FRANKLIN PIERCE LAW CENTER'S SIXTH BIENNIAL PATENT SYSTEM MAJOR PROBLEMS CONFERENCE

I. INTRODUCTION

A. Conference Background

On April 11 and 12, 1997, Franklin Pierce Law Center (FPLC), in cooperation with the Kenneth J. Germeshausen Center for the Law of Innovation and Entrepreneurship and the PTC Research Foundation, both of which are located at FPLC, held its sixth conference on the major problems of the patent system. This biennial series of Patent System Major Problems Conferences was started in 1987 by former FPLC professor Homer O. Blair.

The discussions in the first and inaugural conference focused on such diverse topics as New Forms of Patents, Litigation Cost Reduction Measures, and First-to-File versus First-to-Invent Systems.[1]

The 1989 conference dealt primarily with Patent Trial Simplification and Dispute Resolution.[2] The 1991 conference covered such patent law harmonization subjects as Secret Prior Art, Prior User Rights, 35 U.S.C. § 104, and Publication of Pending Applications.[3] The 1993 conference featured such subjects as Abolition of Jury Trials in Patent Cases, a New Specialized Patent Court in England, Prior User Rights, and the U.S. Patent and Trademark Office as an Independent Government Corporation.[4]

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[1] *Franklin Pierce Law Center's First Biennial Patent System Major Problems Conference*, 28 IDEA 61 (1987) and 28 IDEA 117 (1987).

[2] *Franklin Pierce Law Center's Second Biennial Patent System Major Problems Conference*, 30 IDEA 107 (1989).

[3] *Franklin Pierce Law Center's Third Biennial Patent System Major Problems Conference*, 32 IDEA 7 (1991).

[4] *Franklin Pierce Law Center's Fourth Biennial Patent System Major Problems Conference*, 34 IDEA 67 (1994).

The 1995 conference focused on three topics: Patent Costs; the Future of the U.S. Patent and Trademark Office; and Prior User Rights.[5]

B. 1997 Conference Design

The 1997 conference also dealt with three topics, namely Medical Procedures Patents, Software Protection and the Doctrine of Equivalents.

The purpose of the 1997 conference, and prior ones, was to elicit opinions of people who are knowledgeable about the patent system about what could be done to solve or alleviate what some see as the patent system's major problems.

Hence, the conference attendees included invited guests from the private and corporate IP bars, universities, the ranks of private inventors and entrepreneurs, as well as ACIP (Advisory Committee on IP) members and faculty from FPLC.

The format of the conference was in-depth discussions and exchanges among the attendees, without prepared speeches.[6] However, prefatory comments to each of the subjects on the agenda were made by 1) Karin Gregory, Robert Armitage, and Gerry Mossinghoff; 2) Ralph Oman and Karl Jorda; and 3) Bill Pravel, respectively. For the purpose of introducing these subjects, the following background materials were used:

1. Gerald J. Mossinghoff, *Remedies Under Patents on Medical and Surgical Procedures*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 789 (1996).

2. Marlene Shinn, *Medical Procedures Patents*, GERMESHAUSEN CTR. NEWSLETTER (Fall 1996).

3. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 117 S.Ct. 1040, 41 U.S.P.Q.2d (BNA) 1865 (1997).

4. Bernarr R. Pravel, *The Supreme Court Decides* Hilton-Davis, Presentation to the Intellectual Property Section of the American Bar Association, Spring CLE Meeting (1997).

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[5] *Franklin Pierce Law Center's Fifth Biennial Patent System Major Problems Conference*, 36 IDEA 345 (1996).

[6] The transcript of the two day conference has been minimally edited to enhance the printed flow of the discussion. Also, although discussions relating to a single topic occasionally occurred at different points during the conference, they have been placed under a single heading here for clarity.

Towards the end of the conference, as in previous conferences, each attendee was given an opportunity to briefly identify additional major problems.

The conference was chaired by Robert B. Benson, Chairman of FPLC and its Advisory Committee on Intellectual Property, as well as the former President of Bancroft Corporation, Chief Patent Counsel of Allis Chalmers, President of the American Intellectual Property Law Association, and Chairman of the IP Law Section of the American Bar Association.

