FEDERAL TRADE COMMISSION

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In the Public Hearing on:)
COMPETITION AND INTELLECTUAL)
PROPERTY LAW AND POLICY IN)
THE KNOWLEDGE-BASED ECONOMY.)
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FEBRUARY 8, 2002

Room 332
Federal Trade Commission
6th Street and Pennsylvania Ave., NW

The above-entitled matter came on for hearing, pursuant to notice, at 9:15 a.m.

PANEL:
WILLIAM E. KOVACIC, FTC
WILLARD K. TOM, Esquire
FRANCES MARSHALL, DOJ
ROBERT POTTER, DOJ
HILLARY GREENE, FTC

P R O C E E D I N G S

MS. GREENE: Good morning. On behalf of the Federal Trade Commission and the Department of Justice, welcome. My name is Hillary Greene, and I'm in the general counsel's office here at the FTC, and with me at the far table we have Robert Potter and Franc Marshall who are from the Office of Legal Policy at the Department of Justice.

We are truly delighted to present this session on antitrust laws for patent lawyers and our distinguished speakers, Bill Kovacic and Will Tom.

When the Chairman first announced these hearings, he emphasized that properly understood, IP law and antitrust law both seek to promote innovation and enhance consumer welfare. Today's speakers are true pioneers in promoting and understanding of how antitrust law serves those goals, and not surprisingly, they've used that same understanding to challenge and help the competition community to increase its sensitivity and their ability to promote those shared goals.

To say that the respective accomplishments of our speakers are far too immense to mention is an understatement. Nonetheless, I'll mention a couple things. I'll begin with Bill Kovacic, the Commission's general counsel.

Bill returns to the FTC from a professorship at the

George Washington University Law School. Previously he had worked at the FTC with the Bureau of Competition's Planning Office and later as an attorney advisor to Commission George Douglas. Simply stated, he is one of the nation's preeminent scholars on competition policy.

I wanted to provide you with some type of overview of his work for today, and basically once my list hit about 75 articles and books that he had authored, coauthored or edited, I abandoned that enterprise. So the one article that we do have, is called "Antitrust Policy: A Century of Economic a Legal Thinking," and I urge you all to pick up a copy because it draws on the major antitrust decisions and research in industrial organization economics and provides, as the author stated, the evolution of our thinking about competition.

I don't think we can discuss Bill without mentioning his extensive travels as well. Bill has really gone around the world, and I mean that literally, and has worked with the governments of countries ranging from Egypt to Russia to Zimbabwe and has worked with them to better understand competition policies and to share with them his insights and to see how he can contribute to their own understanding, and so we're really delighted to have him here today.

Let me turn now to Will Tom. Will is a partner at Morgan, Lewis & Bockius.

Will has an extensive history in public service.

Most recently, he served as Deputy Director of the Bureau of Competition here at the FTC from '97 to 2000, and before that he was the Assistant Director for Policy and Evaluation, also at the FTC, and before he joined us at the FTC, he was a counselor to the Assistant Attorney General in charge of the Antitrust Division at the Justice Department.

I guess the main thing that I want to say about Will is that he's the reason that we're all here. It's his fault that we're here today, and while that's not entirely true, it is true to note that Will was one of the framers of the antitrust guidelines for the licensing of intellectual property, which the Federal Trade Commission and Department of Justice issued back in 1995, and he has continued to be a pioneer in this area and has written many subsequent articles, which have revisited the guidelines and looked critically at how they are functioning.

In addition, he's worked most recently as the guest editor for the Antitrust Law Journal, which will be having a symposium issue coming out, which will be focusing on the Federal Circuit and the various questions that it raises.

Basically it's just a pleasure working with these two folks, and despite their stature within the field, they are

not only some of the nicest people in the world, but they are also some of the people who are most accessible to learning, and I say that because I think we are really coming to the table today and hoping to learn from you as well, despite the fact that these folks are sitting up here. We hope to learn from your questions, both what we can articulate better to you and also what you think we're doing wrong.

Thank you all for coming. We will have one break at about 10:40 for about 15 minutes.

Thank you.

MR. KOVACIC: I want to thank Hillary and Gail Levine, Matthew Bye for putting together today's program, and I want to tell you how delighted I am on behalf of the Department of Justice and the Federal Trade Commission to welcome you to today's workshop.

I have to emphasize for you that one of the great privileges in coming back to the Federal Trade Commission is the opportunity not only to work with the professional staff of the Commission, but to fulfill a long time hope that I would have the opportunity to work with the many colleagues, who are now colleagues, but those who I've known from a distance at the Department of Justice as well, so this is an exceptional pleasure for me to be here today with both Bob and Frances and the whole team at Justice that has been

working with us on these hearings, as well as the wonderful collection of the professionals at the Commission that are responsible for this work.

We do have one handout for you for my part of the presentation today, just to give you a glimpse of what our agenda is today. I'm going to give you a short overview of the U.S. antitrust system, both examining certain key features in doctrine and the evolution of doctrine over time, but also to focus in a little bit on the key institutions that are responsible for developing and implementing competition policy in the United States.

We will then be talking about a host of issues involving agreements, principally involving licensing arrangements. We'll take a break about midway through, and then I'll come back and speak a little about monopolization and attempted monopolization and the set of controls that the antitrust system imposes on the behavior of individual large firms, and then we'll finish up with a discussion about mergers.

I want to mention Will and I both, as we go through the material today, we want to welcome you to ask questions, so to pose them not only to ourselves, but for really hard questions as an academic, I've learned as an academic I've learned you always hand them to someone else, and that's why Frances and Bob have been trapped in here with us.

If it's a really tough, imponderable question, I developed academic skills at handing those off or, as I mentioned to Bob and Will earlier, using devices such as saying, "We'll get to that later," or "What do you think," the two "in ca of emergency" academic tools for dealing with problems.

Also, Will and I have each papers for you to take a look at. With Carl Shapiro, I did a paper that's about 17 pages long, basically a tour through 110 years of U.S. antitrust history. That's about a page and a half per decade, but what we've got there is a summary of a number of the concepts that I'll be speaking about today.

On one occasion in traveling in Russia, they had an earlier version of this translated and sent to the Russian audience, and my counterpart in Russia who we were working with said, "Could you give us some instructions about what you want to do with this," and I said, "We'll do what we do in a typical law school classroom, that is, I'll grill them in a very good natured way about what we're talking about."

I went to the seminar, and I've never seen people so compulsively and ferociously well prepared; that is, they had read everything. They had good questions, but I said, "I've never seen such a grim bunch of folks in my life," and the translator said, "Well, it's this damn letter that you sent them." I said, "Well, what does it say in Russian?"

It says, "Professor Kovacic insists that you read this

material, and if you don't do so, he will torture you with fire, and he will laugh while he does it." The difficulty in working with translation: grill, torture with fire; laugh good naturedly, laugh while he does it. No doubt they were well prepared but well terrorized by the threat itself.

I'm not going to torture you with fire today, and neither will Will. Indeed, we're going to take a look at some of what we think are the principal features of the system, with an emphasis on those that bear upon the practice of intellectual property law.

Let me give you a quick half hour or so tour through the U.S. system and some of its key features. I would like to do this in a few stages. I would like to tell you briefly what the status quo in the United States was before 1890, when we had our first national experiment with competition policy, the Sherman Act, to tell you just a bit about the key antitrust statutes and to identify their major implications, that is, their powerful institutional and doctrinal implications that come from the way in which Congress has cast the basic competition policy.

I wanted to talk a bit about how the structure of the statutes themselves lend themselves to a collection of continuing debates and discussions about what gains antitrust policy ought to accomplish, and then to give you a quick tour through the evolution of doctrine and policy to bring us up

to the future with a bit of historical concept, and then as a way of framing the balance of our morning's discussion, to focus on what many observers agree to be today the core concepts of antitrust policy.

Again, as I go through this, if you have a question or comment, something I can clarify, or to address, please let me know.

What was the state of the competition policy art in the United States before 1890? That is, as a way of thinking about what the Sherman Act did to change the framework of competition policy rules, what background was the U.S. Congress in 1890 writing against?

The common law framework, as you might imagine, induced judges to address what we would call competition policy issues in a number of cases, usually in the course of examining contract and property disputes, and out of that common law environment came a couple of key concepts. That is, judges were attuned to the notion that certain types of contractual restrictions might be overreaching, and they developed a key concept that applies to the whole stand of antitrust policy for dealing with that called the Rule of Reason.

Here's the formative case. It involves an apprentice working for a baker in post-industrial England. The apprentice has agreed with the baker for a certain period of

time, "I will agree not to compete against you;" that is, in return for learning the skills that you're offering me as an apprentice, I agree as a condition of my employment that I will not show up across the street except after a certain period of time and compete against you.

And the question in this formative early case called Mitchell versus Reynolds was, Was the duration of the restriction on the apprentice's subsequent employment excessively long? Was the geographic scope of the restriction too broad because the baker had reached very far?

As to duration, he said, You can never compete against me in the future. And in what area? Over an area so large, so far-reaching that it encompassed a good part of England, and the apprentice breached the agreement. The baker said, I want it enforced, goes into the English courts to seek enforcement of the contract.

Issue before the court, Is the contract enforceable, and the court said, Some measure of restraint would be appropriate, else you would not have those skilled in certain trades being willing to impart their know-how to apprentices who come to work for them.

But on the other hand, to tell the apprentice that he can never practice the trade in effect within the better part of the country at any time in your life would deny not only

the individual the benefits of employment, but society the benefits of the rivalry that would come from having a new mind with new skills in the market offering consumers an alternative.

So the court said, Some restriction would be appropriate, but it must be a reasonable restriction, defined in terms of both its geographic scope and the duration of the restriction and the reasonable relationship of the restriction to a legitimate business purpose.

So English common law courts dealt with many of these formative concepts, and you also had those concepts imported into the Colonies in the period running up to the Declaration of Independence, the Constitution, and that provided the template for common law contract adjudication in the 19th Century.

What was the sanction if you had an overreaching contract in this pre-Sherman Act period? The typical sanction was non-enforcement of the agreement. Damages, penalties? No, non-enforcement. Who had standing to sue? The person restricted, not a customer, not a supplier, not a competitor, the person who was a party to the contract, so limited sanction for violating this basic restriction.

There was one national law in place before the Sherman Act's adopted in the United States. Canada adopted the first national competition statute in 1889, and there

were predecessor state constitutions and statutes, both through the guise of antitrust laws and corporation laws that had competition policies principles. That's the framework against which Congress is drafting when it comes to the Sherman Act, again in 1890.

What are the key U.S. antitrust statutes? Basically three enactments with a number of amendments each, but the three foundational enactments are the Sherman Act, adopted in 1890. This is far and away the most important of the U.S. competition policy statutes.

Section 1 of the Sherman Act basically imposes restrictions upon collective action, agreements in restraint of trade, both involving direct competitors, which are called horizontal agreements, and those involving firms that are aligned in the relationship of a supplier or a customer. Those are what we usually call in our jargon vertical agreements.

Section 2 of the Sherman Act provides antitrust's basic mechanism of control for dominant firm behavior. This is the location for the prohibition on the monopolization and attempted monopolization. As we'll see today, antitrust draws a fundamental distinction between concerted action, two or more participants, and a unilateral conduct, with concerted action being treated with much greater scrutiny.

The second most important of the statutes is the

Clayton Act adopted in 1914 and amended significantly in 1936 and 1950, amended with respect to substance in those years. Section 2 of the Clayton Act prohibits certain forms of price discrimination under the guise of the '36 statute called the Robinson-Patman Act.

Section 3 involves a variety of distribution practices and vertical restraints such as tying and exclusive dealing, and Section 7 is the mechanism by which the U.S. antitrust laws control mergers.

The Federal Trade Commission Act is adopted in 1914. It is the foundation for the institution that is your host today physically. The 1914 statute's key operative provision is Section 5 of the Federal Trade Commission Act, which prohibits unfair methods of competition.

For the most part, with some crucial amendments, the basic architecture of the U.S. antitrust system is put in place 25 years after the adoption of the Sherman Act by 1914.

Some key characteristics of these statutes, what I'll call the open texture of the statutes, decentralized enforcement and criminal and civil sanctions. Let's look at each one.

What do I mean by open texture? The key operative provisions of the U.S. antitrust laws are breathtakingly open-ended. The Sherman Act, Section 1 and Section 2, for many observers, especially foreign observers accustomed to

civil codes that specify misconduct in exactly detail, is a shocking revelation.

Section 1 of the Sherman Act has fewer than 50 words. Section 2 is a bit longer, but less than a hundred. What are the key operative terms? Terms such as restraints of trade, monopolize. Section 7 of the Clayton Act and its anti-merger provision, "may be substantially to lessen competition." Section 5 of the FTC Act prohibits "unfair methods of competition."

The statute does not define these terms, and as you can see by themselves they are not self-defining. Yes, Congress had in mind that judges would pay attention to common law models that provided some description of what these concepts might mean, but it made a formative change in designing the law this way.

It deliberately made the law open-ended to permit the conscious process of evolution over time. It delegated to federal judges, for the most part, and implicitly to the federal enforcement agencies the role of elaborating the substance of the doctrines over time.

So with some fixed points of reference from earlier common law cases, for the most part what Congress said is, We want to give the statute a consciously, deliberately evolutionary scheme so that it can be adapted through judicial interpretation over time to account for new

developments in relevant social science disciplines such as economics and to adjust and adapt to new understandings that business behavior.

