world.

My ideal world is this imaginary space where intellectual property rights are floating around, and sometimes they conflict with each other and they lead to lots of litigation and they pay off my students' student loans, and they all like that. And we can preserve a space out there in which cooperation can occur.

And my goal is to make that footprint as small as possible while still getting the job done of facilitating production and having the fewest collateral effects from it. That's my sort of idealized thing, what would I like to have happen. What does that imply for enforcement?

If there are deviations, if somebody comes to me and says I'd like to have a pool with this sort of arrangement; I'd like these provisions in it, the letters that we see, to the extent that I see deviations in a proposal that is given to me, I want to know why. Why can't I get what's perfect? I've got my image.

I've got my goal. I know what I want to see. If there's a deviation, I don't want to have licensors be able to license outside the pool. Let's say that proposal comes to you. Why not? I would ask why, and I would demand parsimonious explanations.

And this is simply my personal belief from my days in practice, that the plausibility of my clients' stories were inversely related with their length. What we're dealing with here are fairly straightforward concepts. A short, straightforward explanation should be sufficient.

This is related to something that Josh mentioned and also something that Chris mentioned in terms of Josh's competition and demand margins. Josh's basic point was if you say -- if you as an enforcer say you must be able as a licensor to license outside of the pool and you get some push back on that, why?

Why is that undesirable? Is it because people are afraid that if licensors can license outside of the pool only one licensor will have any customers? Is competition margin binding?

Or are they really not worried about that because -- and I read this point the same way that Chris did -- what's in the pool really are strong complements and I really don't have that much of a worry about it?

What you're really trying to do because you're at an informational disadvantage -- these people are in the industry. Their lawyers spent a lot of time learning the industry. They know the parameters better than you. You're trying to use your model to test and get explanations as to what you see.

Why does it exist? If it deviates from what I want, why does it deviate from what I want? However, although that level of interrogation is something that I think you have to do at that level -- why can't I get my ideal -- the test shouldn't be whether a pool is perfect because, number one, it's not going to be.

In the final analysis I think what you have to ask when you're analyzing this from a legal point of view is am I better off with this arrangement than I would be without this arrangement including any chance that I might be able to bring some sort of an enforcement action and maybe get it modified.

In that sense this is a game of chicken, right? All law rests on a theory of human behavior. What is my theory of human behavior for people exploiting IP rights? They maximize income. What are they going to do? They're going to try and make money. They may make money in ways that I like.

They may make money in ways that I don't like. That's what I expect out of them. I need to try and reach the best equilibrium possible. That I think has got to be the target.

This is an area in which pursuit of the best can be the enemy of the good. All right. Assessing pools, practical problems.

I would not recommend -- and I've not seen this. And this is I think a tribute, as I said, I think things -- to the way that things have been proceeding in this area.

If you see a pool that reflects a choice to compete within a standard rather than for a standard -- we're going to collaborate on a standard, and then we'll compete on price, quality, whatever else within the implementation of the standard -- that is a valid choice.

That is a mode of competition. I would be wary of trying to force competition towards a certain model. We don't like competition within a standard; we want competition for the standard. We don't like competition within the market; we want competition for the market.

You trade off for a different set of problems like that. And what you're seeing if you see somebody bringing a pooling arrangement to you is at least some evidence so long as you've got -- you don't have facts that are screaming out to you that this is some sort of collusive and unproductive conduct.

You've got some evidence that there are efficiencies to be had through that mode of competition. So I would scrutinize efficiency justifications on their own terms rather than comparing them to a model that you might prefer in the abstract. There is however no model of avoiding competition.

There are different models of competition. I just want to distinguish that to say -- to make clear that what I'm saying is not that you take at face value everything that is said, but that you recognize that there are alternatives that may be being pursued, and your enforcement decisions may influence the path those alternatives take.

All right. Practical aspects in this is basically -- what I want to do is mention a couple of things that I think are important, and they are aspects in which I think the business review letter process has done well, and I'll tell you why. Obviously -- and this is something that the guidelines and the letters talk about.

The desirability of these arrangements depends on the validity of the IP. I want to know a lot about what's in the pool. want to make sure that what's in the pool is actually a legitimate patent. I want to make sure that it is -- well, I'll talk about necessity in a moment.

I want to make sure that they were not loading up or protecting technology that really shouldn't have been given a patent in the first place. There has been employed in the letters the expert procedure. This is more on necessity. But there was a hint in one of them that it might be on validity as well.

How do you figure this out? One way is to build in incentives for pool members to challenge the IP of other pool members. The royalty structure can do that if the royalties keep to the amount of IP in the pool.

If you have an expert -- and this is -- as I say, to some degree it's going to apply to the next slide which is essentiality. What we've got is this procedure where you as an enforcement official don't have as much information as they have. So to some degree you've got to rely on some form of analysis.

The procedure's been we're going to appoint an expert to pass on essentiality. That is a guardian, which means that you have the problem of who guards the guardian. That never goes away.

You're always going to be in the position of looking at somebody and saying can I trust them unless what you're going to do is in-source sufficient expertise to evaluate all the pools that you're going to see, and that's not going to happen.

So you're going to have to depend I think on the structural facts that either give you confidence or give you suspicion in what the expert is doing. Are they disinterested?

Do they have a reputation that could suffer if they are perceived to be as -- in my former litigation days we would think there are some expert witnesses that you have when you -- that you buy -- buy. Hire. Boy, there's a Freudian slip. I would hate to see -- let me put this more bluntly.

I would hate to see this procedure go the way that expert witnesses have gone in litigation where the one thing that you're sure of is that you're probably not getting the disinterested analysis that you would get if you sat down and had a cup of coffee.

There's going to be a trade-off between the procedures that you try and impose on the pool for assessing validity. Are you going to let licensees -- are you going to let outsiders come in and challenge the pool -- challenge the validity of IPRs, and the cost of administering the pool?

The more bureaucratic complexity that you build into it, the more costly it becomes.

And the more costly something is, all else being equal, the less desirable it is. That tension is something that I think is a valid point for people to bring up, and I think it's something you would have to think about.

Necessity -- and I'll go through these very quickly because I think the letters explain them pretty quickly, and we're going to talk about them this afternoon as well.

I think that because what we're talking about is the practical combination of intellectual property rights relative to the production of a technology or a product, we have to have a practical approach. I would not favor abstract, technological approaches.

I would favor can this actually work; is it necessary to get something done. How to determine necessity, this is something I talked about just a minute ago. You as an enforcer can undertake investigations. You can solicit input. You can see if there are ways for necessity to be challenged at various stages.

And I should highlight here one of the things that I think is important going forward in this process is seeing how these issues change over time. We've got some good experience with the initial formation.

The dynamic nature of innovation and the duration of the pool is something that is I think going to be an issue I'll talk about with innovation in just a second. I wouldn't mandate a particular method.

But the confidence you have that the pool is procompetitive is going to rest in large part on the confidence that they give you and the effectiveness of the method it identifies. Exclusivity, I should say non-exclusivity. I think the ability to license outside the pool is very important.

I would be extremely -- and it's not something you've seen challenged in the pools. I would be extremely curious as to what the justification for an exclusive arrangement would be.

I'd really want a very short, good explanation for that. Improvements in innovation, dynamic technologies, the one thing we've learned, this goes back to my fundamental goal.

I think that it's important that licensors and licensees be free to combine technology either to improve or compete with the pooled technology, meaning my vision is that we have here a space in which IPRs are arranged relative to a standard or a product.

My most desirable situation is one in which that space of cooperation does not prevent other spaces from forming, other paths of cooperation from forming. It facilitates it. It's permissive. But it does not prevent others from happening. Grant backs are the bottom.

We talked about a little bit earlier the guidelines mentioned under section 5.6. I would consider evolution of a standard, if we're going to talk about a pool forming a standard, evolution within the pool and innovation outside the pool.

It would make sense for -- if they chose to do so, it would make sense for pool members to take steps to ensure that the standard they were creating so that people could implement it could evolve over time. I can see situations in which grant backs from licensees would be desirable.

The guidelines talk about non-exclusivity being more desirable than exclusivity. And part of the reason the guidelines talk about that is the ability of improvers to get revenues on their own, which means that the royalties come into play. There is also -- and Chris mentioned this earlier.

There should be a relationship between the field of the license and the field of the grant back. Royalties, and I've only got a couple of more. Reasonable and non-discriminatory, like system to licensees, we have seen that. That is also standard in standard setting organizations.

This is an area of overlap. You've got most favored nations provisions in a couple of the letters. How does the royalty vary with the value of the intellectual property right?

You've got in the Toshiba letter -- I do the DVD letters by Toshiba and Philips -- a fairly textured pricing policy, newer patents worth more than older patents. You can go into the -- you can have pools where you go into a pricing mechanism that really gets into -- how do I say -- that gets to a very detailed per IPR analysis of pricing.

You can go down to a level where the pool is really fairly a minimal rearrangement of what would happen if you were selling the IPRs out in the market. Or you can have a per unit type analysis which does not do that.

The royalty -- and I would want -- I think it's important to understand the incentives created by those. I would be hesitant to try and force one or the other. But I would want to understand them very thoroughly.

Does the royalty decrease over time as production costs lower, as you get this sort of standard; we've established the innovation; we're at the end of its more mature product stream. And how significant the royalty is relative to the product, this is a point that's been mentioned in a couple of the letters.

Can the royalty be used to facilitate collusion? Does it suggest to you that something is going on in the first place -- downstream collusion especially -- something that's going on in the first place that makes you suspect the pool as a whole? And the last thing that I want to mention is the treatment of information.

This is something we've also seen in the letters. There's going to be a need for the members to have some information about what is being done with their IPRs. There's going to be a need for some information.

There should be procedures in place so that the information that is granted relates to the exploitation by the pool of the IPRs rather than becoming a conduit for the types of information sharing that you would not want to see. Hopefully I've stayed reasonably within my time. And thank you very much.

(Applause.)

MARY SULLIVAN: We have about twenty minutes for some questions here as we end this morning's session. And I'd like to start out, David, by going back to your issue about parties being free to license outside the agreement. And that certainly has been -- was a factor in the DOJ pooling review letters.

But I'm curious as to whether the parties are free to license outside of the agreement whether they in fact have the incentive to do so and whether that changes as the size of the pool, the amount of IP contained within the pool, gets bigger.

DAVID MCGOWAN: Well, let me take it in sort of mid-reverse order. I don't know the answer to the question of how frequently it occurs. There are people here that are better suited to -- or have better information on that than I do. So I would sort of defer to them.

My instinct is it's going to depend on the intellectual property right. The thing that I have in mind, if the pool is properly constructed, there will be a great incentive to license individually outside of the pool. If the pool has only essential patents, I would be surprised.

On the other hand, what I have in mind in sort of my image because I think that that the innovation aspects, the dynamic aspects of competition in IP markets are probably the most important, is the possibility of reconfiguring. What you have in a pool is a particular configuration of rights.

If you leave open the possibility of reconfiguration, leave open the possibility of some rights that are in that pool becoming part of different standards, competing standards, products that might become substitutes even if they're not now, for the pool product.

That sort of flexibility is what to me is important in the sense that it leaves open alternative paths of innovation that might lower the cost of alternative paths if you can draw on some existing technology. Will a pool member have an incentive to license as part of that new venture?

The short answer is it's going to depend on what they think will maximize their profits. I don't think that anyone should have any Pollyanna views about that. And that's going to be in part a projection of, the present value, the expected value of the innovation on an alternative standard.

What I'm really concerned about is the ability to make that decision being untrammeled by the pool, the pool representing an area of collaboration, and area of cooperation, but not foreclosing others. So that's the basic idea. The frequency with which it occurs, I'd be interested actually in hearing.

MARY SULLIVAN: Any experience here on

the pool? Josh?

JOSH LERNER: I can give you some personal experience. To the extent that pools are small and the number of participants, licensors in the pool is small, then the propensity to license outside the pool is high.

To the extent that the number of licensors in the pool is very large, large being a number, say, greater than four -- you don't probably think of that as large.

But in trying to do -- essentially licensing from, say, five or six or ten different licensors, the probability of someone being able to invest the effort and the time -- and time is very critical in most of the industries we're talking about -- goes down.

The opportunity in a large pool to actually do this licensing outside the pool is in fact for most -- for many firms not a real opportunity. Even firms that have significant economic incentive to do so, they simply don't have the number of hours in the day before a product has to be introduced.

MARY SULLIVAN: Chris?

CHRISTOPHER KELLY: It sounds then like we could probably expect that within the standard for which the pool is directed we can expect the likelihood of independent licensing to be a function of the need for the pool in the first place.

If you do have a lot of IP owners, a lot of disparately held IP that's implicated by the standard, then it wouldn't make a lot of sense to expect independent licensing because whoever went on that path would then have to continue on that path with a vast number of other IP owners and take on all those transaction costs.

But I guess that wouldn't necessarily apply to individual licensors' willingness to support rival standards and even form pools for those purposes if it seemed like a viable proposition.

But that would be more a function of

the type of standard setting questions that I suppose you'll be talking about tomorrow.

FRANCES MARSHALL: Garrard?

GARRARD BEENEY: It's an interesting question, Frances, about the incentives for individual licensing and the comment about the propensities of big pools and small pools. And obviously I'm only working within the experience that I've had.

But in representing pools and representing individual licensors in pools, and representing the individual licensors when they are approached for bilateral negotiations and licenses, in my experience I guess partly because of the advice that I offer to individual licensors, the individual licensors are prepared to enter into individual licenses generally within the margins of their expected revenue stream from the pool.

But at the end of the day the prospective licensee just simply isn't interested and they just walk away and they end up with a pool license.

And I guess what I'd like to suggest is that doesn't mean that there aren't alternatives. It just means that one is so competitively compelling that there isn't actually much of it done.

I kind of think of it in a way that, you know, I don't want to have to fly from New York to Los Angeles -- I could fly a commercial plane or I could charter a jet. But the economics are so compelling that I have never flown anything other than commercially.

So I mean I think it's the same thing, that the licensors that I've represented are always more than willing to enter into these bilateral negotiations or willing to enter into a bilateral license at about the royalty level that they would get from the pool.

But at the end of the day it just doesn't make sense from the licensee point of view. And I don't think you can fault the patent pool for becoming increasingly more attractive as it becomes bigger, as if that were some fault. That's an increase in its efficiency and an increase in its attractiveness.

And the fact that the licensee chooses not to avail itself of the alternative doesn't mean that it's not there.

FRANCES MARSHALL: Baryn?

BARYN FUTA: Actually I think this is more perhaps Peter's point than mine. But I think that my experience comports with Peter's experience, which most bilateral relationships I see in the marketplace are field of use or larger in scope.

And programs like the MPEG-2 program are dealing with a very thin sliver or one intersection point, if you will, between two bilateral partners, that being essential patents, however defined, for a standard like MPEG-2.

So I don't think the largeness or smallness of a patent joint licensing program impacts the marketplace utilization of unilateral licensing.

FRANCES MARSHALL: Let me go down here for a couple of questions or comments and then, Josh, I do want to get back to your comments. Peter?

PETER GRINDLEY: I basically wanted to support the two points we just made that with the standard, the package of IP seems to be worth more than some of the individual patents because the coordination of the access to these IPs has already taken place.

It's -- the potential for holdout by the last -- if you went around individually trying to get these licenses, the potential for the last one charging you everything that you've -- all your remaining wealth has been resolved because the coordination has taken place in advance.

So I'm not quite sure how that works out comparing the individual patent licensing versus the package. But I'm just saying that the package is inherently -- just as a pure matter of network externalities and coordination problems is worth more than the individual patents on their own.

FRANCES MARSHALL: Jeff?

JEFFERY FROMM: Well, I guess generally as a company that does mostly licensee arrangements I just beg to differ. I think that the -- there is always a trade-off between the value of the -- people are making economic trade-offs.

They are trying to think about the cost of joining the pool. And if the cost of joining the pool is small relative to the cost of the product then obviously they will join the pool regardless of other incentives.

If the cost is -- in their mind when they look at their own profit or the way that they run their business, if they look at the cost of the pool as high, then they start to contemplate other alternatives.

And to suggest that they're -- licensees always reach the conclusion that they can afford the pool over doing cross-licensing is really not the reality.

Having attempted to do it in the real world, you find out that there -- if you've got a whole series of licensors, some are more motivated to license than others. Some are very unmotivated.

Some may not even have licensing organizations in a real sense. And some of them are completely de-motivated to do the licensing even though the DOJ letters require it.

So I'm just saying that there are lots of different licensees that may wish to go different ways. But the practical realities tend to push them towards the pool in a very strong way because of time and cost.

FRANCES MARSHALL: Okay. James?

JAMES KULBASKI: One of the -- a question to Jeff is he said that for large pools there is a tendency to license through the pool but for smaller pools such as four- or five-entity organizations there is a higher likelihood of going outside of the pool.

Everyone knows about the larger pools which have been approved by the DOJ and are very popular and profitable. But I'm not too familiar with smaller four- and five-company type pools.

How many of those do you think exist and in what areas of technology are they successful? If people are going outside of them is there really a purpose of forming a four- or five-member pool?

JEFFERY FROMM: I think most of the pools start out as relatively small groups, or many of them do. And so to the extent that they start out that way and stay that way -- and the ones that start small, perhaps they look a lot more like cross-license arrangements than pools like the DOJ has focused on.

But there are quite a few of them that just never get -- they just don't have large patent pools. They don't have large economic impacts. And people do coordinate their licensing.

It doesn't seem to be difficult for

people to figure out how to do it. They have read the DOJ guidelines. And so as long as they stay within them they figure they are okay.

FRANCES MARSHALL: This afternoon we are going to get more deeply into this issue of a full pool license versus a partial license being available.