II. CONFERENCE PARTICIPANTS

Robert Armitage	Patent attorney, Vinson & Elkins, Washington, D.C.
Norman Balmer	Chief Patent Counsel, Union Carbide Corporation, Danbury, Connecticut.
Mark Banner	Patent attorney, Banner & Witcoff, Chicago, Illinois.
Christopher Benson	Patent attorney, Arnold, White & Durke, Houston, Texas.
Robert Benson	Chairman of the Board of Trustees of the Franklin Pierce Law Center.
Howard Bremer	Former patent counsel, Wisconsin Alumni Research Foundation, Madison, Wisconsin.
Ed Coleman	Retired patent counsel, former GTE-Sylvania Lighting; adjunct faculty member, Franklin Pierce Law Center
Robert Crooks	Private practitioner, Durham, New Hampshire.
Tom Field	Faculty member, Franklin Pierce Law Center.
William Fryer	Faculty member, University of Baltimore School of Law.
Charles Gholz	Partner, Oblon, Spivak, McClelland, Maier & Neustadt, Arlington, Virginia.
Hugh Gibbons	Faculty member, Franklin Pierce Law Center.

Steven Goldstein	Chairman of Intellectual Property Department, Frost & Jacobs, Cincinnati, Ohio.
Jose Gomez-Segade	Professor, University of Santiago de Compostela, Spain.
Karin Gregory	Private practitioner, Boston, Massachusetts; Board member, Franklin Pierce Law Center.
Karl Jorda	Faculty Member, Franklin Pierce Law Center.
Edward Kazenske	Deputy Commissioner of Patents, United States Patent and Trademark Office, Arlington, Virginia.
Leonard Mackey	Former general patent counsel, ITT Corporation.
Judge Paul Michel	U. S. Court of Appeals for the Federal Circuit.
Gerald Mossinghoff	Professor, George Washington University Law School; senior counsel, of Oblon, Spivak, McClelland, Maier & Neustadt.
Bob Muir	General patent counsel, Caterpillar, Inc., Peoria, Illinois.
Ralph Oman	Pravel professorial lecturer, George Washington Law School.
Bill Pravel	Patent attorney, Pravel, Hewitt, Kenwood & Grigger, Houston, Texas.
Jacobus Rasser	Chief patent counsel, Procter & Gamble Co., Cincinnati, Ohio.
Gordon Smith	AVS Consultants, Moorestown, New Jersey.

III. CONFERENCE WELCOME

MR. VILES:

As most of you know, Bob Benson is Chairman of the Board of trustees of Franklin Pierce Law Center and is, of course, a distinguished patent lawyer. I am distinguished only by my ability to give the wine tasting reception that will occur later in the schedule.

But I am able to give you a hearty welcome to Franklin Pierce Law Center. Or for many of you, a welcome back to Franklin Pierce Law Center. It's nice when you live in a small town such as Concord, New Hampshire for the world to come to you. We appreciate that very much since we are off any path you may regularly beat. Again, thank you for coming and welcome to the Law Center.

IV. MEDICAL PROCEDURES PATENTS

MR. BENSON:

I'd like to introduce Karin Gregory who will make her introductory remarks regarding medical procedures patents. She will be followed by Bob Armitage and Gerry Mossinghoff. Those three will be making some introductory remarks and then we will go around the table for individual comments. Karin?

MS. GREGORY:

Introductory Remarks on Medical Procedures Patents. Introducing this topic actually is personally and professionally challenging since I have been in the health care industry representing physicians and medical institutions for the last 15 years and have dealt with a lot of the issues that have been raised within this particular topic.

In the last five years, I have found myself getting into intellectual property because many of my physician clients have found the world of licensing and inventions very exciting. So, in studying the topic for today I found I had some mixed feelings about where I stand on these issues. Therefore some of my comments actually may be a little more pro-patent than if there were many physicians in the room. But I certainly think I can discuss both sides of this issue. I am sure that there are far more folks in the room who have more expertise on the patent issues that I do. I think this is a fascinating topic and one that is going to be around for quite some time.

Most of you are familiar with this topic and know that there is a controversy around this whole issue. It was first raised by the AMA, who appear to be in direct opposition to the patent community. Back in the 1950s, patenting of medical procedures became something that was part of the patent process. It was acknowledged that the patenting of medical procedures was appropriate. A few physicians actually filed some applications, but very few patents were issued. The PTO probably issued about 15 or so per month. Physicians probably believed that they were going to have difficulty enforcing patents; perhaps that was the reason few patent applications were filed. This was true at least in the '50s, '60s, and '70s.

Recently it seems as though many more physicians have filed patents. The PTO estimates that it now issues about 100 procedures

patents per month, which is certainly more than double the figure from a decade ago.

The more recent controversy surrounding this issue stemmed from the filing of a lawsuit by a physician named Samuel Pallin. He became frustrated when he could not get his paper published which discussed the terrific technique he had discovered. Instead he filed a patent and actually had it issue.