When you look at the whole scheme of U.S. economic regulation, I want to assert to you that this scheme is truly unique. You will not find another field of economic regulation in the United States that relies upon this process of evolutionary judicial elaboration.

There is no scheme that gives the federal judiciary a greater role in elaborating standards, and there is no scheme that has what a number of courts have called so consciously a constitutional mechanism at work, and that is a uniquely remarkable feature of the U.S. antitrust system, but it does mean that things change over time, and we'll see depending on what. What's the vehicle for change? Judicial elaboration of standards over time.

Decentralization is the second remarkable feature of this scheme, and this is put in place by 1914. The decision to procedure is placed in the hands of an executive cabinet department, the Department of Justice. There is a second alternative mechanism for enforcement, principally administrative enforcement at the Federal Trade Commission. Our authority with the Department of Justice overlaps. It's not absolutely congruent, but for our purposes today, we can assume that it's quite similar.

State governments also have standing under the statute to bring cases as private parties, and, yes, there is a private right of action that enables injured customers, suppliers and competitors, to bring suit, and what induces them to do it? An attorney's fees provision that compensates the prevailing plaintiff, not the prevailing defendant, the prevailing plaintiff for reasonable attorney's fees and costs and the measure of damages for the prevailing private plaintiff is three times actual harm.

No system of law in the United States delegates prosecutorial authority so broadly and to so many parties, and this has an important consequence. It means that no single prosecutorial gate-keeper in the U.S. antitrust system has the ability to control the evolution and flow of doctrine and decide what matters get to the courts.

So that if you read these standard American antitrust case books, you will notice that as many formative cases feature titles involving private parties and private litigation as do cases involving the government of the United States or the Federal Trade Commission.

We can complicate this a bit by adding the presence of so-called sectorial regulators, the Federal Communications Commission, Federal Energy Regulatory Commission which also had a competition mandate for mergers.

I put upward ratchet on the slide simply to raise

this point; that is, when you have so many prosecutorial agents, there is the possibility that the most aggressive preferences or the most aggressive agent are those that determine which cases be brought. That can import an upward ratchet into the prosecutorial process. What is the rationalizing influence? The courts.

This mechanism depends crucially on judicial elaboration to decide what the appropriate equilibrium of doctrine ought to be. Of course, time can intervene. It has in a number of times, but it's mainly the courts that decide which norms, which standards ought to be applied.

The last key item I want to mention is the coexistence of criminal and civil sanctions. Why is this important? The U.S. system, through the Sherman Act, permits the government of the United States to prosecute both individuals and corporate entities as criminals. The statute defines all offenses of the Sherman Act as crimes. Of course, they can be pursued civilly as well, but had the Justice Department chosen to do so, as a matter of technical analysis, if it had wanted to convene a grand jury to indict Bill Gates in the Microsoft Corporation, it could have.

That would have been a jarring departure from modern prosecutorial practice, but it is, nonetheless, striking to contemplate that the Sherman Act defines all of its offenses as crimes.

What in fact has the government done over time? How has it used its discretion? It has ruthlessly focused the prosecution of criminal matters upon the most egregious offenses, what we call hard-core horizontal restraints, agreements between competitors to set prices, to allocate markets or customers.

In order to make that exercise of authority appear legitimate, courts over time have tried to carefully delimit what sorts of offenses deserve that kind of combination. Those tend to be called per se offenses in the language of antitrust offense? What's a per se offense? A per se offense is one for which the proof of liability depends only upon demonstrating that the agreement or the behavior in question took place, utterly without regard to actual effects in the marketplace. As you'll be seeing a bit later today, certain types of price related agreements are condemned per se.

So what about goals, that is, what do the antitrust laws try to accomplish? With that broad, open-ended language, an enforcement agency or a court might ask, It's hard to make sense of the law without having an idea of what you want to do with the law.

If you were really concerned about preserving an atomistic structure of suppliers, you might define monopoly as any condition in which a firm acquires more than a trivial

share of the market. If your goal was absolute political and economic social decentralization, you can do that. You might sacrifice some economic efficiency, but that could be your choice of enforcement strategies.

The choice on the list that matters a lot is economic efficiency. Is it to promote practices that increase society's total wealth by encouraging the efficient use of resources? Is it to prevent transfers of wealth from consumers to producers, transfers that take place often in the face of price-fixing agreements that impose supra-competitive prices?

Is it to promote economic decentralization as an end in itself? Is it to achieve perceived political benefits of maintaining a relatively decentralized structure of business firms on the idea that large firms tend to be politically dangerous because they can manipulate the political process, whereas smaller firms might be seen as benign?

Is it to promote local autonomy by keeping business units small enough that business units are not able to distort cultural/social/political values at a local level or are there others?

If you had asked Congress in 1890 which of these count, they would have said all of them, every one, we wanted to do all of that. You might ask yourself, Well, how do you do them all? Aren't they internally contradictory at some

point? That is, you can't have some of the benefits from economic scale if you want small cottage industry configurations in which no firm has more than a dozen or so employees.

Can you do that? Congress would have said or answered this way, We don't think you have to be huge in order to gain economic efficiency benefits. Congress would have said, It is a disruption in the natural economic order to have huge corporate enterprises. They only get that way and stay that way by using improper means. There's no trade-off between the item on the top line and those on the lower part of the chart.

One of the things we've learned as a part of this evolutionary process and the strong role that economic analysis plays in changing views about what normative rules ought to be in this area is that there are trade-offs all over the place.

Just to anticipate something that we'll see today, what's the goal today? Top line, that's virtually the single minded focus of decision making in the federal courts, and I would say the single final decision making in the federal antitrust systems.

It's the promotion of economic efficiency. I'll say a little bit in a minute about how we got there. Do other of these values come into play? Are they accomplished by

pursuing economic efficiency? Sure. That is, to the extent that you promote economic growth and the fruits of that growth are spread throughout a society, that has powerful political consequences.

To the extent that you prevent artificial restrictions on access to the marketplace, that has powerful social and economic consequences, but those are not the direct aims or directives of policy making. Efficiency in the form of lower prices, greater innovation, those tend to be the aims of modern competition policy today.

I'm going to give you a quick view of how policy changed and evolved in the United States, and again for the mind-numbing treatment of this, the Shapiro paper out on the table gives you lots of the wonderful details of this trip. But I want to emphasize for you how, in fact, policy changes over time and will continue to change and let me give you a sense of what's motivated the change.

To take the first 25 years, what comes out of the first 25 years? What does the Supreme Court do? In the Standard Oil case, one which I think you're all familiar with, this is the case that split John D. Rockefeller's empire into 34 separate pieces in 1911.

In the Standard Oil case, the Supreme Court said that model of analysis I referred to before, the rule of reason,

that's the basic template for analysis in the antitrust area too, and implicit in that is a trade-off, a balancing of competitive benefits against competitive harms, with a general view that restraints on competition should be no greater than reasonably necessary to accomplish legitimate wealth-increasing social ends.

The Standard Oil case also acknowledges that some forms of behavior may be so vicious in their competitive consequence, they can be condemned with a minimal court. That's the so-called per se rule, that it also coexists within the umbrella of the rule of reason.

Supreme Court mandated the break up of Standard Oil. It was a dramatic demonstration that antitrust remedies extended up to and including the restructuring of the firms that had gained their preeminence or maintained it improperly.

By 1914 the courts had recognized that criminal enforcement of the antitrust laws was appropriate, notwithstanding the seemingly open-ended language of the statute itself, that antitrust offenses could be attacked as crimes.

And institutionally you see Congress in 1914 deciding that it would experiment basically with two forms of administrative enforcement and elaboration, a principally administrative mechanism through the FTC with an independent

regulatory commission, and now with the demise of the ICC, the FTC is the oldest of the lot still in existence, and with executive enforcement through the Department of Justice.

From 1915 to 1936, this is a period in which the notion of reasonableness standards gains powerful currency in the U.S. system. A distrust for using the possibility of carving out certain rules and condemning certain behavior as being intrinsically illegal by a per se standard, the attack upon dominant firms that brought about the challenge to Standard Oil largely falters from 1920 through the mid '30s. The government simply doesn't bring large cases to restructure major firms or attack dominant firm behavior.

Institutionally, especially in the midst of the Great Depression, we have a number of national experiments with coordination and economic planning, and I mention this simply to point out that even though the U.S. economic system relies heavily on a competitive process, with the adoption of the Sherman Act, there are many economic actors who come to realize that since private agreements and restraint of trade become hazardous, the old-fashioned, best way to do it is to get a public authority to do it for you, to run the cartel, to exclude entrants and to bring to bear the government's full powers of criminal and civil enforcement to keep your competitors out.

That's the other old-fashioned way to gain monopoly

power. Many of the experiments in the 1930s endorsed this approach and planted the seeds of a number of theories that provide major exemptions from the operation of the antitrust laws today.

It's really not until the second New Deal of Franklin Roosevelt's presidency that there becomes a durable, sustained commitment to the use of competition as the means for organizing U.S. economic system.

From '37 to '72, we see a swing in the direction I suggest for the use and reliance upon per se rules of illegality. The Supreme Court endorses the concept that certain types of behavior are intrinsically illegal. Horizontal restraints such as price-fixing agreements, the sort of behavior condemned in the Archer Daniels Midland Food additives price-fixing conspiracy, allocations of customers and agreement between one firm and another to decide which customers they'll serve; resale price maintenance by which a manufacturer imposes either a floor or a ceiling around the price at which its retailers can sell a product; tying arrangements in which the sale of one product is conditioned on the sale upon another.

And it's in many of these tying cases in this period, especially in the late '30s and early '40s, that the Supreme Court plants the idea in a number of cases that the existence of an intellectual property right is itself a source of

monopoly power, and Supreme Court decisions in this era in antitrust cases glibly tend to equate patents with monopolies, patents with monopolies, copyrights with monopolies, trademarks sometimes with monopolies.

That's a point of view that the antitrust system no longer holds. Fortunately, the evolution that I'm referring to has taken us past that point, but if you're looking for the roots of that concept, it's embedded in a number of the cases that come out of this period.

There's another key assumption about structuralism, and I'll simply describe it this way, is a sense that high level of concentrations inevitably permit firms or encourage firms to glue with each other, and even if they're not actually sitting down in a hotel room deciding what to charge, it's easy for them to coordinate their behavior at arms length. Lots of antitrust laws accept that premise.

Institutional changes: in 1950 Congress adopts the current variant of the U.S. anti-merger policy, merger statute, and in the late 1950s and early '60s we have a tremendous renaissance of private actions. The three largest manufacturers of heavy electrical equipment used to build power plants basically decided that they would allocate sales opportunities for different public utilities.

This resulted in the largest horizontal price-fixing conspiracy prosecution in the history of the statute to that

point and greatly inspired a great growth in the use of private suits.

'73 to '91 is what I call the ascent of the Chicago School. What's the Chicago School? Chicago School is a shorthand term for a line of economic reasoning, theory, that has two principal tenants. One is that antitrust policy ought to focus on prosecuting plain vanilla violations of two types: Agreements among competitors to set prices or to allocate customers, so-called hard-core horizontal restraints; and to prevent mergers to monopoly.

Beyond that antitrust ought to stay out, and the second related concept that the Chicago School has, Why have such a plain vanilla antitrust policy? Because courts and enforcement agencies aren't particularly good at doing anything else. You need relatively simple, clear rules focused on a handful of practices because that matches the institutional capability of the bodies responsible for putting a system into operation, and if you let courts and enforcement agencies do something else, the rate of errors can go way up.

Major institutional changes that reflect some of the new economic thinking may be the most important, single set of administrative guidelines issued by either federal agency in their history. One of the truly remarkable influential accomplishments of modern era, the 1982 merger guidelines

issued by the Department of Justice, a remarkable accomplishment in the field of competition policy, a great increase in criminal enforcement of hard-core horizontal restraints, the emergence in the 1980s of state governments as major enforcers of the federal antitrust laws and what I called HSR in 1976, a major change, the Hart-Scott-Rodino Antitrust Improvements Act, which imposes a requirement that mandates that parties to mergers give the federal agency a limited period to decide whether to challenge transactions before they're actually completed.

'92 to the present: major intellectual developments is in the school of economic thinking that's been called the Post-Chicago School. The Post Chicago School of the great dialectic process is the counterweight to the Chicago School, it's the antithesis in some ways of the Chicago School, and that simply did pose many tensions.

How does the Post Chicago School differ? Two key respects. One is that it sees an appropriate role for antitrust enforcement beyond what I call the plain vanilla agenda of the Chicago School. As a matter of concept, there are forms of business behavior, especially involving misconduct by dominant firms, that ought to be the subject of scrutiny, and second, with respect to institutions, there's much greater confidence on the part of Post Chicago School enthusiasts about the capacity of enforcement agencies and

courts to make sensible judgments about what practices hurt competition which don't introduce something sensible about them.

Doctrine in policy? A change in merger policy that basically focuses scrutiny on horizontal mergers at the point of which you go below firms in the market, mergers that go 4 to 3, 3 to 2, 2 to 1. For the most part the cases that end up in court over the past decade start to occur at the 4 to 3 level, a much greater willingness to accept levels of concentration in a structuralist view would have entertained decades ago.

Much greater attention to single firm conduct, at the Department of Justice the Microsoft case, the predatory

pricing case against American Airlines, the FTC's consent decree involving Intel.