I think one of the things that I would like to point out to Jeff is that I don't believe that the DOJ letters require the individual licensors to license their patents, but just that they be permitted to do so, and it's up to them to choose whether or not to do so.

Peter, did you have something else?

PETER GRINDLEY: No.

FRANCES MARSHALL: Josh, I'd like to finally get back to you.

JOSH LERNER: I'd just like to follow up on Frances' question and just ask David something I've never understood.

This idea of being able to license outside the pool as -- being permitted to license outside the pool as though that's an unabashedly good thing, I don't understand why it isn't the case that licensing outside the pool under certain circumstances is just another way of discriminating under a particular set of facts against some prospective licensee.

And so the pool can in effect facilitate discrimination instead of putting an end to it because in fact you're charging different prices for the same piece of intellectual property.

And then the question that I ask myself as an economist is: Well, then why is discrimination a bad thing? We actually like price discrimination in certain contexts because it's more efficient.

So this is an example to me of -- and maybe it's just because I am muddled on this subject. But it seems to me that this is an example of where the regulatory agencies have too many degrees of freedom.

They can beat you up for not

permitting independent licensing. Under a different set of facts they can beat you up for discriminating, and they don't have to justify -- and discriminating sounds bad, but in fact economists frequently think that discriminating is good.

So what I detect here is either I'm really confused or there's not a coherent intellectual framework. And I just don't want to let this pass. I want to say -- I want to ask whether it's true that independent licensing is always a good thing.

DAVID MCGOWAN: My short answer is that I don't think I said that price discrimination is bad. If I did I didn't mean to. The ability to license -- as I say, I am talking about this from an enforcement point of view.

I think the ability to license outside is good because it allows flexibility in the deployment of the rights. Now, it may be -- as Garrard says, it may be that the economic proposition of the pool is so compelling that you see none of it.

So what I'm saying is that as an enforcement matter I'm wondering why the pool would want to forbid licensing outside the pool. Now, that might be -- I take it that the implication of your question is to ensure that there are reasonable non-discriminatory terms given to all licensees.

There are other ways of achieving that. There are ways of achieving that, for example, by saying that licenses outside the scope of the pool have to bear some relationship to the proportion of payment that the licensor would have received inside the pool.

So what I'm articulating I hope is an enforcement posture that says flexibility should be maximized. And the economic results can be reached in number of ways.

If you want to have a most favored nations provision, if you want to have something that deals -- to make sure that other licensees are on equal footing, that's fine.

There's an issue about what discrimination actually means, whether it should be relative to the yield that a licensee is going to obtain from the use of your intellectual property rights.

And, you know, quite frankly there's a compelling story to tell on price discrimination. I don't disagree with you about that. I'm more worried about particular uses of intellectual property rights to block certain forms of competition.

And this is sort of an analogy from the Allied Tube, the standard setting cases that I mentioned earlier where what you have is in effect a cartel of uninventive people trying to block the adoption of a superior technology.

I worry that if you don't have the ability for somebody to come to a licensor with an economic proposition that makes sense but requires the use of a particular technology, I worry that the obligations of a licensor to other licensors in that same technology, if those obligations prohibit the redeployment of those intellectual property rights I begin to worry about dynamic efficiency.

Now, the economic value of the alternative standard may not be such that it's attractive to the licensor. That's for them to decide. That's why we give them intellectual property rights.

And the distinction between permitting somebody to license and requiring them to license is a very important distinction Frances just made. I would not want to see the use of pool enforcement letters as a device to impose a licensing requirement.

But I think it's something to be taken into account, as I say. Otherwise if you are really worried about discrimination and -- for example, if you thought that it was bad and you wanted to prevent it, there are ways to deal with that contractually within the terms of the pool.

So I guess my short answer is I hope

I'm not implying what I think you think I'm implying.

FRANCES MARSHALL: Chris?

CHRISTOPHER KELLY: Just a word on behalf of incoherence. I think Frances made a very important point about the fact that the pools -- the letters did not -- although the extent of exclusivity was a factor in the analysis, it was not an on/off switch saying if you were exclusive we would say no to you.

I think it's probably right to say that had the pool -- any of those pools been exclusive and prohibited the members of the pool, the licensors from licensing outside the pool, that certainly you would have ratcheted up the pressure of the analysis of the pool because at that point it's the only game in town.

And so we would care much more about each other aspect of the thing. But I could easily imagine circumstances in which a pool could come to DOJ and say, we are a consortium which has defined a new product which we are going to put out there into the marketplace.

And the pool is itself a part of the effort to try to encourage people to use this product as opposed to those stinky four other ones out there.

And so because this is a joint endeavor of ours we are going to, you know, support this thing and we're agreeing to license exclusively for this kind of standard -- I mean this course says the standards war, which then has its own implications.

But I could easily imagine circumstances where DOJ, at least when I was there, saying this may be a perfectly good thing, and the same thing with price discrimination.

I think we have evidence of that in the MPEG letter where you do have -- we were talking a little bit before about the constructive grant back, as we called it for relevant technology, in a sense functions as price discrimination, finds the licensees who see more value in the MPEG standard because they are innovating within it and says, well, you know what, we're going to take a little more from you; if any of us like what you have come up with we're going to get a license on it.

And we said, terrific, because what that probably means is that the people who are simply just using the technology without enhancing it and see less value in it are as a result going to see a lower aggregate royalty then they would if the licensor were to try and find a single royalty that captured the value from everybody uniformly.

PANELIST: Can I make one quick point? I just wanted to say I think a point that Chris made I would suggest from an enforcement perspective is generalizable, which is to say that -- it seems to me a risky thing to say that any of these factors is an on/off switch as Chris put it.

Practically speaking you are going to have to hit an equilibrium and decide whether that equilibrium is something that you live with rather than the alternatives.

And that seems to me just a realistic aspect of any sort of judgment about whether to bring a suit as a private party, or an enforcement decision.

And, you know, the process of weeding through the justifications and seeing how they make sense in particular markets and different things will make sense in particular markets.

It seems to me it has to be an all-in sort of thing rather than a menu of checking the box and each of these has to be present.

FRANCES MARSHALL: Jeff, did you have another comment here? No? Okay. Well, I think we've reached 11:30. I thank you all for a very interesting morning. I wish you all luck on getting lunch and getting back into the building. Give yourselves a good amount of time to do that. And we will see everybody back here at 1:00.

(Lunch recess.)

AFTERNOON SESSION

(1:00 p.m.)

FRANCES MARSHALL: Let's all take our seats and get started again. With this morning's session apparently we had a lot of trouble with the sound system and people not being able to hear very well.

We've requested that the blowers be turned off, and I think they have been. And the consequence of that is that it may get warm in here. So if it gets too warm let us know and we can do the trade-off again, turn them back on.

I think what we need to do for the panel -- not all the speakers are -- the mikes are on. They turn them on as we -- they recognize that we're going to be talking.

So if you just give a couple seconds for the mike to come on when you pick it up, that would be good. If people could speak slowly and articulately that will probably help people understand as well.

So to begin this afternoon's session

Josh Newberg is going to give us an overview of the case law of patent pools and cross-licenses and then talk a little bit about the FTC's VISX case.

JOSHUA NEWBERG: Thanks very much. I'd like to thank the Justice Department and the Federal Trade Commission for inviting me. I'm delighted to be a part of this excellent program. I know I've already learned a lot.

What I'd like to talk about generally speaking is obstacles or challenges to the formulation of competition policy with regard to patent pools. And I want to focus on the issue of uncertainty, two types of uncertainty.

One is uncertainty regarding the legal framework, more specifically the case law on antitrust analysis of patent pooling arrangements, and then the issue of uncertainty with regard to the patents themselves that are evaluated when evaluating a patent pooling arrangement, uncertainty with regard to scope, uncertainty with regard to validity, and uncertainty more broadly speaking with regard to the economic relationships among patents in a pooling arrangement.

I want to begin with a talk about the case law. I'll talk about Standard Oil, Line Material, and a little bit about BMI versus CBS.

Then I'll give an overview and analysis of the Summit/VISX case and use that case as a vehicle for showing how the uncertainty issues played out, and then talk a little bit about implications, recommendations for competition policy regarding patent pools.

I want to try to be a little bit provocative and maybe convince you of three basic propositions. One is that the Supreme Court's antitrust analysis of patent pooling is highly problematic and fails to offer rules of decision that maximize welfare.

Second, I want to suggest that as much as we long to categorize intellectual property neatly in the conceptually distinct categories of competing, complementary, blocking, patents like facts are stubborn things that frequently defy such convenient classifications. They may straddle one or more classifications. And their scope and/or validity may be just fundamentally uncertain.

Third, since this indeterminacy often informs the actual business decisions, the actual business relationships that are structured around sharing patent rights, antitrust analysis should be adapted to account for such uncertainty to try to factor it in rather than pretending that it doesn't exist.

Now, perhaps the most frequently cited Supreme Court case on patent pooling is Standard Oil of Indiana versus United States. It's a case from 1931. And it's typically cited for two propositions.

One proposition is that the rule of reason is to be applied to the analysis of patent pooling arrangements. It's also cited for the proposition that it is permissible for firms to combine blocking patents. That is to say that combining patents in order to resolve blocking relationships is not likely to raise antitrust problems.

With regard to the first proposition, I think it's fairly sound to cite Standard Oil. But with regard to the second proposition, I think it's problematic.

The case involved a pooling arrangement among four firms. It was established in the 1920s. And these four firms had alternative technologies for cracking gasoline. This was a revolutionary method for refining petroleum into gasoline.

And it represented a huge advance over so-called straight run methods of cracking gasoline -- of refining gasoline. And it could increase the yield from a barrel of petroleum from anywhere from two-and-a-half to seven times what you would get under the previous technologies.

So this was revolutionary. And one process was patented. Then more processes were patented. And soon the industry was faced with an enormous amount of costly litigation. And so four firms entered into the pooling arrangement that was ultimately challenged by the Justice Department.

And in this pooling arrangement four firms agreed that they would cross-license each other's cracking technologies. And each member of the pool would be able to license the package or any combination of the pool patents to third parties.

And it was quite successful for a while in ways that I'll talk about in a little bit. But it was problematic and I'll talk about why it was challenged.

The Supreme Court looking at this pooling arrangement decided that it was okay, decided that there was no antitrust violation. Why? There were no downstream output or price restraints as part of the pooling arrangement.

And perhaps most importantly the Court looked at the downstream market for gasoline.

And what they concluded was that as a percentage of all gasoline the four cracking patents firms accounted for only about 26 percent of all the gasoline market.

So not only were there no downstream price or output restraints, the Court decided that 26 percent didn't constitute dominance. So you have a very competitive, perfectly competitive, or acceptably competitive market.

And also there was not a lot of evidence of any kind of exclusion of firms that wanted to license the patents. Well, what's wrong with the Court's analysis then? First of all they looked at the wrong market.

It probably would have been appropriate to look at the technology market, to use a technology market analysis and to make a distinction between the upstream licensing market in which these four firms operated and distinguish that from the downstream market for gasoline.

The patent pool was not in the business of selling gasoline. The patent pool was in the business of licensing the technology to refine gasoline.

If you look at it from that perspective, these four firms accounted for something like 80 or 90 percent of all cracking capacity. So they probably did have something akin to a dominant position.

Looking at the likely effects, the probable effects of the Standard Oil pooling arrangement, it's probable that the firms had less incentive individually to compete for licensees because they had the right to use every -- the other firm members', the other pool members' patents.

There was probably less incentive to innovate because each member could free ride on the innovations of the others. However, the arrangement settled and avoided a great deal of potentially ruinous litigation.

And it did facilitate the diffusion of

a revolutionary technology without which there would be no automobile revolution here in the United States. So in any case Standard Oil is a sort of ambivalent legacy.

It's a case that is about competing patents, competing technologies that is, as I said, cited for the proposition that combinations of blocking, i.e. complementary technologies, are lawful.

The actual discussion of blocking is in one footnote, footnote 5 of the opinion. And it's good. It says that blocking can be -- pooling arrangements to resolve blocking can be a good thing. But it's not part of the holding of the case.

The next case that's relevant to the analysis of pools is United States versus Line Material which specifically dealt with the issue of blocking patents.

In that case one firm, the Line, and the other, the Southern Corporation, one firm had a patent for a circuit breaker technology, but the product that they made with the patent wasn't all that efficient.

Another firm had invented a better, more efficient circuit breaker, but they couldn't market that. They couldn't produce it unless they had a license from the first company. So they entered into a pooling arrangement to share the rights of the combined technology.

They appointed one of the two firms to be the licensor of the technology. They also fixed the downstream prices of the circuit breakers that actually were made with the technology.

Now, in this case the Court not only said that this was a bad thing, it was per se unlawful. The Court said that this arrangement was per se unlawful. What if anything is wrong with that analysis? Well, there was no -- there was no rule of reason inquiry.

There was no inquiry into relevant market. There was no inquiry into competitive effects. And also it's difficult to tease out from the opinion how significant the setting of the downstream prices was to the decision.

Based on my reading of it, it looks as if the Supreme Court still would have condemned it even if there wasn't a downstream product price fixing because they had a problem with the two licensing firms, the two patent holders getting together to fix a royalty rate.

So anyway, on the one hand you have the Standard Oil case which is usually cited for the proposition that you can -- that pools to resolve blocking arrangements are okay. But it doesn't deal with blocking patents.

And then you have the Line Material case which says that a combination to resolve a blocking relationship is per se unlawful. So this is to say the least kind of a difficult and ambivalent legacy from the case law.

Well, let's fast forward to Summit/VISX, to a modern patent pool. The technology in Summit/VISX, as you probably know, was for PRK, the sort of revolutionary technology to reshape the cornea to correct for various refractive errors through applying a laser.

In 1992 the two leading firms in the development of this technology several years before it was approved by the FDA entered into a pooling arrangement, the Pillar Point Partnership. They pooled the PRK apparatus and method patents. They established a $250 per procedure fee.

Whenever somebody actually did the procedure with either a Summit machine or a VISX machine, a $250 fee would be paid to the pool. The firms however remained free to compete on the sale of the machines.

What are the principal antitrust issues? One was what's the economic relationship among the patents in the pool and the relationship between those patents and the two firms' technologies. And a second was what were the competitive effects.

Well, in 1998 the FTC brought a three-count complaint. And they argued first that the pool was an unlawful restraint of trade based on a reading of the relationship among the patents as being competitive. So the argument -- the FTC decided that this was a pooling not primarily or solely of complements but of competing approaches.

The FTC also charged conspiracy to monopolize the PRK and equipment and technology markets, and a third fraudulent procurement of the VISX patent, key VISX PRK patent was the third count. This was resolved by settlement. The pool was dissolved.

And in the settlement VISX granted a license to Summit for the pooled VISX patents. So Summit could use the patents although Summit could not sublicense. Summit could not license third firms.

Now, the decision that the Commission made in analyzing the patents is certainly defensible. I was a part of it. I worked on the litigation team. But there were and there are alternative approaches that could have been taken.

Based on the evidence that we had before us, based on outside observers, you could look at the same pool and say these are not competing technologies. What you have is a blocking relationship being resolved by this pooling arrangement. That's what the parties argued. And this was not a frivolous argument.

It could have been interpreted that way. Alternatively it could have been argued that effectively VISX was a lawful monopolist. VISX had such a broad patent that they effectively covered the market.

And what they were doing was entering into essentially a vertical relationship with Summit where Summit needed to license the VISX patent to be able to operate at all.

Another approach, another way which I think is probably the way I'm inclined to look at it is that this pool and the relationship among the patents in this pool was defined by its uncertainty. The patent scope of important patents was uncertain. And the validity of the most important patent was uncertain.

Now, depending on which of those perspectives that you take, each of which I would submit was defensible, could be supported by the same evidence in the case, it has of course substantially different implications for the antitrust analysis.

The competitive effects then depends on how you characterize the patents. Under the FTC view it's a price fixing cartel arrangement. If on the other hand you see it as the resolution of blocking by combining complementary patents, then at least the pooling arrangement is to be encouraged.

Query whether the per procedure fee is to be encouraged. If you see VISX as a legitimate patent monopolist, then the licensing of Summit was procompetitive. It allowed Summit to be able to operate, and it avoided litigation. And VISX would be entitled legitimately to a monopoly rent from that broad patent.

If you take the position that the relationship of the major patents was in fact fundamentally uncertain with regard to scope, validity, and economic relationship, the pool still seems to be procompetitive.

I mean this was an improvisation that these two start-up firms entered into in order to create a market, a technology that might well have disappeared in the litigation that could have resulted absent the pool. But the per procedure fee and the licensing restraints are harder to assess under that view.

Some tentative conclusions: One would be regarding the uncertain legal framework provided by the case law in the best of all possible worlds Line Material should be overruled and we should apply the logic and the implications of the BMI case, from the copyright context into the pooling context.

Until then I think we need to do what we're essentially doing now which is sort of acting as if the principles of BMI apply and kind of pretending that these cases don't exist.

Regarding the problem of uncertain patent scope and/or validity, as I argue, it should be acknowledged rather than wished away. Sometimes the answer is going to be it's certain. And that uncertainty can move markets. I don't think we should always be compelled to sort of pigeonhole the patents.

And I think it argues for an expansive and searching and economically sophisticated rule of reason that factors in the often uncertain scope and/or validity of pooled patents. Thank you.

(Applause.)

FRANCES MARSHALL: Now we're going to go to John Putnam's presentation. John is very familiar with the VISX case because he worked as an expert for VISX on this matter. And so he has I don't want to say a completely opposite point of view, but some different points to make about the VISX case.

JONATHAN PUTNAM: I have two

difficulties facing me. One of them is that my general interest here is in talking about patent pools, but I recognize that the specific way I've been billed is you're talking about VISX and that's an important topic. So I'm going to try to just move through the general topics and get to VISX.