Pallin's patent showed how to perform stitchless cataract surgery and issued in 1992. Physicians were obviously eager to use this technique on their own patients but they were unwilling to pay for it. Dr. Pallin then filed an infringement suit against a physician named Dr. Singer. I think this is when we began to hear the loud cries from the medical establishment. Dr. Pallin's fee for licensing his patented technology was $5.00. We have to keep that in mind. It certainly seemed reasonable to him and I think for most of us around the table it seems reasonable. Obviously, Dr. Pallin was looking for monetary relief. He was not looking to enjoin physicians from using the procedure. He was just looking for a fair fee. Unfortunately for him, the federal court dismissed his claims, finding that the patent had mistakenly issued.

Essentially, that suit sparked the debate that is the subject of today's proceedings. The AMA, of course, was the first to speak up, and indeed they did. In 1994, they filed a direct response to Pallin's suit and noted that certainly there would be problems arising from the continuing filing of medical procedures patent applications. They issued a policy prohibiting the patenting of medical and surgical procedures and techniques. The AMA believed the trend of granting medical procedures patents would limit patients' access to new procedures, create ethical and malpractice issues, violate patients' right to confidentiality, increase the cost of health care, and impede the flow of information to and from other physicians as well as impede the practice of medicine. Hopefully, we will get into some of those topics later today.

As many of you know, Congress then took the lead in trying to come up with a challenging resolution of these problems. Representative Ganske said that we should ban all patenting of medical procedures. There were several problems with his bill and, in fact, the piece of legislation that has been passed and enacted limits or restricts a practitioner's right to enforce his or her patent. Obviously, the exceptions are important because it does exempt *in vitro* diagnostics, gene therapy and many other biotechnology therapies that are coming in the near future.

The question here, I think, is did Congress miss the point of the patent system or did it, in fact, do the medical profession and its end user, the patients, a favor by enacting this statute? Did the medical community miss the point? Does the medical community appreciate what, in

fact, this legislation may lead to? And I think the big question, which hopefully we can debate this afternoon, is whether this will have a chilling effect not just on the medical profession but perhaps on the patent community.

MR. ARMITAGE:

Introductory Remarks on Medical Procedures Patents. I very much appreciated Karin's balanced introduction to this topic because I believe it frees me, at least in part, from being balanced in my comments on this topic. So, even though this conference will be published in *IDEA*, I will tell you what I actually think about this issue and its progress through the U.S. Congress.

Let's begin by looking at the environment in which Congress acted during the 104th Congress. What is so striking is the extraordinary way in which this particular piece of legislation became law. First, unlike most of the major changes to the patent statute that have been enacted in the last several decades, this particular legislative concept arose and was enacted in the course of one Congress; a single two-year session of Congress.

Second, the substance of the legislation broke with about a 206 year tradition in the U.S. patent system that the patent laws ought to be applied in a nondiscriminatory fashion irrespective of the subject matter or field of technology of the invention.

Third, although it is not unusual for a piece of legislation to be enacted at the very end of Congress, certainly the maneuvering that led to the enactment of this legislation, particularly since the Chairman of both the Senate Finance and Senate Judiciary committees loudly protested both the substance and the procedure, makes its enactment somewhat unprecedented.

Fourth, the Clinton administration at the very end of the congressional process warned that this was not a simple piece of patent legislation that Congress was considering. This was a piece of legislation that perhaps had profound international trade implications for the United States as it potentially could be construed as being inconsistent with our obligations under TRIPs.

Finally, and not to be overlooked, is the fact that if one reads the statute that Congress enacted, it is a piece of intellectual property legislation that is all but inscrutable.

Let's look for a moment at the issue of why this particular piece of legislation was enacted in one Congress rather than many Congresses. I think if you look at the many pieces of IP legislation over the last two decades, particularly those pregnant with policy implications, you will see that normally a sufficient period of time elapses in order for a consensus to develop. The legislation gets molded. The legislation gets better

understood and often the legislation reflects what is at least deemed to be a tolerable compromise by both sides.

Second, there is usually the opportunity for some scholarly comment as well as comments from the bar associations on the actual substance of the legislation. You also frankly can determine, given the span of at least a few years, whether the protestation of the proponents that the legislation is needed, actually had some sustained merit over time. And of course we see in this particular instance that it is very difficult to say that there was some emergency in our intellectual property laws given the fact that the courts certainly were not being flooded by physicians being sued and therefore unable to practice medicine in a way they might choose.

Moving on to the historic nondiscrimination principle in the U.S. patent laws, it is a particularly inopportune time for the United States to now decide that inventions in the medical field ought to be treated differently from inventions in other fields of technology. It is a particularly inopportune time because even industrialized countries such as those countries of the European Patent Convention have a long standing view that not just patents on medical activities, but patented methods for any sort of medical procedure including uses for pharmaceutical products, deserve discrimination under the patent laws.