MR. POTTER: Call it a predatory conduct case.

MR. KOVACIC: Predatory conduct case, yes, exactly in fact more than just pricing, a host of activities to deter entry by entrants into the airline sector.

Institutional changes, major changes in the federal merger guidelines, and as Will will be talking about a bit, the introduction of intellectual property guidelines, which are far more receptive than the earlier structuralist's perspective. The per se perspective that I referred to before was towards a variety of licensing and other practices involving the use of intellectual property and the emergence of what I would call a public enforcement triad; that is, the establishment of state governments as being if not absolutely equal in their dedication of resources and activity to competition policy, certainly well entrenched as elements of the U.S. competition enforcement scheme.

Core concepts today, let me just mention a few areas that we'll be thinking about. One is the importance of identifying and measuring market power accurately. It was a general view that in many instances antitrust policy is most properly focused when it focuses on the improper accumulation of use of market power.

So knowing how to define that in a meaningful way is

important, and one thing I'll emphasize to you, that contrary to earlier cases or decisions that sometimes equated certain species of intellectual property as per se indices of market power, that point of view is no longer adopted today. It depends on the number of alternative substitutes for the item that is subject to an intellectual property right.

Second is the focus of identifying and finding hypothesi of antitrust, what I call collusive effects on competitors to achieve and exercise market power through agreements among themselves, what I call exclusionary effects involving the efforts of firms to achieve or increase market power by denying access to the market to rival firms, and last the focus on what we might call efficiency and efficiency concerns, what's a good justification for practices.

I'm going to turn to Will who will focus on agreements, what kinds of agreements are matters of concern. If there's a question or comment I can address quickly for you, I would be glad to do that before we hand the microphone to Will.

Yes, sir.

MR. EDWARD POLK: I had a question. I'm trying to understand what an antitrust monopoly is as compared to a patent monopoly, what the differences are?

MR. KOVACIC: I would say I think in both instances

the term monopoly -- the question is, What is the meaning or what is the difference between a patent monopoly and an antitrust monopoly?

I think the term monopoly is a very unfortunate label to apply to either of those circumstances. I think the vocabulary we might find better used when we're talking about patents, we're really talking about the right to exclude, and the right to exclude may have some commercial value. It may have none at all.

If I have an idiotic idea that happens to be patented, I have the right to exclude you from using it except with my permission, but I may have no market power at all. I may start with my idiotic idea that happens to patentable, commercially useful, a submarine tank that flies. It's patentable. It's a great idea. Or a fur-lined bathtub or some other extraordinary innovation that I've come up with that has no commercial value, no market power.

When we talk about market power in the antitrust context, the monopoly in the antitrust trust context, we're talking about products for which there really aren't good alternatives or substitutes, so that a person can raise price for that product significantly without watching the migration of that person's customers to other products.

So I think the real question for us may be in both settings is to ask what are the alternatives, what are the

substitutes for the product in question, and when we talk about monopoly in this institution and two blocks over at the Department of Justice, we're talking about the capacity of an individual producer to raise price significantly above a competitive level without losing a substantial amount of sales.

And that depends entirely upon the availability -- in many instances on the availability of substitutes, so I think when we speak about monopolies, it's probably better to talk about the patent monopoly, when we really need to be talking about the right to exclude one from the use of that property right where the property right itself might have no value in some sense.

Yes, sir?

MR. WILLIAM MOORE: You said the main goal of the 1890 statute was economic efficiency and that the other goals had kind of fallen by the wayside, but there is nothing in the current rubric that concerns diversification in the economy, which would equate to economic decentralization I think in the original goals.

MR. KOVACIC: I would say that there is a concern about diversification in this respect. That is, antitrust people tend to be very suspicious about private arrangements that artificially restrict access to the market or suppress the emergence of, for example, new technologies or the

emergence of new competitors, and we are also suspicious of public restrictions that do the same thing.

So we have a keen -- we have a great deal of faith about the vitality that entering into the market tends to bring to the process of innovation, decisions about pricing, and you'll see that I think -- both of us have a great concern about private or public restrictions that have the effect of suppressing that kind of access, in part because of our awareness over time, that you never know who's got the next idea that really is going to make a difference.

Let me turn to Will.

MR. TOM: First of all, let me say that it is really a pleasure to be back here today, and particularly to share a lectern with my good friend Bill Kovacic, who is certainly a luminary in this field.

What I want to talk about in this segment is the subject of agreements under Section 1 of the Sherman Act, which Bill has already explained to you is the part of antitrust law that deals with agreements in restraint of trade, and we're going to in this segment cover basically four topics.

The first one is horizontal relationships versus vertical relationships. The second is a little bit of review of per se versus rule of reason, some general principles that underlies the 1995 guidelines, and analysis of specific types

of restraints, and with some reference to the infamous Nine No-Nos.

Let me start with the horizontal versus vertical distinction, and to do that, inspired by the history lesson that we had already this morning, I'm going to go back to 1906 I believe, and this little schematic diagram represents the case of Bement & Sons versus National Harrow Company, and this was a patent pool, and it dealt with a subject that was undoubtedly at the technological forefront of the day, namely, float springs and tooth harrows.

Does anyone know what a tooth harrow is? Can I have a show of hands here? Well, a harrow is basically something that you drag behind a farm animal or a tractor or something to break up the ground. And somewhere along the

way people figured out that as you put springs in the teeth, it gives it certain advantages in dealing with rocky soil and the like.

And so a float spring tooth harrow was invented, and actually there were a number of purveyors of float spring tooth harrows, and ultimately about 22 of them emerged, and around about the turn of the century, they realized that competing with so many competitors was not a very comfortable thing, and they ought to form a pool.

And they all had patents on their individual products, and the nature of the pool was that they would all contribute the patents to the pool and then license them back on terms that essentially fixed the price at which they could resell their products, a fairly common practice in the intellectual property world.

But this pool had some unique features, and I diagrammed that by using different geometric figures, squares, triangles and circles, because the unique feature of this pool was that each manufacturer was allowed to license back only the technology it had contributed to the pool.

So manufacturer A got the license back from the pool the right to use, the right to practice manufacturer A's patents, and manufacturer B got to license back and practice manufacturer B's technology and so on. Kind of an odd pool,

you would think.

I'm going to ask for a volunteer, preferably someone who knows nothing about either this case or antitrust, and ask you how you think that case should have come out. Can I have a volunteer? Sir? Go ahead.

MR. POLK: I think from an antitrust standpoint, it seems like customers didn't really get anything. The patentees are just selling what they could have done without the pool.

MR. TOM: Exactly. The answer my victim just gave is that it doesn't seem like customers were getting anything out of this deal, that each manufacturer was able, after the pool, only to do what it could have done to start with, so where was the benefit to consumers?

And indeed I think that's how an antitrust lawyer or economist or professor would look at it today. This pool contributes nothing to economic efficiency. It doesn't bring together complementary products. All it does is fix the price of the product, and therefore this pool should be condemned as unlawful.

What did the Supreme Court do? Well, as I think Bill alluded to, there's been an evolution in the law, and given

the degrees of inconsistency between some of the old cases and some of the current cases, they can't both be right, and let me suggest that the Supreme Court nodded on this one. It was 1902, excuse me.

The Supreme Court in this case said: "The general rule is absolute freedom in the use or sale of rights under the patent laws of the United States. The very object of these laws is monopoly." And therefore the Supreme Court upheld this pool, said it was lawful.

By the way, I guess I differ with Bill in one respect, the notion of patents as monopolies does not just arise from that unfortunate period in which the Supreme Court attacked patent rights wherever they could find them but also goes all the way back to 1902 in which the Supreme Court said, Patent equals monopoly, and therefore, the anti-monopoly laws have to yield.

Now, we'll see later in our history, as Bill was talking about, a period in which the Supreme Court did the same thing, patent equals monopoly and therefore the patent laws have to yield. I would suggest they got it wrong both times, and let's fast forward a bit to that period.

This was I believe around 1945. The case of United States versus Line Material Company, and Line Material involved a technology maybe somewhat closer to our own experiences. It involved fuses, electrical fuses, and

Southern, I believe, had a patent on a very complicated and expensive fuse that was undoubtedly a great breakthrough, very fundamental kind of patent, but the product that Southern had was just not very efficient. It was expensive, it was complicated, it was unreliable.

Along comes Line Material with a much simpler, better break-out fuse that would offer great benefits to consumers. The only problem with the Line Material product is that to make, use or vend that product would infringe Southern's patent.

What did they do? They got together, and they formed a pool and contributed patents to the pool, and what got licensed out of that pool was the right to make something better, something better than either company could have done on its own or that any manufacturer could have done by licensing patents from either one of the contributing patent holders individually.

And that's represented in this diagram by the semicircles being contributed to the pool and coming out of the pool the nice complete, full circles, so you can guess what the result of this story was.

The Supreme Court -- and by the way that pool like the earlier pool we talked about also fixed prices.

United States versus Line Material Company: Supreme Court says: "The possession of a valid patent or patents

does not give the patentee any exemption from the provisions of the Sherman Act beyond the limits of the patent monopoly."

Well, what does this mean? What is beyond the limits of the patent monopoly? In another setting I analogize the whole focus of the inquiry during this period being like siblings trying to share a bedroom, and they got a sheet between them, and there are constant, daily arguments about whether the sheet is one inch on my side or one inch on your side, and all of the arguments are about whether you are within or outside the limits of the patent monopoly.

No attention to the fact that -- as Bill said, the whole idea of a patent monopoly is just an unfortunate term in the first place, because when you talk about monopoly in an antitrust sense, you're talking about the presence or absence of substitutes. You're not talking about property rights, and what the Supreme Court here is calling a patent monopoly is really no more than a right to exclude but just as if I owned a factory, I have a right to exclude people from coming in and producing goods in my factory, but that doesn't make me a monopolist if someone else has a factory down the street producing the same kinds of goods, goods that are that substitutes for mine.

Okay. Where are we today? I think we can take a number of examples, but I'll take the Department of Justice

in the business review letters that we did for the MPEG 2 patent pool and DVD patent pool. Basically these were situations in which a great number of firms had patents that were essential to practice the standard for an emerging technology.

They were, in other words, all blocking patents, and the formers of the patent pools realized that given the mess the Supreme Court and the courts generally have left us in the pooling area, that there was some antitrust risk and uncertainty, and given the diversity of sources, and of course when you can't rely entirely on the enlightenment of principles that I think the enforcement agencies have migrated to, they decided to seek a business review letter from the Justice Department.

And what the Department did in this case was essentially focus on this question of whether these patents competed with each other or were indeed complements or blocking patents, and the mechanism that was set up to ensure that only blocking patents were contributing to the pool is that the members of the pool agreed to appoint an independent patent examiner to examine all the patents that were contributing to the pool and to make a determination that they were indeed necessary in order to implement the standard in this area.

Now, there were a number of safeguards as well, but

this was the essential and most critical safeguard to ensure this was really a Line Material kind of pool and not a peril kind of pool.

So what is the test here? I think Rich Gilbert mentioned it on Wednesday. The key test in the Intellectual Property Guidelines for distinguishing a horizontally relationship from a vertical relationship is "would there have been competition absent the license?"

By the way, for those of you who have no antitrust background, these notions of horizontal and vertical are probably somewhat non-intuitive. They came about in days when people were mainly looking at traditional manufacturer and distributor relationships. Horizontal relationships were relations between two manufacturers at the same level of an industry. Vertical relationships were relationships between manufacturers and distributors, and you could visualize it as a chain or a hierarchy, and hence the terms horizontal and vertical.

Bill Baxter, a number of years ago, proposed that legislation be passed to abolish the words horizontal and vertical from the antitrust vocabulary and replace them with substitutes and complements. I think that would be an excellent idea. It's probably too late because we have now such a body of law and the literature using the language of

horizontal and vertical, but that's really what we're getting at.

We're getting at, Would there have been competition. Did these two things compete, and if there would not have been competition absent the license, you really can't call these horizontal competitors. Even if you have got two manufacturers that seem to be producing the same thing, if one of them is in business only by virtue of a license from the other, you do not have a horizontal relationship.

Let me now pass on to the subject per se versus rule of reason and just to enumerate the basic categories that are treated as per se unlawful. The core per se offense is horizontal restraints that fix prices, divide markets or restrict output.

This is obviously an area in which it is very important to determine whether you're dealing with a horizontal or a vertical relationship because what is -- probably one of the most common licensing restraints in the intellectual property area, it is territorial restrictive licenses, I license you in North America to practice this technology, but my patents in South America I license to somebody else. There is nothing wrong with that, as long as you're dealing with a vertical restraint.

Now, if you're dealing with a Bement versus Harrow kind of situation where each of those manufacturers were

perfectly capable on their own of competing effectively with each other and you create this pool or a cross license with restrictive territorial terms and I'll take east of the Mississippi and you take west of the Mississippi, then you do have a horizontal restraint, and you're talking about per se unlawful violations.

There are also some per se restraints that are more or less hangovers from an earlier day in antitrust, and one of the virtues of common law tradition in antitrust is that it is largely self-correcting. If you have a stupid idea that is embodied in a bunch of court precedents but not embodied in a statute, it is fairly easy for courts to distinguish them, ignore them or otherwise deal with them.

In fact, in the symposium that Hillary mentioned, one of the authors has contributed an article praising the Federal Circuit for really accomplishing its mission of reforming patent law, making patent law more rational, and I think it's fair to characterize his argument as saying, When the Federal Circuit was being formed, there was all this testimony about forum shopping and about the problems that were created by different circuits imposing different rules for the same conduct and indeed in some cases the same patents.