Second, I have to admit that I have to pick my jaw up off the floor hearing somebody affiliated with the FTC's case finally admit that the VISX/Summit pool was procompetitive because we certainly litigated this issue at length and took opposite sides.

I should just say that the fallout from that litigation continues in private litigation today, and so the opinions I'm going to offer don't reflect VISX's opinions in that private litigation. I have two themes to talk about today in the general part of it.

The first is that in the context of analyzing the VISX case we see that the government's guidelines make it very difficult to decide whether or not a given pooling arrangement is going to be termed pro- or anticompetitive. There's an inadequate analytical framework in those guidelines.

And I'm going to try to show you why that is in general and also in the context of the specific pleadings in the case of VISX. The second point that I want to make is that when you actually get down to implementing the tests in the guidelines you discover that there's no "there" there.

And it's very difficult to say without a theoretical framework how you would look to data and decide whether or not any given arrangement conveyed market power onto members of a pool. It's that inability to decide those empirical questions that makes the litigation of these cases especially problematic.

So in particular what I mean by that is I mean that the notion of a competitive level in the context of intellectual property litigation generally and the patent pooling in particular is not defined within the guidelines.

If you define market power -- the merger guidelines do as the ability to price above the competitive level for a significant period of time, but you don't have a definition of the competitive level, you don't have a definition of market power.

Similarly if you don't define price you also don't have a definition of market power. And you would think, well, price is easy to observe. But price is not easy to observe in the context of innovation because the whole point of innovation is that you change the quality of the good that's being offered.

And so when you observe a nominal price, that price is not just the amount of money that one party pays for the good. It's also the willingness to pay for a good that has been augmented by the innovation to begin with.

So if innovation is happening the way it's supposed to be happening, real prices should be dropping. Quality adjusted prices should be dropping even if nominal prices are rising. If you don't define price to mean quality adjusted price, they'll never pick that up.

The other point that I want to make is that this is a two-stage analysis. And so if you misregulate with respect to one party or another, the problem is that you alter the incentives for all future inventors. And the harm that you cause from misregulation dwarfs the damage that you do in any particular market because you've changed the incentives.

So the theme here which I'm just going to breeze over is that you really need a two-stage analysis. And unless that analysis encompasses time, you are going to get it fundamentally wrong. So in the typology that was given earlier today, I'm an ex ante guy.

I would contend as an economist that the only way -- right way to think about this is ex ante because that's the only way that you think about both stages of the problem. And the way you take into account time is you look at the incentives the parties have, not just simply what they did.

You look at their expectations in advance, not just what actually happened. You look at the optimal path that you are trying to create for parties and not just whether at any given instance the outcome deviated from a benchmark that you would prefer.

And then the question is over time how do you actually measure this given the data that that you are going to be given in discovery. The guidelines have three principles. Very briefly they are these: Intellectual property is like real property; there is no presumption of market power; and licensing is procompetitive.

Let me just explain briefly why I think those principles are problematic. They sound like they're completely vanilla. They are not. Let's just focus on the key language here. The characteristics of intellectual property can be taken into account by standard antitrust analysis.

Now, is that true? The answer is no. Unlike all -- most other forms of property, intellectual property does not contain the right to use. That's very important.

When I walk onto my land, I have the right to walk onto my land. When I have a piece of intellectual property, I don't necessarily have the right to use it; I only have the right to exclude somebody else from using it. The lack of a right to use in a property context renders a property right fundamentally different.

Secondly, property rights are enforceable only if you make a successful investment in the context of patents. You observe a patent when somebody has satisfied a particular regulatory standard. They made a new and non-obvious invention.

So the sample of observed inventions is a biased sample of all research performed by companies. Property rights are biased. What's observed is successful investments in research, not all investments in research. That's going to become significant in a moment.

The second principle is intellectual property is not presumed to have market power. Why is that? Because there will often be sufficient actual or potential close substitutes, standard analysis. So this is important.

The presumption that intellectual property doesn't have market power is predicated on the presumption that there may be close substitutes for it.

Now, what is market power? It is the ability to maintain prices above a certain level. What's that level? We don't know. Let me give you an example. I'm going through this quickly. You will be able to see it in the handout. Suppose there are two companies that are both competing to get a patent.

One of them succeeds. The other one fails. In this example they both spend $100 on R & D. One of them wins and makes 250. What is the rate of return you will observe for the successful patent owner? You're going to observe a rate of return of 150 percent. They spent $100. They made 250. That's a lot of money.

What's the ex ante return that they expected to make? They expected to make a 25 percent return because there was only a 50 percent chance they were going to win the patent race. If their cost of capital was 25 percent, that means they exactly broke even.

So what that tells you is the biased sample of successful inventions is going to contain firms that are making a whale of a lot of money but it's not going to take into account all the firms that failed.

The policy implication of this is that any remedy that reduced the incentive -- that reduced the return that the company made for its successful invention would have -- in this example would have been sufficient to render that investment unprofitable ex ante. Your capital costs you 25 percent.

You would be expecting less than a 25 percent return. You never would have invested even though it looks like you are making a whale of a lot of money. That's a problem. You don't know whether your remedy in an antitrust case is time consistent or not.

Would the firm have made the investment if it had known that you were going to do what you intend to do in the second stage? As I've already said, there is no definition of competitive price or even price, and so therefore you can't decide what market power is.

The third principle is that licensing is generally procompetitive. Why is that? Because it may promote the coordinated development of technologies that are in a blocking relationship. What does that mean? It means the presumption of procompetitive licensing rests on the presumption that they are complements.

Principle two said we don't presume there's market power because there may very well be substitutes. Principal three says we think that licensing may be procompetitive because they may very well be complements.

Well, whether they're perfect complements or perfect substitutes, they're either one or the other in some fashion. They are not both simultaneously at least with respect to a particular other party.

And so you have three principles, one which presumes no market power based on substitutability and one which assumes procompetitiveness based on complementarity. That's not consistent. I'm just going to skip this example of the cross-licensed patents and move straight to VISX and Summit.

Josh has already given you the background, and so I'm not going to review that. The complaint said, as Josh pointed out, that the pool in question restrained trade, stabilized and maintained prices, raised the cost of entry, and deprived consumers of the benefits of competition.

And so I ask two questions. One is: Relative to what? What were you expecting? This is what patents are due. And so if your null hypothesis is the world should have looked differently than it did and prices should have been lower, then you have to say how much lower and why.

Certainly it's the case that if one firm had come up with all of these patents on its own you have a single monopolist in this market and there would be no question that that firm was allowed to charge whatever it wanted.

And so the question you have to ask yourself is what is it about the behavior of the parties that raised prices relative to what they would have been if a single monopolist had had all these patents rights, if the pool in other words were contained or owned by a single party.

The complaint said in the absence of the pool VISX and Summit would have competed with one another in the goods market and would have engaged in competition in licensing technology.

In other words, the complaint said in the first two counts that VISX's and Summit's technology are substitutes. This is an illegal combination or conspiracy. VISX of course had its defenses.

It said that patents were not substitutes, they were complements, and that therefore it was efficient to combine them and that as Josh pointed out because of the uncertainty surrounding whose patents were going to be found valid in the litigation that also existed between Summit and VISX at this time.

No one knew what exactly what the final configuration of the market was or even who was going to enter because this was three years before the machines were allowed to enter the market.

Under the consent decree the patent pool was dissolved. Each party got its own patents back. The royalties were set independently. And there was a royalty free cross-license.

So the FTC obtained the result that has been generally affirmed to be better in patent pooling arrangements: independent licensing; low, in this case zero, cross-licensing rates; and the ability to control your own patent rights.

What's the result of the FTC's intervention with respect to third parties? Nidek, who is the third entrant in the market, gets sued now by VISX and they get sued by Summit. Why?

Because now the complementary patents that VISX and Summit had are being asserted independently against new entrants, and the combined price that the two parties seek to enforce against a third entrant is higher than the price that the entrant would have paid under the pool, which just illustrates the fact that complementary patents are efficient.

I want to come to count three now which is not about patent pooling but about fraud on the Patent Office. VISX's broadest patent was alleged to be fraudulently obtained. That is not an issue for a patent pooling case except for one thing which will illustrate the difficulty I had with the guidelines.

The FTC -- there were three -- the argument was that there were three potential markets. Certainly one of them was itself the technology market, the patent in question. And the FTC said all firms need a license of this patent, and VISX is monopolizing this market using this fraudulently obtained patent.

The complaint counsel could not -- did not have a definition of what the competitive level was. So they said that market power is the ability to exclude from a relevant market.

If you are asserting a fraudulent patent in a relevant market which is the market for that patent, and you have the ability to exclude and you ought not to, that's the antitrust violation.

VISX's response is obvious. There is no theory of the competitive level. You don't know what prices ought to be. If you actually look at VISX's rate of return on investment, it was within -- it was certainly normal. The royalty rate as a percentage of the final price of the good was normal.

And you're not taking into account the fact that people are better off because they prefer to have their eyes zapped with a laser than to wear glasses the rest of their lives. Here is the critical point.

The problem is that if all other firms under count three needed a license to this allegedly fraudulently obtained patent then the patent is in fact a complement.

But under counts one and two the FTC had already said that VISX's patents did not block Summit's patents and that the two firms ought to have competed in the goods market. In other words, they were substitutes. So the question is which are they.

In the end the patent was found not to be fraudulently obtained. So that's the end result of that. There are three principles. Do I think the antitrust agency should not regulate intellectual property? No.

I think that you should take the following philosophy. Intellectual property is the private means to a public end. The authorization phrase of the Constitution says that intellectual property exists to promote progress.

If you take that seriously, then your overarching charge is to decide whether the intellectual property in question is being licensed in such a way that it promotes progress or hinders it. That's the question.

And you have the right to withhold property rights from individuals who do not promote progress in their use of those property rights. They have an obligation to do that under the Constitution.

The second principle is that you enforce intellectual property rights and also antitrust regulations of them for two reasons. One is because private individuals have externalities of their behavior that they don't take into account. And there may be insufficient private incentives to police behavior.

And a third principle -- and this is I think what I want to leave you with -- is that free entry into research and development plays the role that entry does in competition with the product markets.

You have to believe that the system is self-correcting in the same way that it is that if you allow entry in markets with high prices those prices will fall eventually as competition increases.

Now, what we are doing in the case of intellectual property is moving that preference for entry to solve the problems in the market one stage back to the research phase. And we're saying is there's free entry in the R & D market.

Eventually the high prices that you observe that are being earned by this intellectual property will be corrected as other people come along and enter, develop new technologies, and render the current technologies obsolete. That's our preferred method for regulation, is entry.

What's my normative proposal for this? The question that the agencies should seek to address is: Was the restraining question anticipated to be reasonably necessary to induce the investment at the time the investment was made?

If it was and we have a preference for this investment because it resulted in this new valuable technology, then there should be a presumption that it's not anticompetitive. If it's just something that they developed after the fact in order to further exploit their monopoly rights, then I think it's much more suspect.

But if you take a two-stage approach, you have to ask the question ex ante: Did the companies foresee that they would have to price and license in this fashion in order to justify their initial investment? Certainly the parties in Summit and VISX did, and that's why they chose the arrangement that they did.

By that standard the patent pooling arrangement would not have been nearly as suspicious or would have contained a presumption of procompetitiveness. I think that's -- I think we're running late, and I would like to allow time for questions. So thank you very much for your time.

(Applause.)

FRANCES MARSHALL: Are there any questions from the panel?

DAVID MCGOWAN: Just speaking from a sort of lawyer's point of view, an enforcement point of view, one of the problems that I've always thought of -- and this goes back to an article that Lewis Cappler wrote a long time ago -- is that if you take the financial economics point of view it's very difficult to estimate the revenue stream at any given point in time from a future investment without also positing what the antitrust regime is. You can't actually derive the one without the other.

And I'm wondering if the gist of your

proposal is to solve that problem by positing that the subjective expectations of somebody who's sinking costs into an investment as to what conduct will be necessary to clear whatever their hurdle rate is on that investment should control the antitrust analysis such that if they thought that this was a means of exploitation necessary to cover their costs that it would follow from that belief on the part of the rights holder that it was legal.

JONATHAN PUTNAM: I'd have to say that probably as a lawyer you are much more deeply cynical about human behavior than I am, and your point is well taken although I think at some sort of fundamental level it's almost an evidentiary question rather than an economics question.

I think that there are -- the agencies routinely use their discretion to decide whether pricing documents are a sham or whether they actually reflect true intentions of the parties.

And so it seems to me what I'm really asking for is not that the agencies develop a whole new analysis, but that they take it one step backwards in time and say what did the parties think that they needed to do in order to invest, not what did the parties having invested and succeeded do in order to price their product, because by the time you get to the product market you are answering the wrong question.

We already have the technology. We need to go back initially and say would we have had the technology under this regime or not. And if the answer is no, then the licensing regime presumably promoted progress, and so therefore it's presumptively efficient. That's obviously a rebuttable of presumption.

But I think right now there is no need for either agency to take it into account at all. The investment decision is wholly irrelevant to whether or not there is an illegal restraint in the product market or in the licensing of the intellectual property, and I just think that's wrong.

DAVID MCGOWAN: The other thing that I

think about, if you made this a multiplayer thing so that you had multiple potential inventors, would you be able to draw any strong predictions as to the desirability of a given antitrust rule relative to a multiplayer game?

So, for example, a broad -- a grant or an antitrust rule that would favor an individual rights holder, would allow that rights holder to cover their costs, might also deter other rights holders from entering, or it might not.

I'm just wondering. If you add other inventors in as you would do, for example, in the model in which the probability of innovation varies inversely with the number of people competing because you are going to lose your cost if it is a winner take all market, how do you fit that sort of multiple dynamic into this approach?

As an enforcer I'd be wondering, all right, if I mandate dealing that might draw in new people, but then it might have an adverse effect as you are talking about.

JONATHAN PUTNAM: It's an excellent

question, and I'm going to say I don't know. And what I would need to know is at what point -- timing like this is important because the question becomes, you know, are the other parties competing sort of in the initial stage, or are they competing once the pool is formed and they are competing to generate improvements.

I think your answers tend to vary because obviously you don't just have discrete two-stage games. You have sort of end stage games that are overlapping.

Competition in the product market occurs simultaneously with innovation for the next stage. And so I'd hesitate to offer a general rule. It's a good question. I just don't know the answer.

FRANCES MARSHALL: Chris, did you have a question? Not obliged.

CHRISTOPHER KELLY: Oh, okay, if I have to. John, I think the answer to your rhetorical question of isn't this what patents do is no.

If the second principle of the guidelines is right, the idea that a patent does not necessarily confer monopoly power or even market power, then no, a patent guarantees you the right to make supercompetitive rents on your invention.

If you do happen to be the only game in town, then yeah. But in that regard that's just like with other ownership rights. I think I'll come back to a couple of the points that hook up pretty directly to my presentation.

But the only other thing I wanted to ask is with your rule, the ARNII rule, is the answer to that question the end of the antitrust analysis? Or does that just start the rule of reason analysis in which you weigh the benefits against the harms?

JONATHAN PUTNAM: To answer your second question first, it's only the start of the analysis. Right now there is no charge to the agencies that they take into account the dynamics of the situation.

I'm saying you need to take into account the dynamics, in particular the ex ante expectations, in deciding whether or not there has been -- there is market power and there is supercompetitive pricing. Unless you take into account expenditures on R & D, you are going to get the second stage pricing wrong.

CHRISTOPHER KELLY: I may be mistaken. And probably Ruth Rubiczek if she's here knows this way better than I do. But I was thinking that the guidelines themselves do contain a mandate or two to think about the impact on ex ante incentives and the possibility that enforcement could skew them. But, you know, I never read the stuff. So I may be wrong.

JONATHAN PUTNAM: Yeah. I think -- I guess the question is: Is it going to skew investment going forward if you intervene versus if you intervene now would the parties have done what they did back then. And that's really the counterfactual question that I'm urging people to address.

I want to just hit the ball back on the question of do patents raise prices because I think as an economist the only responsible answer to that question is yes. The only reason why you invested to begin with is because you thought you would make money on that investment.

And you obtained that patent right because you thought it was going to provide you with some kind of return. And the form that return takes ultimately is the ability to restrain somebody else from doing something that would cause you to make less money than you would have made otherwise.

So what this question really is about is what's the appropriate -- the question is really about what's the competitive level. Obviously the competitive level cannot be what you would have earned if you didn't have the patent right.

The competitive level has to be something like an appropriate return on your investment versus an inappropriate return. Now, I'm not -- that's a complicated question.

But it has to be the case that patents raise prices and restrain trade by definition. The question is relative to what or is it too much or just enough.

CHRISTOPHER KELLY: Brother McGowan, you look like you have the answer too.

DAVID MCGOWAN: No. I don't have an answer. I would say one thing. From a legal point of view it is true that patents have this potential. They carry it out through a very complex web of legal rules.

For example, to realize the revenue that patents allow you to realize, you would hope to have a contract law system. And I think Professor Baxter many years ago said we don't need to know a whole lot to know that a patent doesn't give you the right to put a gun to somebody's head to conclude a license.

That is a function of the surrounding legal context into which the patent is inserted. Antitrust is a part of that. And I think one of the reasons it's difficult from a legal point of view is that there is this sort of dialogue and ongoing reconciliation of the goals of a wide variety of legal regimes.

And the rate of return analysis, what I call the sort of finance analysis of IP, is a crucial part, and I agree very much with that. And I agree with the proposition that in enforcing the antitrust laws one needs to make sure you don't kill the goose that laid the golden egg; you don't kill innovation.