Indeed the multinational pharmaceutical industry, particularly the U.S. based industry, has long used the sword of a nondiscriminatory U.S. patent law to attack those developed and undeveloped countries who consider discrimination an acceptable way of treating one particular industry vis-à-vis the others. Certainly whatever moral or political force the United States had and had maintained in its patent laws for 205 years has now basically evaporated.

In terms of the international trade issue, the United States enacted TRIPs legislation under the Uruguay Round Agreements Act. In doing so, we met all of our existing obligations under TRIPs, notwithstanding that there was controversy in what was done. But the one thing the United States did not need to worry about was those provisions of TRIPs that related to providing adequate and effective remedies under our patent system. Indeed, under TRIPs we are not permitted to introduce into our patent system provisions that will unreasonably interfere with an inventor's normal exploitation of his or her patents. I think that we will hear forcefully from our next speaker that there are no article 30 TRIPs implications from the Medical Procedures Act, that what we did is consistent with TRIPs. But let me suggest in advance of hearing those arguments that those arguments will largely miss the point.

When we are talking about medical activities patents we are talking about patents that are by their nature normally exploited by

licensing. The normal exploitation of those patents is merely the act of collecting royalties. These are unlike patents in the multinational pharmaceutical industry. Those patents are largely exploited by the patent holders seeking monopoly protection for new chemical entity drugs foreclosing those who would seek to profit from research that they have not undertaken.

What this provision does to medical activities patents normally exploited through licensing and receipt of royalties is, in effect, eliminate entirely that normal exploitation. We are not talking about something that never happens. We are not talking about something that does not have a well established precedent in our patent system and in our economic system.

We need only search the relevant classes and subclasses in the U.S. Patent and Trademark Office to see that orthopedic surgeons have sought patents on novel techniques typically using novel instrumentation and sometimes using novel medical devices such as prosthetic devices. They have sought and obtained patents, licensed those patents, obtained royalties from those patents and had the public benefit from those innovations, even in the case of opthamologists.

If you go through the patented classes and subclasses relating to the implantation of intraocular lenses, you will find that many opthamologists have indeed obtained patents, licensed patents, collected royalties from those patents, and in some cases have simply licensed their names to be used in connection with commercial exploitation and what they believe to be their innovations in the field of opthamologic surgery.

You could say the same thing about dental surgeons and dental implants. You could go on and on. To say that physicians do not normally exploit the patent system by licensing and obtaining royalties is to miss the whole point of what that field of technology has brought us in terms of innovation.

Then of course we come to the very peculiar language that Congress enacted into law. If we look at the statutory language, we see that it relates to medical activities. Medical activities are said to be the performance of a medical procedure on a body.

I would note that the term 'body' actually is not defined to mean body and I urge you to read the patent law to find out that this indeed extends beyond normal medical and surgical procedures. Nonetheless, the definition of a medical procedure is actually in the statute and given to us in a parade of negatives. It is said that a medical procedure is something that is not the practice of a patented use of a composition of matter.

Now one would hope that we would find out from reading this statute what the patented use of a composition of matter is. But instead, the drafters of this legislation have elected to tell us what it is not.

Among the things that it is not is the use of a composition of matter that does not directly contribute to the achievement of the objective of the claimed method. Now, for those of you who have practiced patent law all of your life you are probably well aware of the patent law concept of the achievement of the objective of an invention. The fact that this is an idea or a concept totally unknown to the patent system is largely because the drafting of this legislation was done by, and for the benefit of, people unfamiliar with the patent system.

We also see that when we read the legislative history for this new statute, although it uses normal concepts of patent law in which to describe the application of this patent to the patent system, it is totally unconnected to the actual language of the statute itself. Perhaps there are reasons for that that may become apparent as our discussion proceeds.

In my view we now can create the historic Blunder Hall of Fame for pharmaceutical patents. We can create such a hall of fame because we now have two historic blunders we can place there. The first being the Patent Term Restoration Act of 1984 which among other things codified the holding in *Roche v. Bolar*. That historic blunder now can take its rightful place in a hall of fame beside the Medical Activities Act of 1996.

MR. MOSSINGHOFF:

Other than that, Bob, was there anything wrong with this section?

MR. ARMITAGE:

Gerry, I'm glad you asked.

MR. MOSSINGHOFF:

Introductory Remarks on Medical Procedures Patents. Well, to paraphrase the classics, I'm not here to praise the new section. In fact, as president of the Pharmaceutical Research and Manufacturers of America, or PhRMA, at the time, I worked with the Biotechnical Industry Organization to bury the section.