Well, that was all largely window dressing. If you looked at Judge Markey's testimony before the Congress and

when he talked about irrational decisions that were based on slogans instead of analysis, all of the examples that he pointed to came right from the Supreme Court, and the thrust of this author's argument is that the Federal Circuit has essentially accomplished its mission by ignoring silly positions from the Supreme Court.

And you can accept the argument or not accept the argument, but basically the judge-made law tends to be self-correctable. It's not 100 percent true, and there are things that end up being relics, but by and large the courts and the agencies are trying to make sure that those relics do as little damage as possible.

It is probably the case that the per se rule against vertical minimum price restraints is one of those. Since I no longer work for the Federal Trade Commission, I can say that. I'm sure that there were some former bosses of mine who would be very unhappy and will be very unhappy when they see that I've said this, but I advanced the disclaimer that I speak for no one here but myself, certainly not for former agencies that I worked for nor for any of my partners or clients of Morgan Lewis, but there it is.

There are also per se rules against certain tying arrangements and concerted refusals to deal. Those per se rules still do exist, but they've been moderated over the years by including as an element of the per se offense the

number of rule of reasonish kinds of requirements. I will not say that they've emerged with the rule of reason. I think they have not, maybe should not, but there are a number of elements there that make this quite different from the hard core per se rules.

Okay. Rule of reason, Bill already talked about. It's basically any restraint that meets a very complicated mathematical formula. Rich Gilbert had to put on mathematical formulas on Wednesday, so I've got to as well. Here's mine for the rule of reason.

If the harm to competition outweighs the benefit to competition, you have a rule of reason violation. That formula probably does not reveal a lot of nuances that are packed into words like competition. Remember that the harm has to be to competition. Remember also that all competition is horizontal.

There's really no such thing as a vertical competition. You can have another firm that's in a vertical relationship, that is a potential source of horizontal competition either because it threatens to enter the space of the other firm or because it can sponsor entry into that other space or otherwise is a necessary input into competition in that other space.

But in essence to have a restraint on competition, there has to be some horizontal relationship somewhere, even

when you examine vertical restraints. Again as we said earlier, parties are in a horizontal relationship if there would likely have been competition among them, absent a license, and therefore this notion that the rule of reason will condemn any restraints that do harm or do more harm than they do good is actually a very limited and highly circumscribed notion.

And as a corollary, and just to take an example as we mentioned before, territorial and general restraints are typically lawful because they typically come up in the licensing arrangements that are vertical in nature, and there's nothing particularly wrong with that.

Remember again Professor Gilbert said we don't require firms or patent holders to create competition in their own technology. That's really what we're talking about here, that to the extent that it is the patent holder's technology and the other firms that are restrained could not have competed absent the license, we're really not really asking the patent holder to create more competition.

The other half of the equation is the benefit side of the equation, and the important point to keep in mind here is that preventing free-riding and safeguarding the rewards to investment count as a justification, and this is for tangible property as well as intellectual property.

There's nothing wrong with somebody who is making a

very substantial investment, whether it's R&D investments or building a tangible facility of some kind, to put in place reasonable restraints to ensure the ability to reap the rewards of that investment.

And to give an example, a very mundane example, non-intellectual property example to illustrate that point, I'm going to diagram the Beltone case that the Federal Trade Commission dealt with probably a couple of decades ago by now, and this involved hearing aids. Beltone was a manufacturer of hearing aids.

The way it marketed its product was to put advertisements in publications like Modern Maturity or publications that had the right demographic for their target audience, and those advertisements would have little clip out coupons that you could send in to the manufacturer and saying, yes, I want more information, or telephone numbers that you could call.

And what Beltone would do with all of these sales leads is find out whatever geographic area the customer was in and send those leads to the distributor in those areas that would go and make the sales calls on the sales lead.

Within their agreements with their sales representatives, their distributors, was an exclusive dealing provision that prevented the distributors from dealing with any hearing aid manufacturers other than Beltone, and this

was challenged as an exclusive dealing arrangement because it restrained competition at the distributor level, so the allegation went.

And the Federal Trade Commission looked at that and did a very complete and exhaustive analysis, but one of the bases on which the exclusive dealing arrangement was upheld was that this was simply a way of preventing free riding.

If Beltone goes through all of the expense of placing these advertisements and creating a database and sending the sales leads out to the distributors, and included in the wholesale price of the sales to the distributors is the cost of all of that advertising and so on, and then the distributor takes those sales leads and buys the el cheapo hearing aid from the other firms that are not undertaking those investments and goes to the sales leads and sells the other manufacturer's sales leads, this whole distribution system would collapse. So this exclusive dealing was a way of protecting the investments and preventing free riding.

Well, you see this all the time in the intellectual property area. Where there are restraints, as you'll see when we go through individual restraints, many restraints are there in order to prevent free-riding on the patent holder's investment in developing the patent in the first place.

That's essentially why we have a patent system to promote the progress of science and useful arts.

Just a quick introduction and review of the general principle of the 1995 guidelines, and I think you heard these on Wednesday. For antitrust purposes, intellectual property is comparable to other kinds of property.

Well, what does that mean? Well, it's for antitrust purposes. We're not saying that intellectual property is not different in any respect from other kinds of property, but antitrust can take those into account, and we'll go over some of those differences in a moment.

Second, this whole idea of a patent monopoly has nothing to do with antitrust. The fact that you have a patent doesn't mean you have a monopoly. You might have a monopoly if there are no adequate substitutes to your product, but the mere possession of a patent doesn't give you monopoly.

And finally intellectual property licensing is generally pro-competitive because it allows firms to combine complementary products.

What does it mean, intellectual property is for antitrust purposes like other forms of property? Well, it doesn't mean there are no differences. Certainly intellectual property is easier to misappropriate. If you build a factory, you can put locks on the doors. You can

build a fence around your factory. You can hire security guards. You're not totally reliant on the law against trespass. In the case of intangible product, in particular the intellectual property, you really are reliant on the power of the state to enforce your rights.

Another difference is high fixed cost, near zero marginal costs. It's very expensive to invent and to develop and to make them into useful inventions. Once the invention is invented, it is very easy to copy. The marginal costs may be zero.

This is not unique to intellectual property. There are certainly investments that involve very large up-front investments, and the marginal costs are very low, and you can think of the cost of wiring up every home for telephone service, for example. You can have X minutes of usage and you may have very low marginal cost, but the initial investment could be very substantial, but it is certainly characteristic of that.

And finally, intellectual property often requires many complementary inputs to produce a product, and as you'll see, when we look at specific restraints, that can have consequences, when people talk about the effects of patent thickets and so on, where the complementary inputs are many, many different patents in the hands of many, many different owners and some of the implications of that.

I suppose implicit in the ones that I've listed is maybe a fourth difference, which is that the boundaries of the intellectual property are often a lot harder to discern, and in the case of real property, you've got surveyors, and they lay it out, and they put boundary markers, and those are observable things that don't often end up in innovation.

In the case of intellectual property, you may not know the boundaries of that property until after some very expensive litigation, and that also has some consequences. But I think that the fundamental position of the guidelines is that those differences can be taken into account by ordinary antitrust principles, and maybe that is because the antitrust principles are themselves open-ended and so economically oriented and based on a rule of reason.

On that last point, the notion that you don't need a fundamental alteration of antitrust principles, you can treat antitrust like other forms of property. You don't need an exemption or immunity for intellectual property. You don't need a sheet in a bedroom dividing the siblings.

Let me note that that's my view. It's the view of the guidelines. If you're counseling in this area, unfortunately you can't count on the courts necessarily adopting all of the principals of the guidelines, although there is a lot of confusion in this area.

As an example, let me put up here some victims from a

case called Townshend v. Rockwell in the Northern District of California, less than two years ago. The principle enunciated in Townshend v. Rockwell is "because the patent owner has the legal right to refuse to license his or her patent on any terms, the existence of a predicate condition to a license agreement cannot state an antitrust violation."

So I can refuse to license altogether, and therefore I can impose any condition as a condition to that license, and that condition must necessarily itself be lawful. This is a kind of antitrust immunity for a patent license, and let me suggest to you that that statement, as superficially plausible as it might seem, is simply wrong.

And I think probably the best answer to that proposition was given by the late Bill Baxter, who was really a giant in the antitrust field. He was President Reagan's first chief antitrust enforcer. He was a professor at Stanford, authored a number of seminal articles, and was a leading proponent of the Chicago School that rationalized antitrust and pared back some of the earlier excesses that we talked about.

And in 1966, the original article, then Professor Baxter had this immortal sentence: "A promise by the licensee to murder the patentee's mother-in-law is as much 'within the patent monopoly' as is the sum of $50, and it is not the patent laws which tell us that the former agreement

is unenforceable and subjects the parties to criminal sanctions."

The mere notion that the patentee can withhold a license all together doesn't absolve you from looking at the nature of agreements that the patent holders enter in to with other parties.

Let me turn now to specific types of restraints, and we'll start with this one, the Nine No-Nos. Normally I would put on the top Nine No-Nos, because I'm a firm believer in the principle that the fewer words on Power Point slides the are better.

However, these slides will probably get posted on the web. I'm certainly willing to Email them to anyone who wants a copy and sends me their Email address, and these things take on a life of their own, and I thought it important to retitle this slide a little bit, lest there be any confusion.

What are the Nine No-Nos? Let me list them quickly, and we'll examine them quickly, and them we'll examine them in detail through modern times.

Tying of unpatented supplies; mandatory grantbacks; post-sale restrictions on resale by purchasers of patented products; tie outs; licensee veto power over the licensor's grant of further licenses; mandatory package licensing; royalties not reasonably related to sales; restrictions on

sales of unpatented products made by a patented process; and resale price agreements. Don't write these down. They'll only confuse you.

Okay. Tying of unpatented supplies, what's that all about? Well, remember this notion of the patent doesn't give the patentee rights that go beyond the scope of the patent monopoly? And anything that goes beyond the scope of the patent monopoly must be a violation of the antitrust laws in addition to being a patent excuse and therefore unenforceable.

I think that misguided notion is probably what gave rise to the notion that tying of unpatented supplies must be an antitrust violation because if I say to you, You may license my patent or you may buy my patented product but only on the condition that you buy something necessary to use that machine, if it's a machine, from me, let's say IBM requiring punch cards to be bought from IBM, Xerox requiring copier paper to be bought from Xerox.

Well, clearly that must go beyond the scope of the patent monopoly, because Xerox has no patent on paper and IBM has no patent on cards, maybe they did, but let's assume they didn't, and therefore this is a misuse of your patent because you're trying to gain control of something that goes beyond the scope of the patent monopoly.

The surgeon general's warning here again: courts may

still do this. You've got to look at the case law. If you're counseling, you have to look at some of the pitfalls, but how should we look at this issue? Well, tying of unpatented supplies is usually a way of metering the usage of the product, right? Somebody who buys a lot of copier paper is probably using that machine a lot more than somebody who buys only a little bit of copier paper.

Now, those of you who are old enough to remember will remember Xerox didn't have to do this because in the old days, they had a lease-only policy, and when you made a copy, there was a little counter that counted how many copies you made. How much you paid depended on how many copies you made directly, so you didn't need to paper to meter. You could use meters to meter.

But why would you want a meter? Well, because, remember again Professor Gilbert put on the demands curve and said under the 1988 guidelines and the 1995 guidelines, the patent owner should have the right to everything they loan the value of this intellectual property.

Well, if you could only charge one price -- which I've marked here at this corner, right? If you can only charge one price and you will charge the -- I'm sorry, wrong corner. This corner, okay? This is demand. This is marginal revenue, right?

I don't have marginal cost on this because since we

get into intellectual property, I'm presuming it to be zero, right? So you look at where marginal revenue intersects with marginal cost. You get the quantity you should sell. There's your profit maximizing price, P, and what you earn at that profit maximizing price is everything below the dashed line, and that's your return on your intellectual property.

You're giving up quite a bit that's under the line. How do you solve that problem? Well, if you could keep selling to these guys Q, all of the people who are currently buying quantity Q -- if you could keep selling to them at price P, but you could sell to some additional buyers marked here as Q prime at a lower price, P prime, what do you gain? Well, you gain all of the area marked A, right, this little rectangle here.

So the result of this is you get to capture more of the rent from your ownership of the intellectual property or to put it another way, more of an reward for inventing the property in the first place, so generally speaking in the intellectual property area price discrimination is a pretty good thing, and tying of unpatented supplies as typically being price discrimination is not a bad thing either. Well, I think perhaps someday the law will say that explicitly. I think we're pretty close to that now.

By the way, anyone who wants a little more detail on this subject, I have another article on the Xerox case that I

have not put out on the table up front today because I don't have reprints of it and of course I certainly do not want to infringe the copyright of the American Bar Association, so again send me your contact information. When I do get reprints I can -- I'll be happy to send you a copy.

Okay. The next No-No is grantbacks.

A grantback as you all know since this is an IP audience is licensing on the condition that the licensee will license assign back or otherwise convey rights to any improvements if the licensee. What are the implications of that?

Well, the fundamental question that we have to ask here is what are the effects on the incentives to innovation? And they're somewhat mixed. The licensee who, let's say, in the strongest possible situations is subject to a requirement that it assign back any proven patents with no rights on the part of the licensee even to use the improvement will have a greatly diminished incentive to continue to innovate and make additional improvements to the original patent.