But it's also true that I think as a social matter intellectual property rights almost as a legislative and a practical presumption operate within a broad legal context. And those intersections are things that need attending to. And I would agree with your point, your general point that this should not be a binary analysis.

It's going to need to be context specific. I think I'm a little bit more optimistic about the guidelines' ability to be flexible. I don't view them as necessitating a sort of binary analysis.

But, you know, I think the trick for us as lawyers and enforcers is to make all of those laws work as well as possible in conjunction with each other as they must. If I abolish contract law tomorrow, patents are going to have a radically different expected return than they did today.

FRANCES MARSHALL: In the interest of the shortness of our time, I think we will move on. Chris Kelly is now going to give us a little overview of the DOJ patent pooling letters that will I think form a baseline for the rest of our discussion this afternoon.

CHRISTOPHER KELLY: It's wonderful to be back, and I love what you have done with the draperies. A cynic might look at the title for this presentation as a tombstone. That's not what was meant.

Instead what I wanted to do fairly quickly was just to give you a sense of what --

just the scope of what I'd be talking about which was how in particular at DOJ since it just by chance fell to us to look at the MPEG and two DVD patent pools, how we approached that.

I say 1997 because that's when Joel Klein gave a speech to -- a brave speech to the American Intellectual Property Law Association within spitting distance of The Alamo and really kicked off the Division's new approach to patent pools.

But I could just as easily say 1995 because that was when the IP guidelines were issued. And I think you could make a decent argument that once those came out everything else was really just a matter of connecting the dots. Let me give you a quick disclaimer. I now represent Sony.

And as you can probably imagine, they are a willing participant in two of the three patent pools that the DOJ looked at. Please don't blame them for anything that I say today. It doesn't necessarily reflect what they think.

What I am going to talk about in theory is differing approaches to patent pools, the three pools that DOJ looked at, what those pools stand for analytically, and probably most importantly the issues that are still hanging out here.

Those of you who were here this morning probably have a pretty good sense at least of what some of those issues are. The bad old days, okay, patent pools as you heard in part from Josh tended to be viewed fairly reflexively by antitrust lawyers as a bad thing.

Line Material is one of the cases that's cited for that proposition. On the other hand, I think unlike Josh I tend to read Line Material really as being a case about at bottom resale price maintenance and in fact whether or not the General Electric case from the, what, 1920s should be extended to this setting.

And in that regard I guess I view Line Material as one in a series of cases in which the Supreme Court has done everything it possibly could to limit General Electric to its narrowest set of facts imaginable. In fact there's even a line in Line Material where they basically say we're not talking about patent pools here.

But certainly it is part of the milieu in which patent pool conduct tended to be viewed with a somewhat jaundiced law. National Lead is probably another decent example. Like Josh I've had some trouble coming to grips with the Standard Oil case. I dealt with it mostly by ignoring it.

But there is really no denying that in that case the Supreme Court actually said pretty much that these patents are substitutes for each other and proceeded to give the conduct the thumbs up. Tough stuff if you really want to view it as being good law. My inclination is not to.

In the interest of public domain citation I've got a cite there for Line Material. By the way, I didn't bring hard copies of the slides. But if you'd like them give me your card and I'll be glad to e-mail these to you. Here is my little gripe about Line Material.

On the other hand, even though we tend to talk about patent pools as being a long time bogeyman in the antitrust lore, the fact is that as long ago as 1918 the Justice Department gave the thumbs up to a patent pool formed by a bunch of aircraft manufacturers who viewed each other as their competitors who go together under duress applied by then Secretary of the Navy Franklin Roosevelt and formed a pool which not only combined their present patents, but also if I remember right all their future inventions in the field as well.

Maybe it was because there was a war going on that the Attorney General said this is really fine, because at this point really the disagreement among the aircraft manufacturers had stymied aircraft production. So I guess the thought was they had to do something.

But what's remarkable is that at least apart from the outcome -- the determination of the question of the incentives to innovate, the analysis is very, very similar to what you see in the more recent pool letters. And in fact you'll see this pool cited in Joel Klein's speech from June '97.

So the guidelines came out in '95 and really as far as I'm concerned pretty much determined everything else. We had three principles which you heard about from John although his understanding of them is somewhat different from mine. I still think this is a terribly important proposition.

And if it's not so, if IP rights are meant by design to create market power, necessarily then everything I'm about to say goes out the window. I don't believe a word of it. It really hinges on this. And similarly on the idea that licensing is procompetitive.

One quibble I have with what John just mentioned in his parsing these three principles is that I think that the patents which provide competition and are the basis for saying no market power are not the same patents which would then be bundled into a procompetitive licensing regime. I think you have two different groups here.

And that's why those two statements can stand next to each other without covering their faces. So the new view, woof, woof, woof, nothing very surprising there. Let's move on. Here's where the rubber really meets the road, in these three business review letters that DOJ did.

First and I think most important and you could say maybe even the only truly important one, the only truly determinative one, the only on/off switch is the relationship of the patents to each other.

Rightly or wrongly each of these letters asked whether these patents that were involved were complements or substitutes and how you knew; how can you tell what the relationship was. And as you know, in each instance there was a mechanism, the expert mechanism which was used to determine that.

Also relevant of course is the relationship of the members of the pool to each other. If they are competing at some level, you do want to know what the pool may do to that relationship.

Degree of exclusivity as I suggested before is important, can't really ignore it, and in some cases I could imagine it being quite important. But to the extent that a pool is non-exclusive that sure takes a lot of heat off of the analysis of other factors.

Maybe the most interesting question posed by the pools is their effect on licensing innovation. And that became most relevant in the analysis of the MPEG-2 pool because of that what I refer to as a constructive grant back. Garrard, there's actually -- what's the name of that clause?

GARRARD BEENEY: Yanking.

CHRISTOPHER KELLY: The yanking clause. How could I forget? That really raised some very interesting issues for us. But as you know, we ultimately saw it the same way the Attorney General saw things back in 1918.

So MPEG-2, there's the URL for it if you want to click to it once you get these slides. Technology for video compression, originally it was just a humble little mom and pop of 9 firms with 27 patents. Now it's grown to 27 and 100. God bless them.

And it was I'd say of the three patent pools the most elaborately laid out, in particular what MPEG -- the MPEG-2 pool has that the other pools we looked at lacks is a joint licensing agent with a separate corporate identity from the other members of the pool.

And that agent, MPEG LA, whose Baryn Futa is with us here today, is contractually required by virtue of its agreement with the other members of the pool to grant a license to all comers for use with that standard, not a license for other purposes.

But within that standard anybody who wants one is entitled to one assuming I guess that its credit is good. Licenses concern both hardware and software, and as we heard before the members get to split the royalties once they are in on a per patent basis. It's fairly strict. There is no subjective element to that.

It's not my patent is more path breaking than yours. It's you have five patents and I have three in Bolivia and that's what we count for dividing up royalties as to sales in Bolivia. Key features, the essential patents as you heard are identified by a technical expert that MPEG LA retains.

The expert has a continuing role any time a question of essentiality arises either because you come to the pool with a patent which you'd like to have admitted to the pool and licensed through the pool or because a member who is, remember, collecting its royalties on a per patent, pro rata basis all of a sudden gets the idea that another patent in the pool which is taking money out of its pocket isn't essential.

At that point the member or anyone,

you or I, could call up Baryn and start the ball rolling with a good faith assertion that a particular patent is no longer or never was essential. And at that point there would be the review by the expert which would then be binding on the pool.

We have talked about the constructive grant back; awfully interesting feature and unique to MPEG-2. We don't see that in either of the DVD pools. When the Department of Justice took a look at this, by far the greatest part of the analysis dealt with the relationship of the patents.

And the conclusion was that the pool was very likely to be integrating complements as opposed to substitutes. By making the criterion for inclusion in the pool essentiality to compliance with the standard, that meant that by definition the patents that were covered by the pool were complements.

There was no way that they could be anything but complements if you absolutely had to get access to them in order to comply with the standard. You get a license from, for instance, Philips on the first five MPEG patents. Well, that's wonderful.

But in terms of complying with the MPEG standard, they are worthless until you get the other patents that you need. So by definition by limiting the pool to essential patents the expert mechanism assuming that it worked right would ensure that the pool was bringing complements and only complements together.

The letter concluded that there didn't seem to be any other aspects of the pool which would be likely to inhibit innovation in any significant way. As we mentioned before, it was non-exclusive. Members could license outside the standard or even outside the pool for the standard.

I think the point is that the pool, other than its positive attributes, did not do anything to make members less able to license independently of the pool than they had been before the pool came into existence.

Licensees aren't inhibited in any particular way as to what they do once they have the license to make the products in conformity with the standard.

And the letter determined that even though this constructive grant back as we call it or yanking clause as Garrard calls it is pretty hard bargaining with the licensees, that it didn't seem to be anticompetitive on balance.

In fact it in some ways was a nifty way as we talked about this morning of identifying innovators to whom the creation of the pool and the support of the standard were really valuable, and made the pool or put the poll in a position to extract a little more from those folks while still keeping the basic license low or at some lower level to other -- a broader range of licensees.

So on balance it looked to us like

there was a good chance that this in fact was procompetitive price discrimination and was the kind of thing that we shouldn't get in the way of especially at this stage of things. DVD, as you know, is digital versatile disc, not video.

These letters dealt with the standard for DVD ROM and DVD video for which there are not any kind of meaningful competition. You may know that there are several standards out there or potential standards, candidate standards with regard to recordable DVD formats. And it will be interesting to see what happens with that.

But here we have the DVD formats for which there was an agreement that everybody could sign on to. But there wasn't just a single pool. There were two of them. If one pool is good, why wouldn't two be better? We had Philips, Sony, and Pioneer.

Actually now I say Sony, Philips, Pioneer, but I forgot to change this around since joining my new firm. As you can see, they had a whole lot of patents, none of this MPEG stuff with 27 or so. We have a lot. And then we had Toshiba and Time Warner with quite a few of their own.

And obviously from one standpoint if you were designing the world, if you were the philosopher queen you would want them to form one pool.

But as we heard I think from David earlier today and maybe from others as well, the real question I think with the analysis of these pools is do they make things better, not do they make things as good as you would like them to be. It's do they make them better or do they make them worse.

Here even though two pools might not be as good as one, it is certainly better than a world in which each of these licensees was off by itself and had to be dealt with individually by -- excuse me. I said licensees. I meant licensors. Licensors was off by itself and had to be dealt with individually by each licensee.

That was I think a largely unspoken

premise in MPEG-2 where you didn't have the ugly spectre of two separate patent pools. But at the same time it was quite clear that the MPEG-2 pool did not necessarily include all the patents that you would need in order to comply with the MPEG standard.

Nor does it even now I would guess. Or have you got the waterfront covered now? Still got to go elsewhere?

GARRARD BEENEY: There are others out there, but they are not actively licensing those.

CHRISTOPHER KELLY: Okay. Congratulations. So DVD -- the first of the letters that the Department of Justice opined on was the Philips-Sony-Pioneer letter. And as I mentioned, unlike with MPEG you have a little vertical integration.

Philips is the licensor for the pool and in fact is really to put it bluntly calling the shots, rather than a situation where in MPEG all the licensors got together, agreed to create this new licensing agent, and then individually agreed with the licensing agent how things were going to be.

Philips negotiated deals with Sony and Pioneer to be -- to license on their behalf. If I remember right, there's not an agreement that would be between, say, Sony and Pioneer. It all extends out from Philips.

Perhaps the other significant difference between DVD and MPEG is that there's a slightly greater degree of subjectivity in the criterion as to essentiality. And as a practical matter it may end up not being important. But because it was there on paper, it had to be dealt with.

And it's this criterion which says necessary (as a practical matter) for compliance. Well, what is as a practical matter? Very hard to say. But I think where we came out was that at the end of the day the way this standard was going to be applied was quite likely going to be virtually the same as that for MPEG-2.

There was also some question about the

robustness of the independent expert mechanism. Here the expert was retained directly by Philips, one of the IP owners, as opposed to MPEG LA in the MPEG situation. And that's the degree to which the expert was insulated from influence by Philips and the other patentees was an issue.

Ultimately though the letter concluded that the independent expert was sufficiently robust a mechanism that we could be reasonably certain that it would be all right. As you can see, non-exclusivity, here the royalties though were allocated not on a per patent basis but on a negotiated basis.

Philips and Sony agreed what Sony's cut would be. Philips and Pioneer agreed what Pioneer's cut would be. And so there's not this per patent mechanism which did in the MPEG situation create an incentive for each member of the pool to keep an eye out for other people with non-essential patents in the pool.

Here Sony could complain about a Philips patent being non-essential and could get it ejected through the mechanism of the expert, but it wouldn't have any impact necessarily on its cut of the royalties. So you lose that -- you do lose that incentive. No constructive grant back, as I mentioned. Okay.

Since we issued a positive letter you can guess what it said, right? Pool combines complements. A little bit of churlish griping about the flawed expert mechanism. But at the end of the day the letter concluded that it was reasonably likely to limit eligibility to essential patents.

And again no other indicia that would suggest that the pool would limit competition among the other folks. I told you Time Warner was very much a similar situation, raised the subjectivity issue to some extent. There was some question about the expert mechanism again.

As you can tell, we were a little bit more sensitive about that issue by this time than we were in looking at the MPEG letter. Our mantra became independent of what; independent of what. Unfortunately it's very difficult to come up with an expert mechanism that is utterly independent.

Unless and until some very wealthy person endows a foundation whose sole purpose will be to determine essentiality of patents to standards and then pools decide unilaterally to rely on that stuff, you're going to have quite likely an expert that's being compensated by the pool organization to make these calls.

So it is a very difficult thing to get around, but at any rate pretty much the same analysis although the Toshiba-Time Warner pool was sufficiently altruistic that, by God, its members are obligated to offer patents independently of the pool.

They are not merely free to offer patents independently of the pool; they have to. So it seems like an energetic way of dealing with that issue. Let me skip real quickly. And you all know about this one so -- oh, my God. We will be here 15 just waiting for this one to end.

Let's see if page down will do something about this. And it's not even that good of a slide. What they stand for, yes. As you can guess from the discussion this morning, complementary is really, really where it's at in these letters.

And so if it turns out that complementarity is not necessarily what is key to the benefits of patent pools, then these letters have a little problem.

As I said, one unresolved issue is how are you ever going to get yourself satisfied that you have a truly bullet proof mechanism for determining essentiality or as I would say ultimately complementarity.

And how much can antitrust enforcers or plaintiffs or Courts realistically ask of a pool when they put something like that together?

Ordinarily when people enter into a transaction of any kind we start -- we don't ask everybody who enters into a joint venture or a contract to hire an independent expert to make a determination that they are in a complementary relationship with each other.

We just start with the idea that people tend to enter into contracts because they have complementary resources they want to bring together.

Exclusivity is going to be I think a continuing issue especially since I think there's some concern that some of these pools may in effect discriminate among differently situated licensees because they offer one product which is of varying values to different licensees.

I guess at the extreme if what's being offered on a take it or leave it basis is a sufficiently bad deal that means that for some licensees the pool doesn't exist or that the members of the pool have agreed on a licensing regime that excludes those licensees.

And at that point -- I guess it would seem to me at that point you have a cross-license although it may be a cross-license that does contemplate use of the IP by the cross-licensors.

Then the question is, is that so bad.

If what you have is an exclusive cross-license, I still think you have -- that just tells you what it is you are looking at and to what you are applying the rule of reason.

And again if the touchstone for the analysis is the world prior to the creation of this entity whether it's a pool or cross-license, the question is are we better or worse off without it. And I would guess that in a lot of cases the answer is going to be, well, we might well be better off.

Finally as I said, you can tell there's quite a bit of interest in the question of how important complementarity is. One thing to look at I guess on this point might be the copyright societies. We've been talking all about patent pools.

But a lot of what, say, an ASCAP or a BMI does is somewhat similar to what we are talking about with patent pools. One difference is that I think with ASCAP or BMI there is a greater sense that overall what they are doing is combining complements.

That certainly seems to be what drives things like the Supreme Court's BMI decision. But on the other hand, the antitrust scrutiny that has shadowed these societies over the decades is I think premised in large part on the sense that in some way they also combine substitutes, that different love songs compete against each other in certain circumstances.

As you know, in those -- in the case of those societies non-exclusivity is quite important. It's a deal breaker. And so that may be what we would be thinking about if we got towards a regime where we had -- where we could contemplate patent pools that did not necessarily convey complements.

On that point I just want to point you to this one business review letter from the Japan Fair Trade Commission which seems directly to take on a joint patent licensing mechanism which by definition appears to encompass technologies which compete with each other. Might be well worth a look if you are interested in the topic. Let me leave it there. Thank you.

FRANCES MARSHALL: Thank you, Chris. Garrard Beeney is now going to talk about pools as a solution to these thickets of patents and I think also how the agencies might refine the rules that have emerged from our DOJ letters.

I'd just like to remind our panelists that we have a limited amount of time, and we'd like to get to some discussion time. So if you can limit your presentations to your 15 minutes, that will give us some time to talk. Thank you. It wasn't just you, Chris.

MARY SULLIVAN: It was just that one troublesome slide.

GARRARD BEENEY: Let me begin by doing two things. First in the three or four answers I gave to Chris during his presentation I think only one of them was wrong. There are actually 21 licensors in the MPEG-2 pool, not 27. But they do license 100 patent families.

Second I want to thank the Commission and the Division for the opportunity to contribute to these very worthwhile proceedings.

I think finding the right interplay between antitrust and intellectual property law will be critical to the ability of innovative companies to invent and consumers to reap the benefit of new technology and sophisticated products.

As you may know, it was my privilege to work with some very talented people, Frances, Ruth, and even Chris here before he joined the dark side, on two of the three principal business review letters which address a significant portion of today's topics, patents and intellectual property pools.