Included in the materials you were given is an article I wrote for the November 1996 issue of the Journal of the Patent and Trademark Society which lays out why the section was enacted as it was. The forces that came into play are in the conclusion of my article that appears on page 797. There I state that the Biotechnical Industry Organization and PhRMA worked actively against the provision, together with all of the national patent law associations.

The America Bar Association's Intellectual .Property Section and the A.I.P.L.A. opposed the Ganske Amendment when it came to a vote on the floor of the House of Representatives with the Patent and Trademark Office Appropriations Bill on July 24th, 1996. It was also opposed by the chairman of the subcommittee having jurisdiction, Congressman Carlos Morehead of California, the ranking democrat,

Representative Patricia Schroeder of Colorado, and the floor manager of the Appropriations Bill, Representative Harold Rogers of Kentucky.

Nonetheless, in a real attention-getter to those that watch Congress—and I have watched Congress closely for over three decades—it passed by a vote of 295 to 128, with not one member speaking in favor of the patenting of medical procedures. Indeed, in the entire legislative history of the House and the Senate, cited in my article, you won't find one statement by any of the 535 members of Congress, including the House and the Senate, saying they think patents should be granted for medical procedures.

There was a clear political imperative here. Two approaches were proposed. First, the Ganske approach, without explicitly amending 35 U.S.C. Section 101, would have effectively amended it by saying that the Patent Office cannot grant patents on medical procedures.

Senator Frist, who is a very close friend of the pharmaceutical and biotechnology industries and one of the world's great transplant surgeons himself, backed away one step further. His approach did not involve what's patentable under Section 101, a section that has served us very well for two centuries. Rather his bill would have provided that it is not an infringement if the patent involved the practice of a medical activity. Both of those members personally assured me and the Intellectual Property Key Issue Team of the PhRMA Board of Directors that they wanted no harm to be done to the biotechnology industry or the pharmaceutical industry.

But they believed that there was a unanimous view of Congress—and certainly no one I heard spoke against it—that something needed to be done. They wanted to do it in a way that did not hurt the very innovative biotechnology and pharmaceutical industries.

As I point out in the article, the PhRMA works very closely with the American Medical Association. One of the members of the Board of Directors very wisely told me several years ago that if we find ourselves at odds with the American Medical Association we should reconsider our policy position on that point. I came to the conclusion very early, and our experts that work Congress for us came to the same conclusion, that something was going to be done.

That view was greatly amplified by the fact that in the Senate, the Chairman of the Appropriation subcommittees with jurisdiction over the Patent and Trademark Office, Senator Gregg of the state we're now in, was personally determined to do something. Dartmouth was involved in the Singer litigation that's been mentioned. He looked us straight in the eye and said, "Something is going to happen and I'm giving you the opportunity to make sure that it doesn't hurt the biotechnology, the pharmaceutical, or the device industry and I'm giving you a blank sheet

of paper. But if nothing's on that paper we're going to go ahead and pass the Ganske Bill."

That was the alternative and those members of the House and Senate who opposed it, namely those already mentioned, Chairman Hatch of the Judiciary Committee, Chairman Carlos Morehead of the IP Subcommittee in the House, Senator Roth of Delaware, Chairman of the Finance Committee did not, in my opinion, have the ability at that time to stop this from happening for several good political reasons, or for several true, but not good, political reasons.

First, we were nearing the end of the 104th Congress. The Republicans had taken a very heavy public relations blow by closing down the government. All of the polls showed that that was not something that inured to the political benefit of the Republicans. Thus, it was certain that there would be an Omnibus Budget Reconciliation Act, or OBRA, and it was going to be passed on time. It was going to be signed by the President on September 30th.

The two people that had total control about what was going to be in that Act said there will either be a provision that we agreed would not harm your industry or there will be the Ganske Amendment. So, in my view, as I stated in the article, given those political realities and the usual suspension of regular procedures to enact funding bills at the end of each Congress, they were on a fast track. Filibusters were not possible. Holds in the Senate were not possible. Enactment in 1996 of some form of legislation dealing with patents on medical procedures seemed highly likely, if not inevitable.

And so the judgment was reached not only by me, but by the people that watch Congress very closely, those who work for PhRMA, B.I.O. and H.I.M.A., the Health Industry Manufacturers Association, that something was going to happen. So, we set out to see what we could write which would not, in any way, adversely affect the pharmaceutical, biotechnology or device industries.

I would take issue with Bob on his statement that no one skilled in patent law was involved in this, because I can name 24 chief patent counsels of the pharmaceutical and biotechnology industry that were directly involved in this. I would submit that we had some pretty good talent. What we did at the outset was agree that we were not going to effect what was patentable under Section 101.