On the other hand, in the typical situation, the the licensor will not grant the license in the first place if it views itself as merely creating competition for itself down the road, and maybe being blocked out of the market entirely by a new and better product invented by the licensee.

So typically grantbacks are permissible in some form

at least in order to facilitate the licensing transaction in the first place, but the courts have wrestled with this: exclusive or non-exclusive; does the licensee retain rights to practice the patent; what are the royalty terms and so on and so forth.

And I think the guidelines contain the statement that non-exclusive grantbacks are less likely to raise problems than exclusive grantbacks, but exclusive grantbacks are not necessarily unlawful either.

I do want to put on an example of a grantback situation that could cause problems and would likely attract antitrust enforcement attention. We're back to a policy situation again. This is again a real case. It's the Justice Department's case against the automobile manufacturers back in the 1970s and a somewhat stylized representation of the facts.

All the major automobile manufacturers got together in a pool with respect to pollution control devices, and they contributed all of their patents in the pollution control area and set up as one of the conditions of the pool the requirement that any future inventions by any individual

manufacturer also be contributed to the pool on a royalty-free basis and effectively licensed royalty- free to all pool.

What's the problem with that? Well, the problem with that is if you know in advance that you cannot earn any return on your patent, what's the incentive to invent in the first place? If you've got to share with the entire industry any patents that you get, why patent? Why research?

It's fundamental to the idea in the patent system that there be a reward for new and useful compositions, machines, and so on, and therefore the effect of that requirement in the pool was to bring to a grinding halt further progress in pollution control devices in the automobile sector because no company could get a competitive advantage from any further breakthroughs in that area, so that was challenged and a consent decree resulted.

Somewhat, in fact substantially, more controversial application of a similar principle, and I am reminded whenever I discuss the Intel case of a panel I was on with Judge Rader not very long ago in which we had a little conversation before the panel, and Judge Rader said, You know, I am also an academic, I teach on an adjunct basis, and one of my favorite things to do as a professor is to deal with one of my own decisions as a judge, and by the end of it, the students are generally convinced that whatever judge

issued that opinion has to be the craziest old fool that there is.

So in the spirit of Judge Rader, I talk about the FTC because it is admittedly a somewhat complicated set of facts, but here's how it relates to the previous document.

Intel, as you know, dominant manufacturer of microprocessors. At the time of the case -- I'm going to simplify it a little bit just in the interest of time. Principal competitor in the microprocessor space was Digital Equipment Company which had the Alpha Microprocessor, much faster than the existing -- its own microprocessors.

Intel comes out with a new generation of microprocessors that doesn't completely close the speed gap with the Alpha Processor, but partly closes the performance gap, and in combination with the compatibility advantage Intel has, a lot of users want to use Intel microprocessors because of the desire to be compatible with other users of microprocessors, the combination of having a smaller performance disadvantage and a network effects made it virtually impossible for Digital to emerge as a significant competitor to Intel, or so the theory goes.

Digital, having examined Intel's new multiprocessors and having concluded that this performance gap was closed by Intel infringing a number of Digital's patents, brought suit. What was Intel's response? Well, they filed some

counterclaims certainly. Nothing wrong with that. That's the way the patent system is supposed to work.

But it also did something else. Digital happened also to have about a $2 billion personal computer business. Personal computers don't use alpha chips. Even Digital's personal computers didn't use alpha chips. Only servers and work stations used alpha chips. They used Intel chips because personal computers run Microsoft with those and that sort of thing, and it was written in the microprocessor and so on.

So this $2 billion personal computer business was entirely dependent on a supply of microprocessors from Intel. Intel's response to being sued was, Well, we will continue to order your purchase orders; by the way, as everyone knows, we don't have any long-term contracts, we sell on a purchase order, and we're not telling what will be next, and also, by the way, you as a personal computer manufacturer have all of these instruction manuals, if you will, manuals that tell you what signals come out of what pins, under what conditions, stuff that you need to build a personal computer around this microprocessor. Guess what, those are our trade secrets, you have them on your license, give them back and you're not getting any more.

The result of this is everyone else gets this trade secret know-how. All the other personal computer

manufacturers get this trade secret know-how essentially for free, built into the price for which they're paying microprocessor. For Digital the price is to $2 billion, and their entire PC business is hostage to the ability to get continued flow of the conditions and a continued flow of microprocessors, and these are all in the FTC's allegations, and hotly disputed facts and so on and so forth.

So what was the FTC's theory here? Well, it was essentially what we saw in the previous diagram, which was if Intel can prevent Digital from getting a return on its patents, if it can essentially impose a privately sponsored compulsory licensing regime on its competitors in the microprocessing field, then threats to Intel's dominance dry up, and therefore it succeeds in maintaining its monopoly position by virtue of essentially eliminating the patent system for everybody else.

And so the FTC viewed itself in perhaps what others might find the odd position of championing the rights of the patent holder to obtain a return on its patent, and Intel's defense, perhaps uncharacteristically, was the patent system in this particular market causes some real problems, that patents are critically important in pharmaceuticals. They're critically important in chemicals. We heard this from Professor Levin the other day. But in semiconductors, you don't have one patent, one product.

You have one product, a thousand patents, ten thousand patents, all right, and the cost of individual licensing transactions with each of those patent holders could be enormous, and the risk that you could get held up by any one of those patent holders is also enormous.

And so there's Intel out there succeeding in the marketplace with a great product and so on, and I didn't put it in the previous diagram, but there were similar episodes alleged, not just with respect to Digital but with respect to a couple of other companies, Intergraph and Compaq, here's Intergraph which had exited the microprocessor business, and its suing Intel for a significant proportion of the revenues from Intel's microprocessor business.

This is a problem, and FTC, you may think you're in there defending the patent system and the rights of the patentees, but indeed, you are simply making worse the problem of the patent thicket or what they also called -- what a number of scholars have called the strategy of the anti-commons.

And I don't know if any of you have ever looked into environmental economics at all, but there's the famous tragedy of the commons in which if nobody has property rights to the field in which the cattle graze, and everyone who owns cattle feels a right to let their cattle loose on this product land, eventually it gets overgrazed, and all the grass dies, and this i

used as an illustration of the importance of property rights.

Well, here the strategy of anti-commons is the danger of the proliferation of patent rights, and in this case it is not the antitrust enforcers singing that song, but it was Respondent.

To sum up where we are on grantbacks, I think these are pretty good rules of thumb. The grantbacks typically pose problems when they significantly reduce the incentives to innovate of those who could innovate absent the pool.

Grantbacks ought to pose no problems where the licensee grantor could not innovate or sponsor innovation absent a licensee from licensor grantee, so we're back to that theme of what's horizontal and what's vertical.

Post-sale restrictions on resale, I'm going to go through these fairly quickly in the interest to time. Involved here is the first sale of doctrine. Lawyers are more aware of that than antitrust lawyers.

By and large, this whole notion of the for sale doctrine is pretty uninteresting to U.S. antitrust authorities, so I won't speak for the technology transfer block exemption in Europe or for other parts of the world, but the for sale

doctrine is more of that business about what's within the scope of the patent monopoly and what's outside the scope of the patent monopoly, and it doesn't really tell you.

What's a post-sale a piece on resale but a piece of price discrimination, and therefore ought to be -- I'm not saying it is, but it ought to be regarded fairly benignly by modern antitrust.

So if you're counseling or if you end up in court in a private suit, you have to worry about what the courts will do, but generally speaking, the case law does allow the use of a patent to be licensed separately from manufacture and sale of the patented product, and therefore separate royalties to be charged, which is the result the antitrust enforcers would reach through the price discrimination route. The courts reach the same result in this limited context.

If you're outside that context, you may have to worry about the courts. Maybe you can get the agencies to file an amicus brief on your behalf.

Tie-outs: It's really exclusive dealing, licensing or selling on the condition that the licensee or purchaser not deal in the products or services of another. Typically, as I say, it's exclusive dealing. Example of where exclusive dealing can raise a problem, the first Microsoft case was like this.

The allegation was that Microsoft licensed to computer manufacturers companies, like Compaq and Dell and Gateway and so on, on the condition that they pay royalties for every box sold, regardless of whether Microsoft's operating system was in that computer or not.

At the time there were competing operating systems, like DR-DOS, which Novella, OS-2 which IBM owned, and the fear of the Justice Department was the effect of the licensing agreement was a kind of exclusive dealing. The manufacturers had to have Microsoft's product because it was so widely accepted, and there were network kinds of things there, so some of their product had to have a Microsoft operating system. The license terms in effect required these computer manufacturers to use Microsoft for all of its computers because they would have to pay Microsoft one way or another.

The effect was to exclude the competing operating systems, the DR-DOS and OS-2, again back to the theme of horizontal versus vertical. These are vertical restraints between Microsoft and Compaq and Microsoft and Dell, but the competition that the antitrust people are worried about was horizontal competition between Microsoft on one hand and the DR-DOS and OS-2 on the other.

You see the same thing in Microsoft II, and we will get into that after the break, so I won't dwell on that.

A licensee veto power. Well, what the heck is that?

This is really -- you're really talking about exclusively licensing in a way. The only difference is that -- I don't know if there is a difference. I guess the only difference is rather than the licensee up-front saying, I want an exclusive license, the licensee is saying, Well, you can license other people, but I want to approve it first.

As we know, exclusive licensing is extremely common. Antitrust lawyers don't generally have a lot of problems with it, except in rare cases where applying a merger analysis to the exclusive licenses will get you a merger that would be condemned by the merger persons, and we'll talk about mergers after the break.

Mandatory package licensing, this is really just a form of tying arrangement. You can have licenses to patents A, B and C only if you take a license to patent D, E and F as well, and as I alluded to, there are a lot of requirements before you condemn a licensing arrangement.

Among them, separate products, coercion, market power, and an effect on commerce, and if there are questions later or if anyone wants me to go into them now, I'll be happy to, but suffice it to say that a lot of packaged licensing is not particularly problematic.

Royalty not reasonably related to sales, here we're talking about metering again. You can have situations in which the royalties are based on all products sold, whether or not that product

practices the licensed patent. Now, there are cases where that causes problems as in the Microsoft case, but in many other cases, it would be nothing other than if one would meter.

The courts have had some trouble with this one because again it seems to violate the principle of staying within the scope of the patent monopoly, and you have the Zenith versus Hazelton case and the Supreme Court saying that royalties that are based on products that don't use the teaching of the patent are problematic, except in those cases where they are mutually agreed to for the convenience of the parties, but if a patentee imposes this requirement on a licensee, that's bad, again because it seems to extract a royalty on something that's not patented.

And in the case of Brulotte, the Supreme Court also condemned post-expiration royalties and royalties based on sales of the product after the patent expires.

From my vantage point at least, it's hard to see why this is particularly a problem, and whatever power the patent confers at the time of the license is being entered into, which is of course a time when patent is still valid, is essentially a fixed amount, and whether you extract them today or you postpone them until tomorrow shouldn't particularly make a difference to antitrust authorities, but

this particular rule I think is going to be with us for some time to come, whether I happen to think it's a good idea or not, and so you've got to counsel your clients accordingly, but there it is.

Okay. Microsoft I, we already talked about. There is a case in which it did cause a problem.

All right. Sales of unpatented products made by a patented process. To modernize, we ought to look at, again, what, if any, competition is being restrained. Are we really doing with horizontal restraint here? The exception again the guideline paper has this, it's there.

In the case of resale price maintenance, you still have problems if you try to restrict, for example, set the price of a product made by a patented process, and we'll see that in the final note when we get to resale price maintenance, which is in fact where we are.

Resale price maintenance, this is a somewhat odd one and is probably caused by the fact that resale price maintenance is a somewhat odd per se rule in the first place.

In the United States versus General Electric in 1926, the court held that it is perfectly okay for a patentee, in licensing to a manufacturer, that they will then take that product and commercialize it, to set the price at which that manufacturer can sell.

So a patent exception to the antitrust rule against resale price maintenance, and since -- if I've made anything clear, it's probably that I think that patent exceptions to the antitrust laws aren't necessary. You can guess that I'm not terribly happy with this state of affairs, but because of the per se rule against resale price maintenance, maybe this one is necessary.

So that's a rule. I think the agencies are generally sympathetic to General Electric. If you read the '95 IP guidelines, the message of the agencies was essentially, Look, this is a new body of law governed by some case law. The Supreme Court has made it a fairly arcane and technical body of case law, and we're just not going to touch it, period.

So General Electric is fine, and the exceptions that the courts have engrafted on to General Electric and that almost entirely swallow up General Electric are also fine, and here they are: Multiple licenses with parallel price restrictions, okay?

If I, as the licensor, say, I'm going to have 12 manufacturers all practicing in this patent, not exclusively, they're going to compete with each other, I think competition is good for me as a licensor, and I'll collect licenses from all of them, but I don't want them to sell below a certain price.

The court says, Can't do that. Unpatented products of patent processes, as I said before, can't do that one either.

Resale prices, it's fine for the licensor to set the price at which the licensee will sell. Once those products have passed into the stream of commerce, those -- the prices of those products can no longer be set by the licensor. The resale prices are not something that General Electric handles.

Agreements with other licensees or patentees, so there's other licensees agreeing with each other. The licensor agreeing with other patentees, those are there, so a fairly intact legal body, and of the statute but there we are.