Today I'd like to suggest to you that those letters which contain I believe a careful and thorough analysis of the competition issues raised by intellectual property pools have withstood the test of time.

While experiences with pools over the

last several years may require additional thought and refinement of the three letters' analysis at the margins, the basic message those letters convey regarding the agency's enforcement decisions should remain unchanged. This afternoon I'd like to address a few of those issues which may require refinement.

But before doing so I'd like to briefly address the role of intellectual property pools in today's economy. No one can seriously dispute the increasing high cost of research and development. Billions of dollars are spent each year on research.

Indeed private research and development has grown at a formidable 17 percent rate from 1995 to 2000, exceeding $200 billion by the end of the decade.

The high cost of R & D and the increasing need in a global competitive economy to reduce development costs and reduce risks that develop initiatives that lead to marketable products has led to at least two significant developments:

First, product standardization as efforts are made to avoid format wars such as the one that involved Beta and VHS which left many consumers with unusable players; second, joint development of single products as multiple industry participants attempt to share the risk and costs of new product development.

These two phenomena have naturally and inescapably led to a proliferation of intellectual property held by numerous companies which cover a single product, the phenomenon that Professor Shapiro referred to earlier in these proceedings as a patent thicket.

And the thickets grow as patent applications grew by over 100 percent over the last dozen years both in terms of patent applications and patent grants.

One solution to clear the patent thicket and avoid the intellectual property bottleneck is of course the creation of an appropriate intellectual property pool.

Indeed the 1995 guidelines that we've discussed today talk about the fact that intellectual property pools may provide procompetitive benefits by integrating complementary technologies, reducing transaction costs, clearing blocking positions, and avoiding costly infringement litigation.

Thus I think it is important to start by emphasizing that in an appropriate forum pools are good. As Professor Gilbert said again at an earlier hearing, licensing is a good thing; we would like to have more of it, not less of it.

Therefore I respectfully submit that the question for today is not patent pools yes or no, but how to balance the measures necessary to licensors and licensees alike with rules intended to minimize any harm to competition or innovation.

In the paper that I submitted for these hearings I suggested nine concepts, characteristics of a pool, that absent unusual circumstances will drastically increase confidence that a particular pool is procompetitive and further suggested that with refinement these nine concepts could be developed into a safe harbor for intellectual property pools to guide the marketplace.

Many of these nine concepts I believe come from the business regulators and the intellectual property guidelines that are not controversial: a defined field of use in the license, certain characteristics of grant backs, freedom of use and development on the part of licensors and licensees alike, non-discrimination, the safeguarding of competitively sensitive information learned in the licensing process, and the non-exclusive nature of pools as a source for individually owned intellectual property.

But today I'd like to concentrate on two of the nine concepts which might create a bit more controversy as they expand on the limits suggested by the Division's business review letters: first, permitting intellectual property in a pool which may in fact be substitutes and, second, permitting inclusion under limited circumstances of non-essential intellectual property in the pool license.

In evaluating the competitive effects of a pool a question of unparalleled significance, as Chris suggested, is what's being licensed; what's swimming in the pool, if you will.

I take no issue with the Commission's complaint in VISX as it was pleaded to the extent that it challenged placing in a pool an amalgamation of patents that were in effect pure substitutes for the only two approved methods for PRK eye surgery.

Pooling there arguably alludes to eliminating competition between two competitive packages of intellectual property rights can be an anticompetitive agreement restricting price competition.

On the other hand, I do depart in some minor respects from the Division's business review letter analysis and suggest that not all intellectual property rights licensed in a pool must be pure complements for the pool to be procompetitive.

Substitutes should be permitted in a pool when, one, at least one of the substitutes is necessary to produce the downstream product or follow the standard specified in the license but, two, the substitute IP is not sufficient to produce the downstream product or follow the standard but other intellectual property is required and is offered by the license.

Now, why on balance is this procompetitive? Basically because of the way standards or processes are defined. In attempts to create open standards or less restrictive protocols for products there may be manufacturing steps, calculations or processes which must be accomplished but which may be accomplished in more than one way.

The step to be performed may be essential, like crossing water on a journey to

Europe, but there may be different ways of getting there, plane or boat. I have heard this referred to as mandatory options. The IEEE 1394 standard for high speed data transfer is an example.

By way of illustration assume with me the following. We're evaluating an intellectual property pool in which the downstream product is defined as a dedicated integrated circuit with defined specifications. To function the circuit must receive electrical signals within defined parameters.

The acquired signal to the circuit can be delivered in three different ways, each of which is covered by a single patent which is not infringed by the other two alternative methods.

Thus A owns a patent on method A which does not infringe method B or C. B owns a patent on method B which does not infringe patents held by A or C. And C owns a patent on method C which does not infringe on methods A or B.

These patents are pure substitutes for

methods of delivering electrical signals within defined parameters. If that were the licensed field of use, under the Commission's I believe quite appropriate analysis in VISX such a pool should be challenged.

On the other hand, if the licensed field of use is the integrated circuit and a method of signal delivery is only part of that product, the fact that there are three alternatives for the signal delivery give rise to the three alternative rules for the integrated circuit pool.

First, inclusion of any of the three patents could be banned under a no substitutes/complements only policy.

Such a rule would in my view increase transaction costs, decrease the efficiency of the pool, and likely increase the monetary costs for those seeking IP coverage because under this alternative the integrated circuit manufacturer would need not just a pool license but also a license from either A, B, or C.

Second alternative, we could require the pool itself to choose for inclusion in the pool one of A, B, or C.

Under this rule the pool process of selection might disproportionately reward one IP holder, perhaps effectively exclude the other two from the market, and limit the licensee's choice of which method to employ, either A, B, or C.

Third, we could permit inclusion of the competitive intellectual property owned by A, B, or C in the pool and let the licensee choose which method to use.

It seems that from an efficiency point of view as well as that from the interest of the licensee the latter is clearly the most sensible and, I submit, the most procompetitive. Obviously this is not advocating all-out acceptance of complements in the pool.

Again assuming the facts stated by the Commission in VISX, the VISX was in my view correct. But when one of the complementary IP is necessary but not sufficient to produce the product described in the licensed field of use, allowing complements is procompetitive and unlikely to attract an effort to fix prices.

Indeed a further step could be taken to safeguard against such behavior. The complement rule could also require that royalties attributed to competitive intellectual property be distributed to the patent holders in proportion to the actual use by licensees of the competitive intellectual property permitted in the pool.

For example and again using our hypothetical integrated circuit pool, we could require that royalties are distributed to A, B, or C based on the actual use of A, B, or C's solution. This can be done by several methods.

First, we could require licensees to report which type of chip they produced if doing so didn't dramatically increase transaction costs. Second, you could try to get market statistics as to which types of chips are being produced, A, B, or C.

Third, you could hire some independent expert to try to make the calculation. Or there are other ways in which you can come to a reasonable division of royalties among A, B, or C to ensure that they only receive royalties only when their patents are actually used.

The second expansion of the business review analysis I would like to suggest concerns the issue of essentiality. Several issues are obviously raised by a discussion of essentiality. For example, how is it defined and once defined who determines whether IP is essential.

This afternoon however I'd like to focus on whether all IP in the pool need be essential and suggest that again under carefully defined circumstances a pool should be permitted to license certain non-essential intellectual property.

Licensor should be entitled to offer licensees a non-assert agreement on non-essential intellectual property. But the agreement not to assert should also be limited to the use of that non-essential intellectual property to the same field of use as the license for the essential intellectual property.

This condition would avoid any spillover effect into other markets. There are several reasons why permitting a non-assert does not run afoul of the concerns expressed in the guidelines or the business review letters.

First, I know of no situation in which a licensee paying a royalty to a pool for essential intellectual property has then been targeted by a pool licensor to pay additional royalties on the same product for infringing non-essential patents.

Thus permitting the non-assertion in the pool would conform with the experience of pool licensing, would increase the transparency of precisely what the licensee is getting, and perhaps free licensees to vigorously compete and produce different implementations of the product defined by the licensed field of use.

While it is true that what everyone

is doing is generally not a compelling rule of reason defense, permitting the offer of non-assertion agreements in pool licenses is justified because doing so is procompetitive.

The typical analysis supporting a rule which excludes non-essential intellectual property from the pool is based on principles of tying. If licensors are going to license all the intellectual property in a pool only as a package, then the licensee should need a license under all the patents.

That is, all patents should be essential to the field of use. That base of the concern is that purchasers or licensees not be burdened with the cost of products or intellectual property they neither desire nor need and that market power in one product not be used to foreclose competition in another.

While this analysis is sound when applied to widgets, I would like to suggest that it may not have as much applicability when applied to intellectual property basically because while intellectual property is a form of property it is different in several respects from real property.

The distinction I would like to focus on today is the fact that generally as a matter of economics the incremental cost to a licensor of adding additional intellectual property to a pool is zero.

And even if you were to hypothesize opportunity costs for licensing the intellectual property in the pool context, even those hypothetical costs are zero because licensors typically do not offer additional licenses on non-essential patents that are covered by the pool field of use.

Thus there is no reason to presume in the pool context that royalties would be higher because of the inclusion of non-essential property which generally costs the licensee nothing.

Thus by allowing licensors to offer non-assertion agreements the pool license becomes more transparent, what generally is implicit in the marketplace becomes explicit, licensees are given greater certainty of their freedom to manufacture and compete by offering different implementations of the defined product without fear of additional claimed royalties, and few if any legitimate competitions are raised.

As I suggested earlier, the question is not whether to permit or forbid the formation of patent pools but rather to identify those licensing practices that advance the undeniable procompetitive aspects of pool licensing without causing unjustifiable or countervailing competitive concerns.

As Chairman Muris stated at the February 6th hearing when these proceedings began, intellectual property antitrust laws both seek to promote innovation and enhance consumer welfare.

These sentiments were shared by Assistant Attorney General James who observed that intellectual property and antitrust law share the common purpose of promoting dynamic competition and thereby enhancing consumer welfare.

The goals of intellectual property and antitrust law can be harmonized with respect to patent pools. And I hope that you find some of these concepts discussed today helpful in that goal. Thank you very much.

(Applause.)

FRANCES MARSHALL: Thank you, Garrard. That was fast talking, but you got it in the time. So we appreciate that. We're going to actually go into a third presentation.

M. Howard Morse is going to give us some feedback on where there are problems with the guidelines found in the DOJ letters as they currently exist in contrast to Garrard Beeney's talk on where we might loosen things up a little bit.

HOWARD MORSE: Thank you. I'm pleased to be here today to participate in this hearing like others. I thank the staffs of both the

Antitrust Division and the Federal Trade Commission for inviting me to participate and for their cooperation over the last few months in connection with these hearings.

I don't have slides today, but you can find what I'm saying sort of between the lines in my paper. I would like to emphasize at the outset that I'm here as an individual, not on behalf of any client. The views expressed do not necessarily reflect those of clients or of other attorneys in my firm.

They are based on my years of experience at the Federal Trade Commission and more recently counseling clients in private practice and focus on some of the practical effects here from that perspective.

I do chair the ABA antitrust selection intellectual property committee. As Bob Potter noted, the ABA has been active in addressing the subject of this whole set of hearings furthering public policy debates through programs, publications, on-line discussion.

But again the record should be clear I'm testifying as an individual, and I'm not here today on behalf of the ABA. Turning to the topic before us, Frances suggests that my testimony will provide a critique of the Department of Justice business review letters.

To the contrary from my perspective I believe the Department and the FTC have in recent years provided much useful guidance to businesses and their counselors with respect to antitrust rules for patents.

We now all regularly look -- luckily we're able to ignore much of that old Supreme Court case law and focus in on the '95 IP guidelines, the DOJ business review letters, and the agency enforcement actions such as the Summit/VISX case which I think if we all ignore the facts and just look at what the complaint says actually has some logic to it.

My testimony summarizes current governing legal principles. But since I'm up here following both Chris and Garrard, I'll focus only on the practical issues that I've seen arising in applying those current principles.

My bottom line is I believe further clarification of enforcement policy may be useful in some of these areas and enforcement actions may be warranted in others.

The business review letters like the '95 guidelines start by and explicitly recognize that patent pools may provide competitive benefits by promoting the dissemination of technology. The business review letters identify potential competitive concerns in three different areas.

I think Chris Kelly in his current position is only focusing on areas one and three and largely ignoring two. But the actual letters I think focus on, one, limiting competition among intellectual property rights within the pool; two, among downstream products incorporating the pooled patents; and three, in innovation among parties to the pool.

To prevent such concerns the opinion

letters set forth a road map of practices that minimize antitrust risks. I count six limitations which require patent owners, one, to limit patents to pools essential to implementing the standard;

Two, ensure royalties are small relative to the total cost of manufacturing downstream products -- we haven't heard much about that -- three, license on a non-discriminatory basis to all interested persons; allow each patent holder to license its patents outside the pool;

Limit access to competitively sensitive proprietary information; and avoid grant back provisions that limit incentives to innovate.

It's already been said that the pool presents the greatest risk of harming competition when it's comprised of patents defined to be competing or substitutes rather than blocking or complementary. The business review letters address this concern by requiring pooled patents be essential as opposed to merely advantageous.

Much of the analysis in the three letters addressed the specific essentiality standard applied which is technically essential in one pool, necessary as a practical matter for which existing alternatives are economically unfeasible in the second, and no realistic alternative in the third, interpreted to mean economically feasible.

Several practical issues arise in implementing the rule. The first one -- and I think this follows some of what Josh Newberg was saying. The business review letters state that a fundamental premise in the analysis is that patents to be licensed are valid since a licensing scheme premised on invalid intellectual property will not withstand antitrust scrutiny.

More generally the IP guidelines require businessmen to make analyses based upon conclusions whether patents are valid and would be infringed in the absence of the license and whether they're blocking complementary substitutes or unrelated.

Such conclusions actually ought to be made, my IP friends tell me, based on specific claims in patents rather than patents as a whole. Moreover, definitive conclusions can often be made with respect to those issues only after years of litigation.

In practice business decisions must be made in a world of uncertainty. It seems to me that conduct ought to be lawful if business decisions are made based on reasonable judgments reached in good faith.

Companies shouldn't face treble damages if a patent thought to be valid turns out to be invalid or a conclusion that a patent is blocking is ultimately proven wrong. That is, you make decisions in a world of uncertainty. Of course in the end that uncertainty might turn out to go the wrong way.

On the other side of the equation firms that take licenses to patent pools ought to have a mechanism to bring relevant information regarding the validity and essentiality of patents in the pool to the attention of the pool's expert.

Individual licensees of a large portfolio of patents have little incentive to mount an expensive legal challenge where even if successful they are likely to knock out only a small percentage of patents in a portfolio and benefit all the licensees.

Even where the royalty allocation formula provides some incentive to pool members to exclude non-essential patents, an effective mechanism is necessary for licensees to do likewise and reduce the royalty as a consequence.

Otherwise there is a concern that the combining patents of uncertain scope and validity strengthens all of the patents in the pool since a challenger only needs to lose on one patent to be enjoined.

This concern has been expressed by the FTC in several merger cases challenging the creation of what's been called a killer patent portfolio and which Will, Tom, and Josh Newberg address in one of their articles.

A further issue is raised as to the meaning of essentiality where some patents may be technically essential to implement a standard but are not essential as a practical matter for certain potential licensees.

Current practice for at least some pools appears to be to insist that all prospective licensees take a license to the pool's entire patent portfolio. The effect is to condition a license to some patents to a license to others.

Such mandatory package licensing ought to be unlawful where a firm is compelled to accept licenses under patents that are not necessarily needed. Potentially even more troubling, what is essential may change over time if licensees have the incentive to innovate.

If there is no mechanism for existing licensees or new entrants to establish that a patent is not essential and to pay lower royalties when such firm only needs a portion of the patents in a pool, there will be little incentive to improve upon the standard.

Turning to the second concern, patent pooling arrangements may affect competition not only in technology markets but also in related downstream markets that use the pooled technologies as inputs.

I read the business review letters as approving the MPEG and DVD pools with limitations aimed at ensuring they would not foreclose competition in downstream markets. First, DOJ noted in each case the agreed royalty was a "tiny fraction" of the downstream products or "small relative to the total cost of manufacturing."

The parties made clear representations that royalties would be reasonable. Second, DOJ emphasized that each proposed pool would enhance rather than limit access to essential patents by requiring licensing on a non-discriminatory basis to all interested parties prohibiting disadvantageous terms on competitors.

Several issues -- practical issues are raised by this analysis. First is the question what is a reasonable royalty. While intuitively a royalty of less than a few percentage points may seem small, some standard is needed to guide business officials. Closely related is what happens over time.

The problem is that a royalty that appears small originally may grow to be significant over time as costs of producing downstream products fall.

In order to be considered small parties should perhaps be required to charge a percentage royalty or at least have a percentage cap that can't grow to be significant over time. In addition, further clarification is essential as to permissible discrimination.

The DVD pools appear to have narrowed their representations limiting discrimination without comment from the Department of Justice in the DOJ business review letters at least as compared to the MPEG pool. The MPEG letter said that the pool would provide, quote, the same terms and conditions to all licensees.

On the other hand, the DVD pools promise only the benefit of any lower royalty rate granted licensees under otherwise similar and substantially the same conditions.

In practice the DVD pools are now in fact offering different royalty rates to different licensees depending upon when prospective licensees sign their licenses. Even when offering the same royalties, the DVD pools are offering different terms to different licensees.

Given the potential for significant differences in effective price through non-price terms, such discrimination has the potential to swallow the prohibition. On the other hand, some discrimination may be appropriate when firms use pools of technology in different applications.

Indeed the DOJ business review letters without comment allow the DVD pools to charge different royalties, produce DVD hardware, and to produce DVD disks.