I submit that the English language is incapable of defining a sensible section which would say that you cannot have patents on surgical procedures such as that involved in the *Pallin-Singer* litigation, and at the same time permit patents on genetic engineering where you do not use a physical scalpel, you use a chemical scalpel to cut parts of genes and rearrange them. That is going to occur in the biotechnology and

pharmaceutical industry. That would have been extremely dangerous to our industry and indeed not at all acceptable to the patent counsel, general counsel and chief executives of the industry.

Secondly, changing what is an infringement could be very, very damaging to the industry. Again, every case would be clouded by the question of whether this is an infringement or not an infringement. So, we focused very quickly on the remedies section of Title 35 and wrote a very limited exception to Section 287. One, however, that from the AMA's point of view, could be tried and decided in a motion to dismiss. Because we take away jurisdiction in the new subsection, if someone were to bring an action for infringement, that would be subject to a motion to dismiss. The language of the Act and the legislative history would be the subject of judicial interpretation.

The biotechnology industry and the pharmaceutical industry formally agreed that if that compromise went through as written with the legislative history as written that we would not oppose it in the last days of the Congress. The significant thing from our point of view is that the agreed-upon compromise will have no effect on what is patentable under Section 101 and no effect on what constitutes infringement. Moreover, and this is critical, it is very clear the new section appropriately and specifically exempts the commercial activities of biotechnology, diagnostic and pharmaceutical companies from its ambit and does not limit, in any way, their ability to enforce their patents against their competitors.

If someone is involved in anything that requires FDA approval, such as biotechnology, pharmaceuticals and devices, they do not fall under the exception. It does not apply to them. If they are using a patented composition of matter, a new drug or a new device that is patented, they do not fall under the exception. So, it is a very clean, very limited exception which was enacted.

Again, if we could have written the history of the effort, the provision would have been defeated at the time the Ganske amendment came up on the House floor. But that did not happen. It was therefore inevitable that something was going to happen and what happened does not, in my opinion, cause any great concern among the people who are very skilled and very concerned about the industry.

There is a paper in the background materials by a Ms. Marlene Shinn in which she says that there is apprehension on the part of the investors in the biotechnology and health care industries. That may be true, but I have not seen it. I think that the matter is sufficiently limited. It's not a good idea, but it is sufficiently limited.

With respect to the trade aspects of the new subsection, there is no question that if we had changed Section 101 we would have fallen

squarely within article 27, paragraph one, of TRIPs. There is no question about that. But the changing of Section 101 was viewed by the industry as so horrendously bad that we traded that off against relying on Article 30 of TRIPs saying that this does indeed fall within the provision of Article 30. We do not use Article 27 of TRIPs. The only way—I think Bob would agree—you can use Article 27 is to somehow get into Section 101. That was a nonstarter with our industry, with biotech and with the device industry. So we ended up relying on Article 30.

I do not think that the pharmaceutical industry's efforts internationally are dead. I think most of those efforts have succeeded because of bilateral success on the part of the United States government and the fact that countries are increasingly recognizing that they serve their constituencies by enacting intellectual property legislation. I see virtually no damage done to the very, very successful efforts of PhRMA in getting 24 countries in the last 12 years to enact patent protection for pharmaceuticals. That is going to continue until they all fall in line, with Brazil and China and many of the other countries.

MR. BENSON:

Thank you. We're going to open it up to general discussion now. Chico?

MR. GHOLZ:

Negatives of the Act. There are a number of negatives attached to this Act. Probably the biggest negative is that it is humiliating to lawyers to be bested by doctors. That seems to be exactly what has happened to us here.

Also, there is the slippery slope argument. This is bad. If this catches on and there are other limitations on our ability to go after people practicing method claims, it will get worse and worse. I have had clients come to me with grossly distorted versions of what they think is in this bill and ask if it applies to them when it does not remotely apply to them. It has been fairly easy to go back. The wildest question I got from a client was based on the premise that this bill did away with method claims of all kinds. Now, we can explain it does not do that.

Enforceable Intellectual Property in Medical Inventions. Apart from the slippery slope argument and the fact that it really puts the noses out of joint of the leaders of the intellectual property bar to be bested by doctors, I think Gerry is right. As far as I can tell, this is not going to have an awful effect because usually we can still get where we want to get. And where we want to get is enforcing our client's rights. I should say I do not always represent plaintiffs. From the perspective of the patent bar as a whole, and our desire to have enforceable intellectual property in medical inventions, I think we still have that because we can go after the source. We can go after the manufacturers. Yes, we have to prove that

there is a doctor out there using the method, but you can usually find a friendly doctor who will be a nominal defendant without getting his nose out of joint. So, we can prove that there is actual infringement going on out there, and we can go after the manufacturers of the device.