Probably the last of the Nine No-Nos to survive as a real reason for rule is you just got to follow them kind of through.

MS. NANCY LINCK: Will, it looks like you turn an awful lot on what form your patent claim's in. Is that true? I mean, what if I throw in a product made by the process, whereas the process is really -- we don't talk about heart of intervention anymore. We don't talk about heart of invention anymore, so oftentimes you can take something that go patents, a unit, and then you'll also patent something that the unit is in, and then maybe something even bigger than the

unit is in.

How do the courts deal with that or don't deal with that?

MR. TOM: In the resale price arena?

MS. NANCY LINCK: In determining whether you're trying to get a royalty on an unpatented product?

MR. TOM: Well, this is probably why I find so much of that old case law unsatisfactory. What the antitrust enforcements would say today is whatever the claims are, each of those claims is a piece of property, and there's a right to exclude associated from that piece of property, and we take the property rights as different.

What we condemn are situations where you're restraining competition that would exist, notwithstanding that right to exclude, so if somebody else has another product that doesn't infringe any of those claims and you reach an agreement that restrains competition between you, that's bad, but the whole argument over what's within the patent scope and what falls without the patent scope is just -- it gets almost metaphysical.

It's not connected to any economic principles or antitrust principles, and generally speaking I think the antitrust enforcers will try to stay as far away from that as possible and simply accept the claims as given, with maybe a little bit of an exception that I'll talk about in the patent

settlement context, playing off of the issue of the boundaries or validity of patents.

How did courts deal with it in the areas where they still apply this notion of where there is this is a sale and a resale and is it the product of patent processes or is it a patent product and all of those kinds of things?

It's not entirely clear from the case law, but I guess if I were a patent holder, I would take comfort from the fact that most of those cases are now going to end up in the Federal Circuit, which is becoming one of the nation's leading antitrust courts for better or worse, and when in doubt, the patent holder will get the benefit of the doubt.

So in antitrust issues, I think if you look at the record of the Federal Circuit in patent issues, there's a lot of stuff that's of value, but sometimes the patent bar isn't terribly happy at what the court is doing, but in the antitrust area, very, very broad berth is being given to the patentees in some respects unfortunately so in terms of kind of language and analysis they're using, we'll get to that later. Okay. Patent settlements.

MS. GREENE: Will, would this be a good time to take a break?

MR. TOM: That probably would be a good idea. Why don't we take a break, and we'll come back and do this.

MS. GREENE: Ten minutes.

(Whereupon, a brief recess was taken.)

MR. TOM: We've only got a little more to go on agreements and what the restraint of trade will do, a segment on monopolization, the Sherman Act which Bill will do and a very brief, maybe ten minute session, on mergers at the end.

We'll try to get you close to the scheduled finishing time. I've been asked to ask people to hold questions until the end so that -- I'm willing to stay as long as we need to answer questions, but that way we'll get through the whole thing for people who do have to leave.

All right. Patent settlements. The issues here are really similar to pooling and cross-licensing. That is, we're talking here about either explicitly actual horizontal restraints or restraints that appear like horizontal restraints and that the courts can easily mistake for horizontal restraints.

And I'm just going to take the pharmaceutical patent settlements as an example because there have been a bunch of those cases, including a trial that may be going on in this very building today, but I'm not trying to single out the pharmaceutical industry here or anything. Settlements often take the form of pooling and cross licensing and mergers so it's not surprising that they share issues in common.

Here's the pharmaceutical situation. You start out with the guy up there labeled patentee. This is a pioneer drug company which invests hundreds of millions of dollars in order to produce new products. They make new breakthroughs that help cure or ameliorate human disease.

It may make those hundreds of millions of dollars of investments and end up with, quoting another industry, call it a dry hole. Maybe about one in ten products ever make it to commercialization, and most of the R&D efforts are being essentially down the drain.

But if you do hit it, if you come up with that blockbuster drug that really makes an advance in ameliorating suffering, you get pretty handsomely rewarded for it. The margins on the successful blockbuster drugs are enormous.

You often hear somewhat loose talk, particularly in political settings, about the cost of producing this drug as only ten cents a tablet, and why is the manufacturer charging $25 a tablet for it, and the answer of course is this is all the reward that incentivises the investment in R&D in the first place.

So as a result for this very successful drug where I have drawn a very fat arrow with a dollar sign in it

representing not necessarily patients, the payers are paying to the patentee for that drug, and whether it's hospitals or insurance companies, managed care organizations or whatever, or individual patients. They're paying a lot of money to the pioneer drug company while the patent is in force.

Now, eventually, this is part of the bargain in our patent system, eventually that patent expires. And even in the pharmaceutical industry, the equation of one product and one patent is a vast oversimplification, and it may be that the patent on the chemical entity expires, but then the main patents on particular dosage firms, methods of delivery and so on and so forth.

So there can be arguments over exactly when the relevant patents expire, and there is competition in the marketplace from generic drug companies, but let's assume that all the relevant patents expire and a generic company comes into the market.

What happens to the size of that dollar sign arrow? Well, even more so than in most industries, in the pharmaceutical industry, it shrinks dramatically because you've got state substitution laws and managed care organizations and so on that are really forcing the move to the generic product.

So what happens when the generic company comes on? The arrow gets really skinny. What might one do with the

difference between the fat arrow and the skinny arrow?

Well, we're talking hundreds and millions of dollars here that the pioneer company is losing when the generic company comes on to the market. Forestalling that eventuality by a year, a month, a week, even a day can be significant, and notice something else, the size of the arrow going to the generic company is also very skinny because the generic company, while it may take tremendous volume from the pioneer company, is charging a much lower price than that generic company was charging. So if you summed the size of those arrows up, it would be only a fraction of the big fat arrow that the patentee was getting in the first slide.

Well, what does that suggest? Well, one thing it might suggest to a sufficiently inventive couple of companies is if you could increase the flow of money of the generic company from the patentee itself. You can restore for the patentee the pre-expiration situation and get back the rents that you're otherwise getting, and this is particularly so because for the first 180 days under the Hatch Waxman Act, there's only one generic that can come out.

So this is the diabolical view of what can happen in these cases, and I am sorry to say that in the two district court cases that have been rendered so far in private suits, that's pretty much where the analysis ends. What is this in the view of the Eastern District of Maryland and the Southern

District of Florida, this is nothing but a per se unlawful market division in which two companies are getting together and agreeing that in exchange for a payment, one of them is going to stay off the market.

So far I don't think the FTC has ever gotten that far. If you've looked at some of their public statements, speeches of Commissioners, the statement that was released in connection with the Price Standards Consent Order, they recognize some of the complications that are present in this area.

Why are those complications? Well, I talked earlier about the fact that intellectual property is different from tangible property in some respects and that when the guidelines say that for antitrust purposes, they will be treated the same as tangible properties, that only means that antitrust principles are sufficiently flexible to deal with the differences.

And what's the key difference in this area? Well, it is that the property rights are not as clear-cut, and they're not as certain. They may have to go through a litigation before you determine whether there's a property right there or not.

And in a particular pharmaceutical patent situation, these disputes arise out of the litigation in which the patentee is saying, I still have valid patents in this area

that block out any generics when a generic company is saying, No, I certified to the FDA that my product is not -- either my product does not infringe any of the patents that the pioneer company claims covers this area, or that those patents are invalid, and you've got a litigation, and the arrangement between the two companies comes about as a result of the litigation.

So the question which is being litigated or continues to litigated, we're going to see interesting variations on the subject, are how do you deal with uncertainty. Does the FTC have to conduct a patent trial in order to determine whether there would have been competition absent the license, or is there some other way to resolve it?

Is there some kind of truncated rule of reason? Can we say that this agreement has anti-competitive effects without offsetting appropriate benefits, without saying that these are marketing issues.

But one thing that should be clear is that you ought not stop the analysis of whether this is a horizontal market division because as long as there's uncertainty on the subject, the analysis is not all that simple.

And on Wednesday you saw Professor Gilbert put up a formula that suggests dealing with this in terms of probabilities and expected values and so on, and I think that may be helpful where there are a large number of patents, the

validity of which is independent of each other.

You can fairly quickly, as he showed say, Well, this is not of antitrust concern because the chances of this becoming an issue in this area were nil to start with. Where you're dealing with a relatively small number of patents or if validity of all of them stands or falls on the same issue, then that is fairly far, and you're still left with the question, How do you determine whether there's horizontal competition in here that's being restrained here in the presence of uncertainty.

And to revert to my Judge Rader mode for a moment, you can study those 1995 guidelines in great detail and the guidelines are wonderful, and they state very sensible, very enlightened principles that are all true, let's say in the spirit of hyperbole, but they don't say anything about uncertainty.

If you knew there would have been competition absent the license, the guidelines give you the answer. If you knew there would have been no competition absent the license, the guidelines give you the answer. In the real world, which is 90 percent of the cases where you don't know, the guidelines are only a bare starting point, and I think all we have to say on that subject this morning has been said.

Bill?

MR. KOVACIC: I want to turn to the set of doctrines

that applied when the principal actor is what might be called or might be accused of being the dominant firm, and here we're going to look in relatively quick order at a set of doctrines that govern what antitrust specialists call monopolization or attempted monopolization.

And by way of taking this tour, I want to again acquaint you with the statutory framework that governs claims in this area, a couple of quick words about historical trends and the application of the relevant antitrust statutes, and then to look at three principal operative concepts that determine the implementation of this scheme, the definition of relevant markets and the measurement of market power, the ingredient of improper conduct, and just a little bit of the formulation of remedies.

The statutory framework basically is grounded in Section 2 of the Sherman Act, and Section 2 of the Sherman Act encompasses three offenses, but two of them that are principally important for us today, the offenses of monopolization and attempted monopolization.

The monopolization offense requires a showing of monopoly power defined in various ways in both the legal and economic literature. For antitrust purposes, what we're mainly concerned about is the ability of the producer of a product to raise prices substantially above the hypothesized competitive level without suffering an immediate, substantial

loss of sales. That's how antitrust economists and lawyers today define monopoly power.

But a vital concern in the antitrust system is that the antitrust laws do not attack the mere status of monopoly power, that as you could imagine a competition policy system that stopped the inquiry after point one and took specific measures to dissolve existing aggregations of monopoly power.

By its own terms, the U.S. antitrust system doesn't do that, and you can imagine why, for the same reason that the system of intellectual property laws encourages innovation and in many ways hold out a significant prize for innovation, a prize in the form of the possibility of gaining super-competitive returns.

Why else do many inventors get up early in the morning, except to achieve that possibility? So too does the competition policy system realize that if you attacked the status of monopoly power, however lawfully attained, you would diminish incentives to innovate.

The second ingredient is what's called the conduct requirement. The plaintiff must show that the monopoly power in question was either obtained improperly or maintained improperly, and as you might imagine, great disputes focus on both of those requirements, does in fact the defendant have monopoly power and what is the definition of improper

exclusion.

The second offense, the attempted monopolization offense, basically attempts to create a zone of concern or scrutiny before that accomplishment of actual monopoly power, and here there are three requirements. There has to be a specific intent to monopolize, improper conduct once again and the improper intent can be inferred from demonstrably bad conduct, and last there has to be a showing that the defendant has achieved a dangerous probability of attaining monopoly power, and it is these two offenses that really provide the core of controls on dominant firm behavior in the United States.

You can break the U.S. experience in dealing with Section 2 claims, especially government enforcement of them, into four periods. To go back to the first period, 1890 to 1914, that features the formative well-known cases that lead to the break up of the Standard Oil Company, American Tobacco and a number of other early leading figures in American enterprise.

The second major period ones from 1938 to 1956, beginning with a case called Alcoa that we'll talk a bit about more, and the development from Alcoa of a reinvigoration of Section 2 enforcement. I choose 1956 because that's the year in which the government achieves settlement of a monopolization claim with AT&T, a settlement

that is revisited in 1982, and ultimately becomes the foundation for the so-called modified final judgment by which AT&T's restructured in 1984.

1969 to '82 is a period of unparalleled government enforcement effort, including well-known cases involving IBM, AT&T, the petroleum industry, the cereal industry in the United States, the Xerox case that Will mentioned before, for the most part a spectacular dedication of resources with relatively few successes. Again I put the AT&T case in the success basket as most observers would.

The other cases raise fundamental questions about whether the doctrines governing intervention were sensible and raised perhaps even more fundamentally questions about the capacity of government enforcement agencies and courts to do that.

IBM is often held out as the most striking example begun in the last days of President Johnson's presidency in 1969 and concluded in January of 1982, 13-year-long case. What Bob Morkin referred to as the antitrust division's Vietnam, a metaphor chosen both to reflect the amount of effort devoted to the undertaking as well as the failure at the end to accomplish success.

IBM, I think fortunately for the FTC, overshadows some of the FTC's own experience, most notably In Re: Exxon, which was the effort to restructure the eight leading petroleum

refiners in the United States. Case began in 1973 and was ended in 1981. There were eight years of pretrial discovery, costing tens of millions of dollars, both certainly to the private parties and to the FTC. Case never went to trial.

This story isn't picked up again until the mid 90s with the renewed interest in Section 2 government enforcement, which includes the Intel case that Will mentioned as well as U.S. versus Microsoft and a number of other cases, perhaps commanding a bit less attention but also renewing the government's interest in enforcement in this field.