It might be appropriate to allow different royalty rates to be charged to firms selling stand alone DVD players to be used with televisions as compared to firms selling computers with DVD drives at least so long as the conclusion is reached that those downstream products don't compete.

Firms producing competing products should be treated similarly to prevent the pools from being used to foreclose downstream competition. Perhaps most significant, news reports suggest that there are situations where pool members have a license to pool technology at zero royalty.

That is, discriminatory royalties are being charged to similarly situated firms that compete in downstream markets. The combined impact of a substantial royalty and this discrimination seems to undermine the theoretical justification for patent pooling, the dissemination of technology.

That is, such a pool is no longer an efficient method of disseminating intellectual property rights to would be users. It may instead be a de facto exclusive agreement to limit licensing and stop competition.

The preferred approach approved in the MPEG business review letters is to require each pool member to pay royalties to an independent administrator and receive its share of royalties in a lump sum distribution. Finally we've already touched earlier today on the grant back issues.

The '95 guidelines warn that pooling arrangements may discourage research and development. The guidelines explain that an arrangement that requires pool members to grant licenses to each other for future technology may allow free riding and reduce incentives to engage in R & D.

The business review letters do approve grant back clauses that require licensees to cross-license patents on reasonable, non-discriminatory terms. In each case however the scope of the grant back was commensurate with that of the pool and considered so narrow that it would not discourage innovation.

The letters also focus attention on termination rights that allow withdrawal from a particular licensee's portfolio license if the licensees sue for infringement and refuse to grant a license on fair and reasonable terms.

In recent years standards agreements and patent pools with broad grant back provisions and termination rights have proliferated. Promoters of these provisions argue that they lead to broad cross-licensing and are therefore efficient.

I am aware of agreements that automatically terminate a party's license if a licensee initiates any infringement action against any other licensee.

Notably such provisions cover entirely unrelated technology, cover future as well as present patents, cover non-essential as well as essential patents, and provide for termination regardless of the other firms' willingness to grant a license on reasonable terms.

Lack of enforcement in such cases sends a mixed message to the business community as to what is allowable in this area.

My bottom line again, further guidance on all of these practical issues through revised guidelines, additional business review letters, and enforcement actions would give a clearer road map to intellectual property owners considering forming pools and to businesses negotiating licenses with such pools. Thank you.

(Applause.)

FRANCES MARSHALL: Thank you very much, Howard. I'd like to take the next 20 to 25 minutes and try to get into some of these issues that our three panelists here have raised.

And I was thinking that maybe one of the things that might help to start out with is if we could talk a little bit about essentiality -- some definitions, essentiality, complements, blocking, and substitutes, and what we mean by these things.

I was wondering if there was anyone who would like to take a crack at those definitions. And I'm actually going to totally reverse myself. I'm sorry.

I had set up that James Kulbaski was going to be our lead-off commentator on these presentations. Let's go to that, and then we can get to some of these other issues. I'm sorry.

JAMES KULBASKI: Real quickly, I have already prepared some written testimony that is posted on the internet which reflects my views on these topics. Those are my personal views and not necessarily the views of any client or my firm.

One point that a lot of the speakers have touched upon but not really gotten into is the business realities of some of these situations and really the practical issues.

Sort of slightly changing the topic, looking at consumer electronic companies most of them are losing money on the particular products covered by the patent pools at issue, MPEG-2, DVD. There are really not a lot of high profit items.

And the question is if they are losing money selling these products or not making money on products covered by the patents, then why would a company continue to innovate and develop products?

And I think that's really the key here, that patent pools should not only provide an efficient way for the licensees to receive the technology, but the licensors should be able to reasonably recover their investment in the technology.

A specific example: a new company came out selling DVD players last fall which greatly undercut the market and basically was selling DVD products at half of the price of the major companies that developed the technology.

And without an efficient way to collect royalties on those issues there is really no way for the companies to continue to innovate.

And while the specific situation I'm talking about there was not -- the company was initially not paying royalties to any patent pool, I think the patent pools as they apply to DVDs will greatly help out that situation.

With regard to some of the other issues, Chris Kelly talked about an independent expert and some of the potential issues with that and how independent really is the expert. And, you know, he has to get paid by somebody, and what is the standard for determining essentiality.

I have developed a practice of working with independent experts and trying to have patents considered to be essential into these patent pools. And my experience has been that it's a very tough road to follow. The current experts involved are very stringent in enforcing the guidelines in trying to have a patent.

The ultimate decision as to whether a patent is accepted to be essential is in my experience being properly and strictly implemented.

And despite the fact that the money has to come from somewhere, I think that if the evaluator was not being fair in just letting in any patent, for example, especially in the MPEG-2 patent pool where every additional patent into the patent pool is less money to the other patent owners, if the evaluator would let in any patent just because somebody made some type of argument, then the other patent owners, other essential patent owners wouldn't be too happy with the evaluator.

There would be some problems. But I think that the system as currently implemented with the evaluators is working quite well, and the integrity of the system is existing.

So that feature of the definition of essentiality, whatever that definition is, my experience has been that it's pretty much consistent throughout the patent pools even though there is a slightly different definition within the DOJ letters.

The practical implementation, it is pretty much the same. And it is being properly -- you know, the gatekeeper is existing and that system's working.

FRANCES MARSHALL: Do you find that when you are trying to get different patents accepted into the different pools that your arguments on essentiality differ based on the standard?

JAMES KULBASKI: Not at all. Basically the argument made to the evaluator would be as if a standard patent infringement test, as set forth in the Markman case first, the claims have to be interpreted. And then you see if the standard reads on the properly interpreted claims.

And for the most part there is not a lot of variation of essentiality. The question is what -- you know, is what is recited in the claims necessary to practice the standard.

And, you know, you could word

essentiality and define it in various ways. But for most practical purposes is it necessary is the same for most of the pools.

FRANCES MARSHALL: Garrard, this sort of brings me back to your two points. You talked both about loosening the standard somewhat so that you might have some substitute patents in a pool as well as complements. And I'd like to get back to that topic.

But you also talked about it is not necessary that all the patents be essential. I'm wondering if you can explain to us how those two things are related or unrelated.

It seems to me that if the patent is essential to the standard to which it is being compared then that is in and of itself a definition of complementarity. Is that not true?

GARRARD BEENEY: I think that's true, but I do think that there is some difference in the concepts. I think that you can have patents that are not essential to the standard but that are nevertheless complements.

And I also think that you can have patents that are essential -- that are not essential that are substitutes obviously. So I think the two concepts are somewhat different.

The way I look at essentiality is very much the way it's been discussed I think, which is that whether you take into account the practicalities of the cost of production and the cost of designing around particular claims in a patent, basically the issue of essentiality is can you produce the product or comply with the standard that's defined by the licensed field of use without infringing a claim of the patent.

And if you can, the patent's not essential. If you can't, the patent is essential. Complements I think of in terms somewhat different, and that is that the amalgamation of the rights increases the value over and above the thing individually.

And I don't think that they necessarily all have to be essential to the field of use in the license in order to be thought of as complements. In my view all of this starts with defining a field of use in the license, either in the product or the standard that's being complied with, and that everything essentially follows from there.

FRANCES MARSHALL: Chris?

CHRISTOPHER KELLY: As you suggested, essentiality if it's gauged right should be a guarantee of complementarity. But it's not the exclusive -- it doesn't cover the entire universe of complements. There are plenty of non-essential patents which are very complementary.

But the problem for patent pool analysis is that for any of those non-essential patents there might well be alternatives. So those non-essential patents have a complementary relationship with the essential patents, but they might have a competitive relationship with other non-essential patents.

GARRARD BEENEY: Can I just take issue with that just very briefly?

CHRISTOPHER KELLY: No.

GARRARD BEENEY: I think in at least one situation -- you know, in some standards as I mentioned as I was trying to race through my presentation, in some standards there are various ways of doing something, but you've got to do it.

And in those situations each one of those patents provides an access to an essential element of the field of use, the standard. On the other hand, they are not complements. They may be pure substitutes.

FRANCES MARSHALL: Jeff?

JEFFERY FROMM: When the Department was doing the original business review letters, did they ever consider -- I'm a patent attorney.

So it kind of bothers me to talk about essential patents as if patents are essential. Of course they're not because it's only the claims we're really concerned about, and that most patents, perhaps the strong majority as Howard alluded to, include claims that in fact are not essential.

Did the Department ever consider the issue of essential claims versus patents either in the foregoing grants or in the grant back provisions?

CHRISTOPHER KELLY: My sense was that the analysis was geared to claims rather than simply patents as such.

JEFFERY FROMM: But the review letter of course only talks about patents.

CHRISTOPHER KELLY: If so, that's the danger of having antitrust lawyers write about patents. If that's right, then that's an imprecision which is unfortunate, although I would think that most people read it to refer -- to mean claims rather than patents, divorced from the claims that they include.

JEFFERY FROMM: Well, I would never do that. I mean certainly the license grants that are granted underneath -- you know, in response to the business review letters certainly talk about patents. They don't talk about patent claims. There is no mention of claims in them.

They talk about patents.

CHRISTOPHER KELLY: I think licenses are granted in terms of patents, right, not in terms of claim?

JEFFERY FROMM: No. I mean that's how the Department considers it. I mean many parties -- over there tomorrow you're going to talk about standards. The standards organizations have evolved.

They talk about claims. They don't talk about patents anymore because patents may of course include claims that have nothing to do with the standard. And they certainly understood that that's the real world.

GARRARD BEENEY: But it's really -- some pools that I'm familiar with license patents. Other pools that I'm familiar with license claims.

But if you are a licensee and from a competitive analysis and you must be licensed under a particular claim of a patent and a license is restricted to a field of use, the fact that you may be licensed on other claims that have no bearing on the field of use is completely immaterial because you can't use the license that you have under those claims because your license is restricted to a field of use.

So whether the Division uses patents or claims makes no difference because, as I say, if you have a license under claims restricted to a field of use for which you cannot use that license for those claims, it doesn't make any difference.

JEFFERY FROMM: Read the contracts under which the licenses are granted. I agree in theory with what you just said, that if the field were restricted and the grant back field were similarly clearly restricted, there would be no problem. But of course there is imprecision in that process.

FRANCES MARSHALL: James?

JAMES KULBASKI: In practical reality the evaluator looks at one independent claim and usually picks the broadest claim, but it could be a claim of your choosing. And if that claim is found to be essential, then I believe the letter issued by the evaluator says that this patent is then essential to the standard, so.

FRANCES MARSHALL: Is that suggesting that it may be a distinction without a real difference? We may talk about patents' claims are analyzed. I'm just wondering, Jeff, what concern do you have that the letters talk about patents as a whole and not about particular claims?

JEFFERY FROMM: First off I should say that I'm not terribly concerned necessarily that all -- there is this kind of essentiality argument. There is this abstract essentiality. But we are ignoring the very real fact that there are lots of patents in this pool that include claims.

The majority of patents that are essential that meet this test include lots of claims that are not essential. And that doesn't seem to bother anybody on the foregoing side.

Certainly from the licensors' perspective they seem to be unbothered by it.

And they participated in the creation presumably of the license under which patents are -- the grants are being made. So they are apparently happy with it. But it is not a distinction without a difference. There is a very real difference.

And if you are a licensee, for example, and you don't participate in the license grant and yet you are required to give a grant back that is a non-negotiable grant back as to essential patents, that is a patent which has one claim which is essential, then in fact you are giving a license grant to non-essential claims on a license agreement for which you have absolutely no negotiating capability.

Now, you can argue that, well, that's just part of the price of doing business. But -- and maybe it is.

But to argue that there is no difference between essential patents and essential claims is to overlook the way patents are actually functioning, the way they are actually written which is as to essential claims only.

I mean that claims are what counts, not the patents. And so there is a very real difference in the economic impact just dependent upon how the particular patent attorney ten years earlier wrote the patent application.

FRANCES MARSHALL: Okay. Howard?

HOWARD MORSE: I think it also touches on Garrard's other point which is that certain other non-essential patents ought to be allowed into the pool if you are already allowing certain non-essential claims into the pool to some extent. In fact he's already got his way.

But the concern I think that is expressed in the Department's business review letter is what I would characterize as the tying in the foreclosure effect on someone else who has competing technology to that non-essential patent or non-essential claim who -- I think Garrard would say but you are getting it at zero; you are not paying more of a royalty for it.

I think the D.C. Circuit in the Microsoft decision sort of undermines that argument if in fact you are getting it and you are required to get it. I think there is a tying element.

And the question is what is the impact on that and is it limiting other, you know, efficient and beneficial technology from reaching the marketplace because you are already -- someone's already tying a lesser technology into the pool so some other better technology isn't getting used as a result.

GARRARD BEENEY: I guess the response is that the proposal is first of all that the non-essential intellectual property be limited to the license field of use.

And maybe the comments we have had so far require some explanation as to what all these concepts are. And maybe I can take my hand at it. But as I understand the licenses that I've dealt with, each of them are circumscribed.

That is, the grant of the patent holder to use the invention that's described in the claims of the patent is limited to a particular what's called field of use, meaning that, for example, in the MPEG-2 patent portfolio license you may not use the patents to produce something akin to the space shuttle.

They have to be limited to practicing the MPEG-2 standard. Similarly the grant back provisions are limited to the field of use. You must grant back any intellectual property you have that's essential to the field of use, which I guess is why I fail to understand why there is any practical significance whatsoever to talking about patents instead of claims.

Because, as I said, even if you were to have a license under non-essential claims, if that license is limited to practicing those claims only within the field of use, then you have no effective license under those non-essential claims.

And if the grant back provision is limited to the field of use, not to the patent that's granted, it has no effect on the grant back provision.

As to offering certain intellectual property that is non-essential, again I think limiting it to the field of use has very few competitive effects because on the one hand it can be an offer that the licensee doesn't have to accept. It does not have any marginal cost to the licensor.

And so I think it is incorrect to presume that royalty rates would go higher. And as to effect on competition, it does have the effect of reducing competition for the non-essential property that a particular licensee may want to use.

But the countervailing procompetitive effect is to open up competition in the downfield, downstream market that's defined in the license, because any licensee of the essential intellectual property is free to compete in all sorts of variations of implementations of the field of use.

So I think in balancing the two I think the suggestion to include non-essential intellectual property limited to the field of use is on balance procompetitive.

FRANCES MARSHALL: I believe Josh Newberg had a comment.

JOSHUA NEWBERG: I wanted to try to bring it back or perhaps relate it to the discussion that we had in the morning of cross-licensing and ask anyone who has an opinion on it what the relationship is between the concept of design freedom as that came up in the cross-licensing context and essentiality as that concept is used in the competition analysis of patent pools, and whether patents that allow for design freedom maybe -- you know, we don't know, but we want those in there because we might design something that infringes.

Would that fall into the category of non-essential but okay in an analysis of pooling or not, and to what extent do design freedom and essentiality conflict or overlap?

FRANCES MARSHALL: Jeff?

JEFFERY FROMM: I don't mind trying my hand at the distinction you're trying to draw. Of course in a cross-license you generally have two parties. As several speakers have talked about, there are really only two parties.

And so design freedom is almost always an element or frequently an element of cross-licensing.

Of course you can take the same attitude you can about patent pools which is -- really the objective is basically to eliminate all the patents. So there is absolutely no reason that we just can't compete on whatever it is we're going to compete on.

But patent pools aren't supposed to do that. As between two parties if I'd like to do that, if company A and company B want to say as between us patents are going to become totally irrelevant, that's their decision and they make that business decision in the competitive environment that they are operating in.

But they don't control a market. Patent pools operate differently. There really is -- pardon -- I'm not an antitruster, so pardon me if I misuse the term.

But patent pools have market power independent over and above the patents in the pool just by the sheer number of the patents that are there. And that is not the case in a cross-license.

And so to the extent that the parties in a cross-license want to throw in lots of things to have freedom to innovate, that might be okay.

And in a larger context when there's a large patent pool with many patent -- many licensors and many patents, essentially what you are saying in that pool is if you want to play in this market you have -- you, Mr. New Person, you have to be in a free fire -- there has to be -- you have to give up your patent rights and you have no choice.

Whereas that's imposed on you by the strength of the pool. Now, you can argue as we have done before that you can -- oh, that's not true; you can license independently of the pool. And as I pointed out before I think that's in many cases not a real world situation.

So I think the difference of throwing in lots of patents so that you can have the freedom to innovate between two licensees is -- two licensors, excuse me, is quite different than the dynamics in a patent pool.

JOSHUA NEWBERG: What if the licensees are IBM and Intel or two parties that have a huge percentage of the relevant technology in an area?

JEFFERY FROMM: Well, obviously when you have dominant players you get different results.

PETER GRINDLEY: Let me make an additional comment. Maybe this is what Josh is trying to get at about the question about uncertainty, whether you are sure that a patent is going to be essential or not.

In a cross-licensing situation if you are not sure you probably will still go ahead and cross-license it. In a patent pool the standards are a bit tougher. So you have to be fairly sure that it's going to be essential or not.

And we have independent experts to try to work that out. So I suppose the intention with the pool is to keep it as narrow and tight as possible, and with a cross-license is to cover whatever you think is likely to be a problem in the future. So slightly different criteria.

JOSHUA NEWBERG: Does that extension make sense?

PETER GRINDLEY: Yes. I think it does. It certainly makes sense from the cross-licensing viewpoint.

From the pool I suppose that -- I was arguing this morning that apart from the -- there's the antitrust concerns and just the general administration of the pool becomes more acute as it gets bigger. So you want to keep it as focused as possible, so.

FRANCES MARSHALL: I'd like to go back to this just for a minute, to this concept of how do we go about analyzing a pool that consists of blocking patents.

And I think in our letters because there was a standard against which to compare them we used that as a proxy for determining whether or not the patents were blocking or complements.