In the first place, a lot of the patented methods employ patented devices, and even if there are not patented devices and we can't sue for infringement on the device, they are usually inducing infringement by saying that their devices can be used to carry out the method. So, we can get where we want to go most of the time. I am sure that we can all hypothesize situations where we cannot get where we want to go, where the only person that we could sue is the doctor. No doubt there will be cases where we simply cannot do that in view of the new act. But it does not seem to me that this is a major, major catastrophe to the patent system. It is just an annoying, very annoying bump on the road.

MR. BALMER:

Religious Nature of the Issue. I thought I'd start off by telling a quick joke. Several people were arguing about what the profession of God was. The first says, "God must be a doctor because out of the earth he created man and from man he created woman. That's got to be a medical act." The second fellow said, "No, God must be an engineer because out of chaos was created the order of the universe." And the third said, "Well where do you think the chaos came from? So, God must be a lawyer."

The point of that story is that we are dealing with a religious experience when discussing the patent system. We've got the doctor who believes that what he brings is for the benefit of all mankind, thinking patents are frustrating benefits. We have the patent lawyers who happen to fill both shoes because many of us are also engineers believing that we are right. If we don't think that IP has become a religious experience, all one needs to do is turn on C-SPAN and listen to preaching on the Congressional floor. Religion tends to make economic issues pale in comparison to emotional issues. Logic is not necessarily persuasive.

What can we do in light of the march toward regulation? I think Gerry clearly summed it up: we used the best management techniques known to mankind, which is you either duck, deny, deflect, or delegate. What we did was a very good job of deflecting.

Now, I stand back and say, "Well, what happened to us?" Maybe this is a wake up call. Perhaps the AMA has not yet understood patents and tried to internally work out any access problems. The present AMA position parallels that of university professors who in the 1960s and 1970s thought the patent system would be very adverse to their professional calling. Somehow that perspective seems to have dropped by the wayside.

In industries such as the chemical industry, any technology which relates to safety is made available for licensing to anyone who needs it by our own industry organizations, such as the Chemical Manufacturers Association. In 1971, there was a tremendous amount of discussion about compulsory licensing. Things have changed a lot since that time. The power of patents has never been greater, and compulsory licensing is not here. The AMA has elected their course of action, which is unique in patent law, and they are going to have to live with it in the future until they get it changed.

In summary, this is a wake up call. We have got to understand that there are going to be situations that come up which are religious in nature. They are approached from a religious standpoint and it is a question of how we can manage those in the future to have good public policy come out. It seems kind of crazy to have the patent system being used to inflict public policy, but we have to look at that being a tactic that is now used. We IP professionals have raised IP to something which is well known throughout the communities. We are now hearing it back and perhaps not applied the way that we believe it should, but it is going to be played back that way.

MR. GOLDSTEIN:

What this Teaches Us for the Future. Having been through the legislative process several times, I agree with Gerry's assessment of the situation. When you see that something is going to happen with certainty or virtual certainty, you have to do what you can to minimize the damage. It happens frequently. And it was not just PhRMA who felt that the surgical procedures bill was going to go through. I know the A.I.P.L.A. and various other patent organizations felt passage was pretty much a certainty. It seems to me that the useful thing to do right now is to try to figure out what it teaches us and what it means for the future.

I was concerned and a bit amused in a somewhat panicked way by the manner in which the legislation went through Congress. It is interesting to see how typical patent legislation can sit and stew for years under normal circumstances. This is true even when the legislation is important. But in a situation where there is some religious or moral outrage or a little political imperative, the same legislation can zoom right through.

My concern is about the slippery slope. That is, there are other situations out there that are actually quite reasonable, but could be found by some who do not really understand patent law to be morally outrageous.

Consider the situation where somebody who does not understand patent law wakes up and realizes that someone could put together a treatment protocol utilizing three unpatented drugs in a new way and get

a method claim on it. All of a sudden, other people cannot use those three nonpatented drugs in that specific patented way. I don't know what kind of moral outrage that would spark. It should not spark any from a patent practitioner's point of view, but from the point of view of the people who are outraged by the surgical procedure situation it could.

I think it is very important that we set about as a profession to make sure that the people involved in creating legislation which effects the patent system—doctors, the AMA, Congress and businesspeople—understand the benefits of the patent system, specifically understanding what is in it for them. Then, perhaps the next time around, when we do get to the next step on the slippery slope, there will be more consideration of the patent equities and the economic equities of the legislation, rather than just reacting based on what is politically expedient.