Talk a bit about the first requirement, the market power requirement, and I'm using the terms market power and monopoly power interchangeably here. The antitrust system relies upon and entertains essentially two approaches to proving market power. One might called direct evidence, the other circumstantial.

The direct evidence methods of measurement would include first and foremost directly measured demand elasticities to directly measure the intensity of user preferences and to use that direct measurement as a way of identifying the extent to which consumers react or perhaps more accurately do not react in the face of a relative increase in prices.

Ideally, technically that's how economists would go about doing this, and today, with better and better econometric models, with better data in some areas and with better applied techniques inputting the two together, it is possible in some instances to creep up on relatively good answers simply using these kinds of fairly high tech, fancy economic models to directly measure market power, and the two enforcement agencies use these methodologies to an increasing degree in formulating divisions to prosecute merger cases.

Other forms of direct evidence include proof of actual price effects or actual exclusion, and the last item that I put there with two question marks just by way of emphasis to underscore something we've been saying today, Do you infer or presume market power from the holding of intellectual property rights?

Certainly the resounding answer from antitrust commentators and observers is, no. The answer that intellectual property guidelines give in 1995 is no. Do you still see a stray comment in the occasional antitrust opinion that says, Yes, there may be the proxy of that patent monopolies as being monopolies in the technical antitrust sense. Yes, you can find them here and there, but such references are increasingly rare.

The other method, and in a sense the more traditional method, is what I call circumstantial evidence, and that is

to define a relative market for the products in question and to measure the market shares of the defendant in that relevant market.

Why is this circumstantial evidence? Well, it's a proxy and the intuition behind the proxy is this: If a firm acquires and maintains an inordinately high market share of activity in a given market over a long enough period of time, protected by barriers to entry into the market, you can infer that they have power over price or power to exclude rivals. If you show that, then you can infer that you've actually observed the operation of a monopoly over time.

Other forms of circumstantial proof the courts have looked at include profitability data or price cost ratios. To take an example of these concepts in work in the U.S. v the Microsoft case, the district court used and the court of appeals entirely endorsed the use of both methodologies. That is Judge Jackson's opinion from the district court with the subsequent approval of the court of appeals, came at the market power problems both directions, looked at direct evidence.

And in particular the court of appeals fastened upon Microsoft's suggestion at trial that Microsoft set its price for software without regard to its competitors. In the D.C. Circuit opinion, the Procarian (phonetic) opinion issued last summer, said, Firms in competitive markets don't set prices

like that. They don't simply say, We don't care what competitors are charging, here's our price, we don't think about it. The court said, That's a form of direct evidence.

Circumstantial evidence, the court said, Let's look at the market shares and concluded that looking at the market characteristics as a whole, the market shares were a reliable proxy for market power as well.

Court of appeals, in other words, came at this problem, as did the district court, from both directions and found that the results were the same in each instance.

To perform the market definition, market power analysis, one has to define what we call a relevant market. This is the arena of commercial activity in which competitive effects are measured, and it has two dimensions. One is to look at the product in question.

The principal basis for evaluating what the relevant product market is is to focus on what consumers regard as adequate substitutes for the product. To take the Microsoft example again, from a demand side prospective, for personal computer operating systems, the district court and the court of appeals asked, Well, what else is there, and yes, it considered each of Microsoft's arguments about alternatives, and said, Well, maybe the PC is in the markets, it's a small, decentralized, hand held devices, and said, Well, maybe it's not just the Windows operating system, maybe it's Alcoa.

Maybe it's any number of other nascent competitive possibilities in these areas.

But the court relied very heavily on the cross examination of Microsoft's expert, a distinguished economist in the field, who said, Microsoft faces constraints from all of these directions, small hand-held devices, other operating systems, and that large market share that Microsoft has, that's an illusion because if it stops running for so much of a second, the rest of the world simply is going to blow by it so Microsoft, despite a high market share, has to run for its life.

On cross examination, the government's expert, and I focus on this just because it highlighted a point, was asked, How soon are those other things going to overtake the company? Well, not yet. When? A couple years, two, three, four, five? Somewhere over the horizon. Thank you very much.

And in this instance, the court concluded that while there were other possibilities from a demand side perspective, they weren't coming along quickly enough to constrain Microsoft.

The other approach is to look at the possible responses of suppliers; that is, how quickly can suppliers reconfigure their production operations to produce the product that the defendant, the hypothetical defendant,

produces? And if they can make adjustments relatively quickly at relatively low cost, that's a powerful constraint upon the operations of the defendant, and indeed it might be that productive capability itself that tells you what the real boundaries of the product market ought to be.

The geographic dimension simply asks where can consumers look to purchase the product, how broad a geographic round can they turn to, and increasingly in many intellectual property or high technology markets, those markets are global or at least based on large regions of the world rather than simply local markets, especially of the kind that we would characterize, say service markets for the paving of roads.

City of Los Angeles isn't going to ask road pavers located in Virginia to come on out usually and pave the roads. If you're buying microprocessors, though, your scope of activity might be truly global instead.

Let me quickly mention a couple places that are very troublesome for the antitrust system. If this were a sporting event and we were talking about match ups, I'm going to describe the problem that matches up badly against the antitrust system. And it's the problem of defining relevant markets where you have a lot of technological dynamism, where you have an old technology incumbent technology being tendered by a new technology.

And I'll quickly mention two cases. One is a case called Standard Oil of Indiana which did involve patents. It involved a patent pool for the then new technology, miracle technology for cracking gasoline as part of the refining process. I'm going to offend all of you chemical engineers here today, but what's a petroleum refinery? It's basically a big tea kettle. The old technology is a big tea kettle. You heat crude oil, and the light fractions that boil off are the most valuable fractions, gasoline, kerosene in this period.

The heavier stuff that's left can be burned in industrial boilers, in ship boilers, used to make asphalt or to produce much of the coffee that I drink regularly. That's the last residual use of the last bit of the barrel that can't otherwise be boiled off.

Obviously it's the higher valued fractions that are the most useful, and the miracle of cracking was that by reformulating the molecules themselves, you could extract a larger percentage of gasoline and kerosene from a single barrel of crude oil.

The problem in evaluating the pool, one problem for the court was to define the relevant market because the defendant's collective market share of activity swung widely between the mid 20s and the low 50s, depending upon whether you define the relevant market as being all refining

technology, that is distillation plus cracking or cracking only.

And the Supreme Court said it's all fungible capacity, so it's all refining technology, so the defendant's market share for this pooling arrangement is in the low 20s, not in the 50s. That wasn't the only variable for the court but it had a lot to do with identifying what it thought to be the competitive significance of the arrangement.

Basically what the court did was to discount the extent to which the new technology was really going to simply sail past the old technology and displace it, and indeed that happens to a large extent over time.

But notice the dilemma for the court. How much weight do you give? What formula do you use? Do you give some weight to the old technology but have a heavily weighted variable that gives more emphasis to the new technology? How rapidly is the new technology going to gain acceptance and how do you predict that?

The court basically said, Too hard for us to sort it out, and instead arguably they underestimated the defendant's market power by focusing on the full range of refining technologies, which tended to bury or understate the significance of the cracking technology.

DuPont Cellophane is another four minute example of a court finding wrestling with a problem, arguably wrestling

badly with it. Dupont Cellophane was the Department of Justice monopolization lawsuit against DuPont, one of antitrust's famous customers over time, and in this instance the government's claim was DuPont had illegally monopolized a relevant market consisting of cellophane as a flexible wrapping material.

DuPont said, Oh, no, relevant market isn't just cellophane, it's all flexible wrapping materials, including such wonderfully quaint names as Classene, Plyofilm as well as other things known better as wax paper or aluminum foil.

DuPont said, In the all-flexible-wrapping-materials market, we have a market share that's competitively insignificant given traditional cases laying out market share thresholds for monopolization.

The government said, But if you look at cellophane, your market share is well over 70 percent, and in part it's because you are the exclusive U.S. patent holder of the relevant process, there are imports, but your market share is 70 percent plus.

So the court has to decide, Do you count all of the other stuff in, or do you count only cellophane? In DuPont's main argument, which the court accepted was, You can tell that we don't have market power based simply on cellophane because you know what happens if we try to raise the price for cellophane. Users migrate to these other wrapping

materials, QED, no market power.

If we had market power, we could simply keep pumping that monopoly price higher and higher and higher, and we wouldn't face substitution, but we do face substitution, and the Supreme Court said, Makes senses to us. There's a high cross elasticity of demand that DuPont faces, and here's the market evidence that shows that the price is going up.

Again to use the Will Tom dialogue technique, Can you guess what's the problem there? A problem that becomes known over time as the cellophane trap into which the Supreme Court fell. What's the problem with the argument? When the price goes up we face substitutes.

MR. WILLIAM MOORE: When you keep your price down, those substitutes go away.

MR. KOVACIC: What might it tell you about the price.

UNIDENTIFIED SPEAKER: The price that they're at is already the monopoly price?

MR. KOVACIC: You're' already charging the monopoly price because, yes, at some point there's substitutes for everything. I'm willing to bet you that if the price of gasolines or automobiles got high enough we would all be riding bicycles to work. We would do it. In fact, many of would start walking if we had to.

For many products you see substitution. The question is, At what price. Tough problem for the antitrust system to

wrestle with, dealing with the old and new.

The results you get in trying to measure market shares are very sensitive to assumptions you make about what you should count or not.

In Alcoa, U.S. v. Alcoa is a famous case that decided in 1945 by the Second Circuit acting as the court of last resort under a special congressional statute that accounted for the fact that the Supreme Court did not have a quorum.

Alcoa involved a challenge to the company for monopolizing a relevant market consisting of virgin aluminum ingot. Alcoa for a long time had been the largest U.S. producer of aluminum. The government said, That's the relevant market, if you look at virgin aluminum ingot, you have a market share of 90 percent plus monopoly power.

Alcoa said, No, you have to count in used aluminum as well, recycled. We make aluminum, recyclers recycle it. They sell ingot based on used aluminum scrap. That comes back and competes against us all the time. If you put in the recycled aluminum, you push their share immediately down into the 60s, past the 90s.

The Second Circuit decision said, We're not going to count it at all. Now, it's clear that some users insisted on virgin aluminum. The aircraft industry did, for example, but a number of others would use it and used a lot of it. Judge Hand ruled it out completely.

Another category of activity involved internal consumption. Alcoa not only made aluminum ingot, but it fabricated aluminum parts and then sold the parts, so do you count in their market share the stuff that they used internally or do you exclude that?

Judge Hand said, That counts, we're going to include that, probably a reasonable choice here. The last choice was imports. How much do you count imports, and Judge Hand I think correctly said it, It depends a lot on the trade regime. If imports come easily in to the country, you count them, but you only count them to the extent that trade barriers or other hurdles in fact allow foreign suppliers to ship into the country.

By results, what do I have in mind here? If you contradict Judge Hand's decision on the recycled goods and internal consumption, Alcoa's share goes down to 33. If you leave in recycled aluminum at 64 -- if you leave out recycled aluminum as he did and you include internal consumption, you get a market share of 90. Just to show you that the results you get and the inferences you draw in defining markets depend a lot on the assumptions you make about what is to be counted.

The last area in which measurement questions have become relatively tricky involve aftermarkets, and a case called Image Technical Services versus Eastman Kodak, Supreme

Court decision in 1992, highlights this. Kodak made copiers. They made about 20 percent of all copiers. That was their market share at the time, but they also provided parts and services for their own copiers.

And over time there grew up to be non-Kodak companies that would also service Kodak copiers but needed Kodak parts in order to service Kodak copiers.

Kodak said we have a complete defense to monopolization here, our market share is 20 percent. Image Technical Services, the plaintiff, said, No, you have over 90 percent of the share of service on your own machine. Kodak said, That's not the relevant arena to focus on, the relevant arena is to focus on parts and services for all copiers, not just Kodak copiers.

They said, Why is that? With a 20 percent market share we have to go out every day of the week and sell new copiers, and if we achieve a reputation for gouging our copier customers in the aftermarket, we don't make new sales. Why? They look at life cycle costs. That's what they're taking account of.

The plaintiff said, Oh, no, life cycles costs are hard to calculate, and there is a collection of purchasers that we might simply call as a shorthand suckers or more accurate suckers and dummies, and the Supreme Court said, Yes, there are suckers and dummies.

Who are the biggest dummies? They said government purchasing agents. Those are the dummies, and they can't figure this out, and the Kodaks of the world can exploit this because the existing purchasers of their machines are locked in. They're not going to sell their copiers and go some place else, and because of information imbalances that it's hard to calculate life cycle costs, those suckers and dummies are vulnerable, so that the relevant focus of concern might be the aftermarket for one's own product.

Couple of concluding thoughts about conduct. As you might imagine, it's not enough again just to have monopoly power. It's not enough to be big. You have to be big and bad. What does it mean to be bad in this area? What's improper exclusion?

For a long time the antitrust laws answered this question by saying, Every time you twitch, if you have a particularly large market share, that could be bad, that you don't have to actually take a swing at someone, just looking at someone in an impolite way could be bad.

In Alcoa, for example, what was the bad act that the Second Circuit focused on? In Alcoa, the government's recollection was that Alcoa had improperly excluded competitors by identifying likely increases in demand and adding new capacity to satisfy that demand, and by doing adding new capacity to satisfy that demand, that forestalled

entry by companies that might have serviced the same demand.

Now, many observers have looked at that and said, In effect what would you expect them to do otherwise? That is, what was the avoidable behavior, ought Alcoa to have stood back and said, People want more aluminum but we're not going to produce it, we're not going to expand our facilities to produce more.