But that also includes some substitute patents. And let's say we take your example, Garrard, and that is limited to the field of use. How would you suggest that the antitrust authorities go about determining whether that pool is ultimately pro-competitive?

GARRARD BEENEY: I'm not sure, Frances, if the analysis is different because you have added the package of rights that licensors may have that may or may not read on the particular implementation of the standard. Is that your question, how do you go about it if you do that?

FRANCES MARSHALL: I think it ties into the question of if you don't have a standard. So far we have had -- we have analyzed pools where there is a standard with which to make a comparison.

But if you don't have a standard I think that increases the difficulty of the agencies looking at the patent pools to determine whether the independent expert is going to correctly put into the pool blocking patents.

So that's one question. And then the other question -- and I think you get that same issue when you define that the -- when you say that the substitutes could come from a field of use which doesn't have a standard associated with it. So you're in that -- you're in that same ballpark.

And I'm just wondering how you would suggest that if the authorities, if we were looking at a patent pool that was defined that way, how we would go about making those judgments when in the past we have used the standard and the independent expert working together as a proxy to make that determination, perhaps imperfectly as everyone has said.

GARRARD BEENEY: I think that's a good question. But I would not in any way suggest that pools be permitted to offer a license under anything other, whether it be essential or not essential intellectual property, that the grant of the license be -- exceed a field of use because otherwise as you say there is no way of determining the competitive effects unless the scope of the license grant is limited to a defined criteria, whether that be a defined product or a defined standard.

But the scope of what's granted -- which is a question different from what it is that you're granting.

But the scope of what you're granting, that is what the licensee is entitled to do with the rights in the license, has to be defined and has to be limited. Otherwise, as you say, there's just no way of analyzing the competitive effects of a pool.

But once you do that I don't think that the intellectual property that's in the pool has to necessarily be limited to intellectual property that is essential to practicing the standard as opposed to something that may be infringed by a particular voluntary implementation of the standard.

And what I'm suggesting is that licensees be given the freedom to compete in the downstream markets by producing any implementation of the standard that they want by being given this non-assert from the licensors to free up any concerns that they may have about infringing non-essential intellectual property.

But the scope of the grant on the essential and the non-essential intellectual property has to be that standard of product. Was that clear at all?

FRANCES MARSHALL: Chris, do you have a --

CHRISTOPHER KELLY: I'm just wondering whether what you are driving at, Garrard, suggests that whatever the field of use is it's going to bear a very close relationship to something that most people might view as a standard of some kind.

That's going to be the context. So whether it is essential or not you are still going to be talking about something like an MPEG or DVD as opposed to saying televisions or tables. So it's not -- the field of use will be fairly rigorously defined.

GARRARD BEENEY: Correct.

FRANCES MARSHALL: Pretty limited as well. In a sense you are expanding your definition of essentialities, and essential as a practical matter then including things that are -- different methods for implementing the standard.

GARRARD BEENEY: Yes, but also that in the course of implementing the standard you may have to do something that's not even in the standard.

And that's what I'm suggesting, but that the grant of the patent right is only limited to implementing the standard. But you may be doing other things in creating what that license allows you to create.

FRANCES MARSHALL: Any other comments? Questions? Okay. Why don't we go ahead and take a ten-minute break and come back at 3:35.

(Recess.)

FRANCES MARSHALL: Thank you all very much. I've heard that we are stressing people's legs and backs. But we are scheduled to end at 4:30 so hopefully this next session will be easier. We are going to turn to Baryn Futa who is the manager and CEO of the MPEG LA -- licensor?

BARYN FUTA: Licensing.

FRANCES MARSHALL: Licensing administrator. And he's going to talk to us about some lessons that he has learned from the MPEG pool since its inception in 1997.

BARYN FUTA: Thank you, Frances. Thanks for inviting me, first of all. And I think the Division and the FTC have done a terrific job putting these hearings and panels together.

I have learned a lot from my fellow panelists. I'd like to thank everybody. But probably more importantly I'd like to thank you in the audience today.

Given the availability these days of location and time non-specific information, it really is something when people actually show up to these things and listen. So I appreciate you for being there.

Also, Frances, I was going to say the next time my 14-year-old or 11-year-old asks me the type of stuff I get involved in during my day I'll refer them to doj.gov and they can go through all the testimony and that will let me punt on the dinner conversation about work again for another ten weeks.

I have some written statements which I

think you have or can get access to on the web. So I just wanted to make a few quick points and turn it back to the panelists and to the discussion. These are not points that have not been made already. So I apologize.

First, I think that it's clear that there are many different ways for companies to clear patent rights. I think you have heard the many different ways. And I'm particularly interested in the context of standard setting with the panel that will occur tomorrow where presumably you will hear a lot more.

You will probably hear about the various non-assertion programs that are in place and are being established and non-assertions with regard to all the specifications of giving standards, but also to certain profiles within standards.

Certainly we've talked a lot about bilateral licensing of which cross-licensing is a subset. Again we've talked about MPEG-2-like programs. But there is the whole area of multilateral licensing involving non-assertions that hasn't really been touched on today.

So, you know, really out there, there are a lot of different efforts using a lot of different approaches as Josh and Pete and others have mentioned to give the marketplace access to standard based technologies.

You know, as consumers we are in a world of formats and standards. And as makers of these products, makers of these products are in a world of formats and standards.

And I also don't think any of you have this impression, but I wouldn't want any of you to get the impression that there is no competition among these formats and standards themselves. There are lots of different formats trying to do lots of -- the same applications.

For example, in the DVD itself there are going to be multiple formats for recordable DVD. I believe the DVD forum also recently approved a non-MPEG-2 coding that will be DVD compliant.

In the broadcast area the United States will using an entirely different digital video terrestrial broadcast system than will Europe.

So when we talk about MPEG-2 or we talk about DVD as formats we all have to keep in mind that there are lots of different formats trying to address the same question and the same opportunity.

But we are all dependent on interoperability. As consumers and manufactures we are all dependent on these same formats and standards. And therefore they are all dependent to some degree on each other's R & D.

I find that as Peter had mentioned cross-licensing and MPEG-2-like programs are not mutually exclusive. They co-exist very nicely in the marketplace.

Bilateral licensing, cross-licensing can deal with all the various intersection points that may occur between two companies' IP needs, whereas a program like the MPEG-2 is dealing with only a narrow slice or one intersection point, that being essential patents with regard to the MPEG-2 technology.

There has been talk about design freedom. And I think design freedom is a very different thing than access to the intellectual -- to the essential patents for a given standard like MPEG-2.

Design freedom to me connotes a notion of peace, and a notion of to be able to have your product makers go out there and make products, to invent, to innovate, and to diffuse. And that's an entirely different kind of scope or a field of use I guess to use the term than what I do every day for a living.

So from my personal viewpoint I see lots and lots of bilateral arrangements being negotiated every day involving lots of different technologies.

I don't have the experience in licensing that problem like someone like Jeff or people like Howard do, but in the context of the

MPEG-2 program I have worked with -- we have over 400 licensees.

And I would probably say that we have probably dealt with many, many more companies than that that are still potential licensees or looking at the technology or technologies.

And I think I have a pretty good idea of what they think is important, at least what they tell us is important in regard to licensing and MPEG-2-like programs. And for what it's worth I'll go through my list.

Everybody is looking for better terms than the next guy, and maybe they will settle with same terms. And then that is in regard to everything, royalty rate. Everybody's looking for an MFN. They are looking for some upside protection on their royalty rate upon renewal.

And I think in that regard a feature that is in the MPEG-2 program that I think our customers particularly like is that all of our agreements are terminable on 30 days' notice by the licensee.

So I think all the rate protection and the rate related issues are in the hands of the licensee in the case of MPEG-2. Because we're all dependent on each other's R & D and therefore each other's patents, licensees are looking obviously for good coverage.

They are looking for some sense that -- they realize they will not get 100 percent of essential patents from any program, but they are looking for what they consider to be good coverage of the essential patents.

They are aware of the licensors of those patents. And since many of these companies are involved in the standard setting effort they know which companies paid their dues, put in the R & D, sent research teams, proposed things to the standard setting body, and got their inventions or techniques incorporated into the standard.

Our licensees are very sophisticated and they know how standards are developed and who developed them. They want all their products that use the spec covered.

I think probably one of the most important terms is they want to see that the licensors are also licensees and are also paying the same royalty rates. As a business I consider any program like MPEG-2 a non-starter unless licensors that utilize the technology are also licensees and pay the same royalty rates.

I don't know about competition or the legal requirements. I just know as a business person it is a non-starter unless the licensors that make the products are also licensees and pay the same royalties.

You know, I should mention also that probably what will not be discussed tomorrow but -- and I can't remember who mentioned it, it might have been Chris -- is a copyright tool like a clearinghouse approach.

I'm not necessarily aware of any patent programs that are standard related that use a clearinghouse approach. And I haven't really thought much about it. But really, you know, there may be a situation where it's appropriate.

I would say that the 3-G licensing concept is as close to a clearinghouse approach as I've seen in a standard setting -- a standard licensing situation, but not -- nothing like what you suggest in terms of copyright. But, you know, it might work in some situations.

You know, I couldn't help but -- being at the end of the day, Frances, I couldn't help but reflect on some of the things I have heard already. And I just -- again anecdotally I'd just make a couple comments.

In the case of the MPEG-2 program licensees don't pay less for more or less patents. So if a patent should be found to be invalid and it's pulled off the list, that licensor would not get proceeds for that patent. But the license royalty rate would not go down.

I personally believe that invalidity is an area where the courts of competent jurisdiction should do their thing. I would be -- I haven't thought through all the ramifications of that being done in the context of the joint licensing program, but my gut tells me that that is not a good thing.

Again I think the notion of percentage royalties -- you know, really these programs operate in a marketplace. And what it boils down to is what the market will accept. Access to MPEG-2 is like any other subsystem cost that goes into a product that uses MPEG-2.

And in that sense it has to have a value equation such that the value is there. So I would not want to have -- I would not think that any per se rules about percentage or fixed price would be warranted.

Having said that I think that when you start a program and the cost of building the net sales cost or product cost of building those products is quite high, I think you would hear the licensee base arguing very strenuously that a percentage royalty is probably inappropriate because it would be high.

I think a sum certain also gives you a sum certain, which is you know your cost. Certainly as the costs of making these products go down, then a percentage royalty looks good. So again changing conditions may be changing reaction.

I guess what I'm saying is that when you are licensing, which is a product, and so I consider myself a salesman selling a product, what you will hear from the marketplace is the argument that at the time renders a lower price for that program.

Similarly I've heard arguments about there ought to be a per patent rate or something. Since we have gone from 25 to 100 patent families and from something like 120 patents to 325 patents, I don't tend to hear that argument so much anymore.

And last but not least I think that all this discussion we had today operates in an environment where we have never had more entertainment video information platforms and products that provide that to us than ever before.

I think as consumers, American or otherwise, we have available to us lots of information and lots of products. And so to the extent that progress is what we're looking for, that's what patent law is all about.

And innovation is what the Division cares about. I must submit that I really don't see that much of a problem out there. Thanks.

(Applause.)

FRANCES MARSHALL: Thank you, Baryn. I think we'll turn to Jeff Fromm, who as we said before is senior management counsel at Hewlett-Packard, for some of his views on the practical aspects of licensing.

JEFFERY FROMM: And as the last speaker of the day I'm going to make this as short as I can. Obviously we've come a very long way from the past generations where patent pools were often seen as cartels.

The MPEG LA and DVD letters delineate basic rules that can minimize risk and are now widely employed and I think in fact have increased competition.

Those rules, however, are often not sufficient to provide the level playing field for all affected parties and to ensure that unimpeded competition goes forward.

There are inherent conflicts of interest between insiders, the pool's founding members owning the patents being assembled, and outsiders, often a diverse group of applicants for pools, including both many existing competitors and later new entrants.

Patent pools generally accept the principle specified in the DOJ letters that their package prices should be offered to all parties on reasonable and non-discriminatory terms and conditions.

Naturally enough, perspectives on what terms are reasonable and non-discriminatory in practice may differ markedly between and among the different classes of affected parties.

Insiders holding patents and the pool administrator answerable to them have an interest in maximizing the use of license rights across whole industries. But they also have an interest in the revenues that the licenses generate.

Most importantly, changing market conditions may render these license terms reasonable at the outset of the pools, unreasonable years later.

A royalty prescribed at the outset of the pool may represent an inconsequential part of total cost of the product. And that same royalty several years later may represent a competitively significant part of the cost.

As an aside not in my written remarks, products that are first introduced as, you know, selling for $1,500, $2,000, some years later it is not unusual to see them sold for 89.95 at Best Buy.

Obviously the same royalty on both if it's a fixed dollar amount as we often prefer for lots of reasons, may affect the competition in the markets later on in a quite different way than it does at the beginning, at the $1,500 product.

In any case, serious problems rarely arise at the outset of the pool's operation when the sponsors are incented to attract outsiders and get new technology widely accepted.

Pools unfortunately often do not readily adjust to new circumstances and competition facilitating or innovation facilitating manners, which is a point in which further DOJ guidance would be desirable, encouraging sensitivity to changing market conditions and their bearing on appropriate license conditions going forward.

The common approach to pool licensing today is one size fits all. Obviously we have a different view whether you are the licensor or the licensee.

This is generally deemed to be consistent with the DOJ letters as long as the pool as a whole includes only patents found to be essential.

But while all the patents in the pool may be essential to the pool founders at the outset of the pool, some or many of them may later turn out to be non-essential or non-useful to outsiders seeking to employ the technology later in unexpected ways.

Competitors or new entrants should be able to license the set of patents they need without being forced to take and pay for the whole license. In other words, pools should be amenable to issuing partial licenses to applicants.

I'm aware of two explanations for pools' resistance to the partial license concept. First, pool sponsors suggest partial licenses would create undue administrative burdens.

It's hard to believe that tiered fee schedules and associated allocations among patent holders cannot be fashioned with due allowance for associated costs of implementation.

Second, pool sponsors suggest the availability of individual negotiations with the patent holders is a sufficient alternative for parties needing less than the whole set. But as I have talked about before today, this is more illusory than real.

The DOJ should appropriately encourage partial license features by recognizing their potential for procompetitive effects, thereby offseting anticompetitive risks under the applicable antitrust rules of reason.

Another concern to outsiders' inability to participate in or challenge determinations of patent essentiality, the DOJ letters caution pools to remain alert to the possibility that some patents initially determined to be essential should be reconsidered in the light of subsequent information that they are invalid or that they cease to be essential.

Mechanisms facilitating outsiders' input in this regard would be desirable, particularly since they often have the highest financial incentive, especially if there's going to be partial pool licensing.

Concerns also arise over the scope of grant back requirements and other license provisions impeding a licensee's assertions of its own patents against a licensor within the pool. Outsiders should be -- should have meaningful opportunities for input on these parts of the license.

And one size fits all may not be appropriate for all licensees. A broad grant back or an inhibition on asserting patent rights against a licensor may have no significant impact on the licensee -- on one licensee, while amounting to a major forfeiture of value to another licensee.

The concerns I've described as conflicts between pools' insiders and outsiders point to the need for some more explicit and effective recognition of these premises and the manner in which pools are organized, administered, and governed.

The starting point would be commitments set forth in the organizing documents to operate the pool at all times with due regard to the interests of all of the users of the technology being licensed, present and future licensees alike, members and non-members alike, and with particular regard to the public interest in a maximally open competitive market.

Critical to the public's confidence that the pools' insiders adhere to these commitments is some reasonable degree of openness and publicity regarding significant pool operations.

This could, for example, take the form of a publicly available website where minutes of the meetings of the pool's governing board are posted periodically.

A further safeguard would be a mechanism by which outsiders could challenge pool decisions about such matters as royalty rates, other license terms, and patent essentiality. To be effective a mechanism should provide for some form of neutral and objective dispute resolution.

Obviously we don't want to turn this into another form of litigation. That's not the purpose of pools. It is to avoid litigation.

To be effective a mechanism should provide -- another desirable safeguard would be the inclusion in the pool's governing board of at least one person unaffiliated with any of the founding patent holders, perhaps a widely respected university guru or someone with expertise in the technology to be licensed but without any financial interest in the pool's revenues.

He or she could be in the nature of an outside director, something that's pretty important in many venues today. Guidance from the agencies encouraging pools to consider steps of these kind should be welcomed in many quarters.

Particularly with that kind of an encouragement these steps could help to minimize conflict between and among the different pool constituencies and to help ensure the pools operate in the public interest. Thank you.

(Applause.)

FRANCES MARSHALL: I think there are a number of interesting issues here. Does the panel want to respond to anything that was just said? Baryn?

BARYN FUTA: I can talk about the program I am familiar with, which was MPEG-2. I'm sure comments addressing some other programs like DVD or audio licensing or what have you -- I don't know if I quite have all the points he made. But I'll go through the ones I remember.

First I think that our license -- licensees are our customers. So again I consider MPEG LA a business and I consider myself a salesman not unlike anybody else that's selling a subsystem or hard drive or whatever that goes into products.

So with all due respect I don't need much reminder to tell me that I need to take care of my customers and be responsive to their needs anymore than probably HP needs to be told to take care of their customers and respond to their needs.

For example, effective January 1 we reduced the MPEG-2 royalty rate from $4.00 to $2.50 in light of market conditions. And I think it's fair to say most of our licensees were surprised and elated and delighted by that.

With regard to licensees being able to challenge essentiality of patents, I find that our customers like when the patent list increases. They like the fact our coverage goes back to the first product they ever paid and they pay no more money for additional patents.

As you know, a patent could go on the list tomorrow, but it could be licensable for a substantial period prior to going on the list. And our licensees have that coverage for the products they manufactured and sold for those prior periods for no additional royalty payment.