Again if you look at the period in which Alcoa was making these decisions, the 1930s, you can ask, Would it have been a better thing for the country if they had made less aluminum, added less capacity in the run up to the mobilization for World War II?

There is a theory called strategic entry deterrents where capacity additions, capacity announcements might be improperly exclusionary, but Alcoa underscored a basic normative concept about antitrust which is the rules ought to be able to give businesspeople clear guidance about what they can and can't do and ought to forbid clearly what it lacks.

A narrower perspective that comes from the 1980s, a case named Matsushita involving predatory pricing, is representative of what I would call a modern trend which is a trend that gives dominant incumbent firms much greater freedom to chose product development, pricing and promotional strategies of their own liking, not uninhibited, but the

general trend has been in looking at the conduct requirement to give firms broader freedom to act as they which but not uninhibited freedom.

The modern formula for identifying what's bad is suggested by the Microsoft decision where the court says Let's go through a four step inquiry. First requirement has to be monopoly power. Second, Has the plaintiff offered a hypothesis that shows there will be anti-competitive effects, and again, as Will said before, does not simply mean harm to the plaintiff, harm to the competitive process.

Anti-competitive effects that will provide in a social society-wide basis, an economy-wide an increase in prices or a reduction in innovation, reduction in output; harms to competitors is not equated with harm to competition in this formula, but the plaintiff has to step forward and provide a hypothesis about those effects.

Then the defendant has an opportunity to justify the behavior by showing, as Will was suggesting before, for example, that it's trying to prevent free-riding, that it's engaged in reasonable efforts to ensure that it can appropriate the gains to its innovative activity, and last if there is a mix of those justifications and anti-competitive effects, the last steps is that the court will decide which predominates gains or harms.

And in Microsoft, again to look back at the court of appeals decision, again this was given the difficulties and demand of the case in my own view is this is a considerable vindication for the Department of Justice and the position it took in the case. The court focused on the use of exclusive contracts which Will was referring to before and focused on the use of bundling of certain forms.

It focused on the deliberate effort to suppress the emergence of new technology on the part of one of its customers, Intel, and in these and other key respects found that the company's behavior was improperly exclusionary.

Conduct claims sometimes are put into a collection of different compartments: Predatory pricing, refusals to deal, product design and development, abuse of the administrative process.

I want to go simply for the moment to the second and fourth of these, and looking at refusals to deal, simple question, is a firm compelled to license its technology, required to license? Short general answer is no, no more than one would ordinarily be required to share any other form of property right with a competitor or with a firm upstream or downstream.

There is a doctrine, however, that has raised questions about that, and that's called the essential facilities doctrine. The doctrine is principally emerged

where the asset in question involves some physical bottleneck rather than say an intellectual bottleneck or a bottleneck defined by an intellectual property right.

And I'll simply say that in a limited number of circumstances, courts have said that where the asset in fact does confer monopoly power on its owner and is not feasibly replicated by a competitor, and there is no good business justification for denying or restricting use, a court can intervene to mandate on reasonable terms.

If you apply all four of those conditions ruthlessly, you have a tiny set of arguable matters in which access will be mandated, but I suppose a continuing question for holders of intellectual property rights is whether or not the right they hold in some sense might be characterized as falling within that category.

The Federal Circuit's opinion in the Intergraph case, which was the private counterpart to the FTC's Intel case, answered that question with a decisive no. In looking at some of the conduct, a variant of the conduct that Will was describing, this time in a claim pursued by a manufacturer work stations Intergraph in private litigation with Intel.

The last I'll mention is the abuse of the administrative process. What happens in a somewhat clumsy way you need to enlist the government or use the process of

government as a way of achieving your aims? Suppose you lie to the Patent and Trademark Office? Suppose you clog an administrative tribunal with suits that you know to be baseless? Suppose you otherwise misuse the machinery of government in some sense to achieve a competitive advantage?

Under certain limited circumstances that kind of behavior can be illegal, although courts tend to draw distinctions about whether you're betokening a legislature, where you have almost uninhibited freedom, I would say, as opposed to approaching a judicial tribunal or other administrative body that exercises judicial functions, the protections, the petitioning protections under the First Amendment tend to be reduced.

Finally on remedies, basically three varieties: controls on behavior, that is orders that limit certain forms of competitive behavior; structural relief, and structural relief usually encompasses compulsory licensing and divestiture, and courts have said decisively that both are available to a prevailing plaintiff and most often made them available when the government is the plaintiff; and civil recovery, mainly through treble-damages actions.

The D.C. Circuit in one interesting paragraph in passage in the Microsoft case when asked, Is antitrust up to handling the new economy, what happens if the district court ultimately has lots of trouble designing a remedy?

Part of the D.C. Circuit's answer is, Maybe it's the government's job ultimately to bring cases that help define what the legal rules are, what the liability rules are. Maybe the allocation of labor in that instance is for private claimants to step forward and obtain treble damages.

And arguably in the class action suits and perhaps in the AOL versus Microsoft suit, one might describe those developments as being part of the division of labor that the D.C. Circuit had in mind here.

The last point I have about institutional capability: there have been a number of observers who simply said, special challenge in technologically dynamic sectors is where the section moves quickly, do the enforcement and judicial processes move quickly enough to adapt to, to absorb that information and to account for the speed of change?

And I think the Microsoft case was a good example of how you can hold a trial in a time well short of a lifetime, and you can certainly overcome the notion that the litigation of a major Section 2 case in the high tech area is going to take a decade at a minimum.

I'll turn back to Will to do mergers.

MR. TOM: Thank you, Bill. I will try to do mergers well short of a lifetime myself. I think we can probably do this in about ten minutes.

A few minutes to bear in mind about mergers, just to

put this all in perspective. About 99 percent of mergers go through unchallenged so we're talking about a very small group of challenges here. Many of the others can be restructured to solve the competitive problem, that is a particular line of business spun off, a product licensed or what have you, so generally speaking the efficiency enhancing aspects of mergers can be captured.

And most of the problems that we talk about come about when one firm acquires a direct horizontal competitor in a concentrated market.

Let me start with the simplest case, an acquisition of a direct horizontal competitor. The key question we're looking at here is how much other competition is there, and you heard talk earlier in these hearings about the kinds of mergers that the agencies look at these days are typically five to four, not even that, four to three, three to two, two to one kinds of mergers.

If entry is easy, you're not going to have merger challenges. Someone can have 100 percent of the market, but if he tries to exploit that position by raising price, other sellers will quickly leap out, and he's not going to be able to exercise market power.

And finally more and more of the agencies are looking at efficiencies, and they need to be efficiencies that can only be achieved through the merger, but where there are

significant efficiencies, those will allow mergers to go through.

Bringing more into the intellectual property context here, a key issue is when -- let me skip this. This is obvious.

The acquisition of a firm or its key assets and the acquisition of patents can be equivalent in the sense that the patent can essentially confer a position in a particular market, and so if, for example, there are only two products that compete with each other and they're both patented, the acquisition by one firm of the other firm's patents can eliminate competition just as surely as acquisition of the entire firm.

But similarly, and here's where we get into some of the more complicated issues where you have exclusive licenses of patents, those can be analyzed as mergers. Substantively they can be looked at as mergers, and also procedurally, the exclusive license of a patent can be reportable under the Hart-Scott-Rodino Act, which imposes pre merger notification requirements, if they meet various thresholds.

And the trick here is how do you value an exclusive license of a patent at a stage where the product may not have come into being yet. The valuating issues can be very tricky here. The threshold for HSR reportability is $50 million.

The initial license fee may be less than that, but

when you started adding up milestone payments and royalties that come in over the years down the road, how do you factor that in. The general rule seems to be when you can discount for the probability of occurrence, so if payments down the road are highly uncertain, the board or its designee can make a good faith evaluation discounting for probability. For some reason net present value concept calculations don't seem to be allowed, and so that's one of the quirks of Hart-Scott practice there.

Substantively some of the tricky issues comes in where the acquisitions involve products that have not yet been commercialized. Back in the 1970s, we had a Second Circuit decision in SCM v. Xerox that essentially said, If the acquisitions take place at a point where there's no marketable product, it simply doesn't implicate antitrust laws.

I think I can understand the reasons why the court came to that conclusion. It was an era where antitrust was not fully rational in the way that it was dealing with some of the issues in that case, and reaching for this kind of bright line rule was an easy way of avoiding what seemed to be some absurd results.

If anyone is interested, I have a whole article about the FTC and the private case back in the 1970s, but I would suggest that the rule of thumb that that court suggested

doesn't really work very well, and the proof of that is particularly in the case of some of the pharmaceutical mergers where you've got, for example, either -- you've got one product in the market and that firm is acquiring another firm that has a product very far along in the FDA pipeline, no other close substitutes.

Do you have a competitive problem, even though the second firm has not yet commercialized its product? I would suggest you do because of the fact that if, particularly with the FDA pipeline, you've got a pretty clear indication that there is going to be any competition for the existing product in the near term, it's only going to come from the product of the company that's being acquired.

And it makes sense to require that product, that pipeline product to be divested as a condition for the merger going through, and there have been a number of cases that the FTC has dealt with reaching exactly that result.

We also have seen some I would say probably somewhat esoteric situations where the horizontal parity is not entirely obvious on the face of the merger, and here I generally use the gene therapy aspects of the Ciba Sandoz merger as an example, and playing off some of the diagrams you saw in the licensing presentation.

Here we had a situation where in order to produce a commercial gene therapy product. You needed a lot of

complementary inputs. Some of the inputs that were needed would be the patents on the genetic material itself, the isolation of the gene responsible for a particular disease entity, and those are represented by the circles up there at the top of the diagram.

But simply identifying the gene responsible for a form of brain cancer or hemophilia or something of that nature doesn't give you a commercial product. In order to have a commercial product you need lots of other things, including the vectors that enable you to get the genetic material into the cell, you need the manufacturing facilities that have been certified by FDA as we do in manufacturing processes and the like.

And the FTC's investigation to oversimplify a little bit identified Ciba and Sandoz as the only possessors of the complements necessary to commercialize the vast majority of these products.

And how is competition affected? Well, if Ciba and Sandoz are allowed to merge with no divestitures, then what will happen to the dozens of research entities up there at the top of the diagram who may have a very good and interesting patent on genetic material relating to particular disease states, but no way themselves to commercialize the product?

When they got into the business they had two entities

that they expected to partner with, joint venture where you sell out to. When you do all your research and get your patents, then you approach Ciba and Sandoz and you say, Let's do a venture or if you want, if the price is right, just buy my company all together.

If the two companies merge and you had only one such entity to deal with, who would take most of the rents? Well, the monopolist of the bottleneck would take enough of the represents that a lot of these research ops were actually giving serious consideration to shutting down abandoning their research and so on, so the FTC stepped in and made a solution for that problem a condition of the merger.

Innovation markets, I'm not going to talk about very much at all because it's been taught to death. It really doesn't matter in the vast majority of cases.

Rich Gilbert in an article that he and I coauthored in the last year or so examined the Agency's merger challenges in the period before the guidelines and after the guidelines, and I think we concluded that there were only three of those mergers in which innovation markets really made a difference as to whether the merger would be challenged or restructured or not.

And I even have some doubts about those three, but we had to talk about something.

A limiting feature on use of innovation markets in

antitrust challenge that I think really pairs this down to a very small set of circumstances is the specialized assets or characteristics to do innovation in this area need to be scarce, and so if you're not a business in which any inventor in his garage might come from left field in disrupting kind of market, this is probably not a good candidate for innovation market analysis.

And the only other subject I want to touch on briefly is intellectual property as a defense in mergers of tangible assets, and this has come up in a number of cases mostly at the Department of Justice.

There was one, the Boston Scientific case, at the FTC many years ago, one in which it was raised as a defense but disposed of by the FTC, and a challenge did take place, but here the question is when are competitors that appear to be horizontal competitors really non-horizontal competitors, and the answer is where the patents, one of them are broad enough in scope to really cover the activities of the other.

So that going back to what's your definition of horizontal, if there is no legitimate competition absent a license, then at least it could be argued that there is no real horizontal competition here, and a merger ought to be allowed.

In the Miller case, this defense was examined and rejected I believe. There are press accounts that a similar

issue was at stake in the acquisition of TV Guide by GemStar, and that case did not result in a challenge, and therefore there are no real official materials that we can go by to really judge what the facts were in that case.

But the nature of the defense at least seemed to be that GemStar's patents were broad enough that no real competition would be eliminated by the acquisition, and with that I think we're done. I would be happy to stay and answer any questions.

MR. POTTER: Are there questions, and if not we're over our time, but I would like to thank both Bill and Will who did a wonderful job this morning.

I know Bill in particular has been getting over a cold, so he's had two hours of worth of throat problems.

I just wanted to say that once we got by this fundamental session, future sessions I think we'll have much more debate and discussion among panelists, so you can look forward to that as we go forward. And thank you very much.

(Whereupon, at 12:41 p.m., the hearing was concluded.)

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

CASE TITLE: HEARINGS ON COMPETITION AND INTELLECTUAL PROPERTY LAW AND POLICY IN THE KNOWLEDGE-BASED ECONOMY
HEARING DATE: FEBRUARY 8, 2002

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

DATED: FEBRUARY 15, 2002

DEBRA L. MAHEUX

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

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

DIANE QUADE