I can't speak to the other programs about changed business circumstances, but anyone

I know that administers a patent licensing program such as MPEG-2 is in a business and operates as such.

With regard to -- I don't know if you said this yet, but with regard to your written testimony you said you were being forced to take a combination of unneeded and needed licenses. We talked about the notion of essentiality and if you practiced the art of MPEG-2 in the case of what I do that you are infringing those patents.

By not needed maybe you mean the patents that you have access to under cross-license. I will say all of our licensees, including licensors, pay the same royalty rate.

However, if there is a cross-license, the scope of which may include essential MPEG-2 patents between the two parties, then upon request of those two parties and the waiving of the confidentiality requirement that we have with each of them as licensees and licensors, if they waive it as to each other we will provide them the figures so that they can quantify the value of their cross-license with regard to essential MPEG-2 patents that either of them may have and are paying for a license for, and ultimately the money going to each other or the licensor, and to account for that within their existing or then existing cross-license arrangement.

But that happens all external and outside of MPEG LA. So I don't see anyone paying for unneeded licenses. Our customers are very sophisticated, including HP. I don't think they would pay for unneeded licenses. We are in a marketplace now where no one pays for what they don't need.

FRANCES MARSHALL: Chris?

CHRISTOPHER KELLY: One point Jeffery made that was interesting that maybe we don't give enough thought to is one that is provided for in both the IP guidelines and the competitor collaboration guidelines, the idea that things change over time and that a license today which seems marvelous may have a very, very different effect five years down the line when the licensor has 90 percent of the market.

And that is something that needs to be borne in mind. In a sense that links up with the general approach of the business review letters, which is if the facts turn out to be different this goes out the window.

And so it's certainly always going to be relevant for DOJ and FTC when they are looking at pools that they have already passed on. They need to think about whether things are different.

As to the royalty though I guess I would think that even if the price of, say, the players continued to drop there would -- it seems unlikely to me that -- or I wouldn't -- obviously DOJ can make up its own mind.

But I would not expect DOJ to react ever on the question of whether the royalty had become unreasonable or oppressive or non-affordable for particular licensees. I think that's pretty much out the purview of the enforcement agencies, or at least it was when we looked at the pools.

What we looked at was simply whether the royalty was sufficiently large that it could in some way form a basis for coordinating prices on the downstream goods.

Whether it would be a royalty acceptable to the market or beneficial to the pool, as a business matter we figured we'd leave it up to them and see what would happen.

Now, whether that would be true in Europe or not I don't know. There gouging can be an abuse of a dominant position, and I suppose you might have an interesting issue there.

GARRARD BEENEY: There are some interesting cases in Europe that address that concept.

This is I guess off the point, but there are a couple cases in Europe that address the concept of whether as prices on the product go down and the royalty rate becomes an increasing percentage of that product does that mean that changing conditions should allow for the reformation of the license contract. And those cases have said no. Sorry.

FRANCES MARSHALL: Baryn?

BARYN FUTA: Were you being self-effacing or insulting Chris? I couldn't figure that out. I forgot to address the part about the partial license.

I think the MPEG-2 program is a certain kind of product in the marketplace and addresses a certain need. And if there is a need for a partial product, there are cross-licenses and bilateral licenses.

But having said that if there is a marketplace need for subset licenses, if you will, I actually to see them starting to occur. For example, in the MPEG-4 situation AAC, advanced audio coding, is a subset of the MPEG-4 normative audio specification.

But enough of the marketplace may have an interest in just licensing AAC as a bundle that I believe the licensors to AAC are forming a joint licensing program that might be different from the licensing program that includes all, quote, unquote, of MPEG-4 audio or MPEG-4 audio structured along the lines of the MPEG-2 video and system program that MPEG LA administers.

I think that if the marketplace need for certain subsets is such that there is a demand, like any other product, people will be there with a product to meet the demand.

If the subset is very specific to a certain potential licensee, then we have defined the terms, haven't we? By definition that company needs to go out and deal with its own unique subset with -- using the current marketplace tools.

I think that -- so I don't want you to get the impression that I don't think there's room for what you are advocating. I think there is.

But I don't see where we need to customize or fractionalize the current MPEG-2 program because I'm not hearing from our customers that there is a need for any subset of -- with enough market core to address it.

Like HP, I mean there may be certain customers that need a certain product. But until you have enough customers with that same need, marketing and product development are not going to gear up to make a product for that market.

Those people have to avail themselves of companies that specialize in customization or custom implementation, like the INSes of the world with regard to Cisco equipment.

FRANCES MARSHALL: Jeff, do you want to respond?

JEFFERY FROMM: I didn't mean to suggest that MPEG LA is not responsive to its customers. But I would posit that like most organizations that are responsive to its customers, it is a lagging indicator and that new innovations get introduced and product plans get plans for future products.

And by the time there's a groundswell of demand for a revision in your product it's no longer an innovation.

And since we're talking about

innovation markets and trying to encourage competition in innovation markets, it's a different dynamic than looking at the buying and selling of products, which as a competitor I mean if I decide that I'm going to be in a business and be perfectly happy to sell a trailing product and optimize my business model around selling a non-leading edge product, that's perfectly fine.

But in fact the organizations such as MPEG LA are in a very different kind of business because they are supposed to be facilitating future innovation markets, at least in my view.

And that's the problem of the delay problem. And that's the reason why it is difficult to do the alternative which is to go to the individual licensees -- a typical patent license, for those who haven't gone through that exercise, of any significant size takes at least a year to negotiate a bilateral cross-licensing arrangement.

Now, if I just want to go to company X and license one patent, that's not what I'm talking about. But if I'm looking for a portfolio of patents we're talking about a year.

Now, the product life cycle where the entire product is designed, introduced, and becomes obsolete in only a year, that is a problem.

That is the reason -- there is no doubt that I think the dynamics of serving customers is quite different when your customers are really -- where you are trying to foster innovation. And that's all I'm pointing out.

But never would I suggest that you are ignorant or unresponsive totally to your customers. I didn't mean to suggest that. And I apologize if there was any misunderstanding.

PETER GRINDLEY: I'll try and make some additional comments. I think the points Jeffery has brought up are very pertinent and very important.

Coming from a practitioner in the area they are just very serious and need a lot of consideration. And it's difficult to off the cuff make remarks.

Two points that might either help or hinder: On the partial licenses question I'm just drawing a parallel with cross-licensing where patents are available singly but the -- not but -- the pricing tends to favor licensing the whole portfolio.

And I guess the real reason is that it's -- if you only license one patent there is still the question of monitoring potential infringement on the others. So you really haven't saved the overall transaction design freedom aspects that go with a cross-license.

So typical royalty rates are just total -- just an illustration. One patent might be one percent, two patents one-and-a-half or two percent, and umpteen patents two-and-a-half to three percent. So it's not linear.

The one patent is at a kind of fixed rate, if you like, and many more patents is not that much more. And I think the reason is that it's a question of whether you really are being more efficient by licensing all the patents for design freedom or just a specific patent.

I'm just wondering how that translates to a patent pool story where we're not talking about one patent. We might be talking about a subset of patents.

So there may be parallels in the sense that out of 27 patents you may want to just license six, or -- you know, but I think once you get very selective I think kind of the administration of that partial license becomes a problem. And so it's just an observation. That's something that would need to be addressed.

If I can go on to another point, which is the life cycle, how things change over time. This is just another point to throw in here, is that if the patent pool is oriented towards a standard, then I guess not only is the technology changing over time, but the need for the patent pool, if you like, changes as the standard becomes adopted.

In the early days of establishing

a standard it's very important what people's expectations -- the credibility of that standard. And the fact that they can be assured that their basic package of IP will be available is likely to be a very strong incentive to any user to adopt that standard rather than another standard.

So it's very important in the early stages. Once the standard is fully adopted and it kind of defines the industry or the product sector then I suppose the conditions change somewhat and I don't know whether that means we should use different criteria for analyzing.

It's very much I think we've talked about ex post, ex ante, which seems to go through a lot of these licensing issues, that ex post in this case once the standard is adopted and established, then it's a slightly different situation than before.

So that's just another factor that we need to think about. And, Jeffery, I'll be very grateful if you have some comments to elucidate these.

JEFFERY FROMM: I think we do concern ourselves with those issues. I think the problem with standards is as you say that in the beginning there is lots of money to be made by early adopters.

And over time I think it's the thing we'll talk -- the standards discussion tomorrow is that the economic value for the package of patents in some markets goes down much faster than the life of the patents.

Now, there are other markets of course like the chemistry business where you have a patent on this drug -- I mean the drug market. You have a patent on this drug and in fact its value goes up over time.

The patent on Viagra is going to become more valuable ten years from now than it is today. But in fact in these highly dynamic innovation markets that most of these patent pools operate in, the exact opposite is true, that once the standard becomes pervasive it is not a matter of whether you have a choice to have or not have an MPEG player in your PC.

If you don't have it you are not in the PC market. It's as simple as that because no one is going to buy your PC if they can't play their DVD or CDs on your product. So the leverage against the product changes over time. The dynamics of the industry changes over time.

And as they become the standard part of the product, not of the DVD product but of the greater product in which it's innovated, once it's become a commodity the value to the licensees goes down to zero and the leverage to the licensors goes up. If there is no mechanism to kind of adjust those things it causes distortions.

That's not to say that as we talked about before the business people who operate the pools, especially in the case where you have a businessman, a licensor who is also a licensee, they have pushing and pulling in both directions as well.

I think up front we need to recognize

that you can have a patent pool in which the patents -- of course there are new patents to be added to it that will be issuing later.

And especially since there are going to still be patents pending in the U.S. Patent Office -- I've prosecuted them where they didn't issue for more than 20 years from the date of filing.

That suggests there could be patents out there right now that would be flowing into the MPEG pool 20 years from now that we haven't seen yet and then will have 17 more years of life after that.

Potentially we could be looking for the pool to have the ability to get a royalty on the pool of patents some 34 or 35 years easily after the initial pool was started or the standard was adopted.

Now, obviously 30 years from now I don't think any of us would expect that MPEG, for example, or DVD or any of the technologies we have today are going to be extracting anything more than commodity prices from all consumers.

And I think we have the antitrusters -- when the Department looks at these pools they need to take those kinds of effects -- situations into effect.

That's not to say that the system might not self-adjust. I'm just saying that if you think about the long-term impacts and the fact that you almost have to have some from of review on a regular basis.

If you're expecting the insiders or the licensors to do it, that's fine. That's essentially the way the program works today.

But it just may not be sufficiently offsetting the end competitive effects that are being ignored for a long period of time until somebody gets pissed off enough to bring a lawsuit. And we want to avoid those if we can.

FRANCES MARSHALL: Howard?

HOWARD MORSE: If you want to follow up go ahead.

GARRARD BEENEY: I just wanted to make

an observation about partial licenses. One of the truly procompetitive aspects of patent pools is the reduction of transaction costs. It is one of the principal reasons why licensors agree to put their patents into a pool.

And it's one of the principal reasons why licensees accept pool licenses. And I would submit I guess that there is really no principled way of formulating any antitrust concept that would require a pool to offer partial licenses.

And I say it for this reason. The partial license is really just a claim that I want to be able to license fewer patents than are offered in the pool.

But of course what's left unsaid is I want to be able to do that for less royalty. If the demand is that you license less patents but are willing to pay the same royalty, then fine, there are no transaction costs. We can strike patents off the list of patents that are being licensed.

But really obviously what's being

sought is a lower royalty rate than what other pool licensees are paying. So, number one, it is a request for a discriminatory royalty.

Second of all, if you take a pool that has 100 patents, an MPEG pool has far fewer -- excuse me, far more. One of the DVD pools has more and another less.

So it's not an unrealistic number. And you assume that those patents are issued by 30 different countries in the world.

You then get into a situation where allowing partial licenses and to let licensees pick and choose among the patents in the portfolio, that the licensing agent has to offer thousands of permutations of licenses, perhaps all with different royalty rates.

Excuse me. You may have someone who wants just a license in France for two of the patents. You may have someone who wants a license in the U.S. for three out of the thirty patents in the U.S., et cetera, et cetera, et cetera.

And if you formulate some antitrust concept of requiring partial licenses as opposed to letting the market play its role, there is no principled way to limit that -- the effect of that to the huge transaction cost that would be created by requiring the people that are licensing to try to track thousands of different royalty rates for thousands of different licenses in any pool of any size.

Next I think that you would find that licensors would be reluctant. There would be a great disincentive to form a pool if there was some rule that this was really just a menu where licensees could go in and pick and choose what they want. If that's the case then why have a pool at all; let's just have individual licensing.

I guess finally the point that I'd like to make is that you have a pool as an alternative. If the pool doesn't fit I guess what I'm suggesting is then you have the alternative that would be available to you if there was no pool at all, that is, individual licenses.

The only reason why anyone can claim that individual licenses are not a realistic alternative is because the pool exists in the first place.

So if a pool doesn't fit and it doesn't meet the needs of a licensor, then forget the pool ever existed in the first place. And you have to do what you would have to do but for the existence of the pool.

So I think that creating an antitrust rule that would require licensors who decide to form a pool in part to reduce transaction costs, lower royalty rates so those transaction costs are not reflected in the price of the pool, and then to fashion a rule that says you have to substantially increase your transaction cost and offer thousands of different permutations of licenses really I would submit is not a principled application of antitrust law.

FRANCES MARSHALL: Thank you. Howard,

do you want to move on?

HOWARD MORSE: I want to come back to the point that Chris made where Chris I think suggested that at least if he worked at the Department of Justice he would not look at the reasonableness of the rates being charged.

At least in the 6-C pool letter requesting the Department of Justice approval -- and these guys don't make representations in these pool requests that are well represented unless they have a reason for making the representation in the letter.

In the October 9, '98 letter to Joel Klein on 6-C there are two representations. One is the licensors agree that the pool will make the essential DVD patents available on fair, reasonable, and non-discriminatory terms.

And elsewhere -- that's at page 11. At page 20 it says the royalty rates proposed by the DVD rule are reasonable. And I do think, you know, we can come back to this ex ante, ex post notion.

These are representations that were made to Justice that are made out to the business community who endorses the DVD standard in part because of this I think.

And then maybe ex post as the cost of manufacturing goes down, if it no longer is reasonable it does seem to me that this is an area where it's appropriate, particularly in a situation where the rates are combined with discrimination.

We talked earlier about the fact that I believe certain of these pools the members of the pools aren't paying a royalty at all.

I think that puts you in the situation which the IP guidelines describe where at least if the pool participants collectively possess market power in the downstream market and the excluded or disadvantaged firms can't effectively compete in the relevant market because of the significant royalty plus the price discrimination, then I think you've got a serious antitrust problem from that combination.

So looking at -- the question is, is it appropriate to look at the reasonableness of the rates. And I sort of asserted that at least in certain circumstances looking at that issue it does become relevant particularly when combined with discrimination.

MARY SULLIVAN: Okay, Chris. I see you have a comment.

CHRISTOPHER KELLY: Whether or not it should be relevant, all I can say is that letter that you quote was to Joel Klein, not by Joel Klein, and there are many things that letter says about the pool.

And I would doubt that you would expect that each of them would then have been adopted and ratified by Mr. Klein's letter and thus become a critical component of the antitrust analysis of the pool.

For instance, just to point up one example, that letter as I mentioned very enthusiastically, energetically, altruistically, pointed out that the members of the pool had committed to license outside the pool.

Does that mean that the DOJ patent pool letter therefore said that one must commit to license outside the pool in order for the things to be reasonable? I don't think so. I guess I'll leave it at that.

MARY SULLIVAN: I'd like to pose a question I guess to the panel in general, but maybe in particular to our economists just on the panel and ask the question: If all the patents in the pool are essential, should the antitrust authorities place any restrictions on the royalty rates charged by the pool?

PETER GRINDLEY: You seem to be looking at me. I am the only economist at this end.

MARY SULLIVAN: Then I guess it's you, Peter.

PETER GRINDLEY: It is a big question and I would hate to answer it with a yes or no. Are these the only essential guns, are these all the patents that you need to operate, or are they just only essential patents and you still need to go outside.

It seems -- just off the cuff without having -- obviously this is an issue I have thought about, but I'm not quite sure I'm ready to give a yes or no answer.

It seems that these are freely negotiated in the marketplace and they should reflect what the package of patents is worth. And on its face I can't really see that there's a regulatory interest in that.

You know, I think the questions go beyond that into thinking in terms of the longer term points, the grant backs, et cetera, what happens over time, maybe that things will change, et cetera, what's essential now may not be essential in three years' time.

So I think it's difficult to give a clear answer other than at a very specific point in time for a specific set of patents. But my answer seems to be that if it's a freely negotiated package then it should reflect the real value and for the reasons we've said it should be economically efficient.

FRANCES MARSHALL: Garrard?

GARRARD BEENEY: Yes. I just wanted to offer one observation on that issue, which is I think if you tell patent holders that they have a choice, that they can license individually unrestrained by the government in terms of price or pool their patents and have the government dictate a price, I think both the Commission and the Division won't have to worry about patent pools anymore.

So I also think that we as lawyers -- or certainly this lawyer is ill equipped to determine a market price. And thirdly, I don't think that there is a problem there in the marketplace as it exists now.

FRANCES MARSHALL: Well, our time is drawing to a close here. Are there any concluding remarks that any of our panelists would like to make at this point? Not from Howard?

All right. Well, I would just like to thank you all for taking time out of what I know are all busy schedules to spend a significant amount of time with us, with writing your presentations which will all be available on the web, and that will really be helpful for us as we look at these issues down the road.

I'd like to remind everyone to please leave your plastic badges on the table downstairs before you go out this evening. Thank you very much.

(Applause.)

(Evening recess.)