MR. FRYER:

The medical technique patent law is very sensitive and tricky. Congress probably did the best job they could under the circumstances. I recommend an improvement, and I would like to make three or four other points. First, this legislation startled me. It gave me pause for thought on whether Congress was giving up on the usefulness of the patent system.

Economic Espionage Act. I want to point out that another piece of legislation was enacted at the same time: the Economic Espionage Act, which contained a new Federal Trade Secrets Act. It came out under rather unusual circumstances, without having a full deliberation on it as far as I can tell. So, we have more than one instance of legislation being passed rather quickly last year. It essentially established a criminal federal system of trade secret protection modeled on several portions of the Uniform Trade Secrets Act. It certainly will have a tremendous impact. So, we had Congress acting pretty quickly on several pieces of legislation last year.

Effective Communication on Issues Impacting the Public. My second point is that this morning I was in Concord and Lexington, Massachusetts, and I was learning about the history of the Revolution. I think that this event was in certain respects very similar to what happened last year on the medical technology legislation. When the state militia moved onto the hill and lined up against the British at Concord, there was a lot of miscommunication. When they saw the smoke from Concord and thought the town was being burned they said, "Are they burning our town?" and the battle and the Revolution started. In fact, the town was not burned by the British.

When we start talking about health law, a very publicly sensitive topic, we are going to be in trouble if we do not communicate well. I question whether there was a problem with patents on medical techniques.

If we do not have our lines of communication working effectively, a battle could start that should not have begun. Intellectual property law battles like this one could happen again in different areas. This medical technique legislation was quite a warning and we should take it very seriously. Obviously, things do not work out best in the heat of battle and also under the heat of Congress. A full debate is essential before any changes are made to the patent system that has served us well.

Involvement of US Senate with IP Legislation. The third point I want to make relates to the internal workings of Congress. As any student of the legislative process would, I thought there existed a strong system of checks and balances. There is the House and the Senate. Well, the Senate has not been doing very much lately, particularly on this bill. I am quite concerned, and I would like to throw up a warning flag that we have got to get the Senate more involved in intellectual property legislation review.

We have a committee, the Senate Judiciary Committee, that is functioning in a general way. They are handling a lot of matters. We do not have an intense examination of intellectual property legislation going on in the Senate. H.R. 400 has been piled higher and higher with important provisions. The Senate up to now has not taken an active and serious role.

Clinical Exceptions. My fourth point is that I am quite concerned about the clinics and the clinic exceptions in this bill. It seems to me that we ought to discuss that topic. In the convoluted definitions that Bob Armitage referred to, there are some exceptions built into this legislation that deal with clinics. I am just wondering what is going to happen. Are we all going to give instructions for people in the clinics on how to use patented medical technologies, so they do not become infringements because they occurred in a clinic?

MR. BANNER:

No Statutory Exception for Patients. Like Chico, I think it is humiliating for lawyers to be bested by doctors, or anybody else for that matter. But I am not too sure that we may not get, or at least have the opportunity for, the last laugh. None of us will likely take it, but there is nothing in the law that excepts the patient from being sued when he signs a consent form that says, in effect, "Do this surgical procedure." I suspect there will be no such case because it would make CNN just as fast as the *Pallin* case made it. But there is no exception in the statute to such a suit. The doctor would undoubtedly be just as angry as the AMA was in this case.

Influence of the Press. I think this is an instance where we got bad law and we got taken advantage of, in part, by the press. There was a lot of press, at least in the mid-west, on the *Pallin* case and it was

unanimous in its condemnation of the patent system that could have such an impact on people.

What did not make the press were all the arguments that were being vigorously pressed by Gerry Mossinghoff and others as to what the patent system is all about.

I believe there will be more instances coming down the pike where we have to keep ourselves aware of the fact that the benefits of the patent system, whether they are in the chemical field, the pharmaceutical field or computer software field, are understood. There are lots of little inventions. They do a lot of big things. The public does not understand how the system supports them. I think this Act was a direct result of that kind of thinking.

On the other hand, I think the way in which it breezed through Congress should give us a wake up call. The bill, as enacted, minimized the damage to the point of reaching what Bob Armitage calls a "tolerable compromise." I don't think so, but I do believe it is the best we could get because it was clear that it was going to pass. As a personal note, I was surprised because I had spent seven years in the health care field before becoming a lawyer. I had rarely seen the AMA quite as effective. This bill passed because it had tremendous public press and public appeal, more so than any other patent bill we have had in a long time. I think that is a lesson we need to learn.

MR. MUIR:

First, my disclaimer: I'm absolutely certain that this legislation has nothing to do with my employer.

Other Similar Situations in Legal History. One of my hobbies is to collect cartoons about the practice of law. One of them that I have is a cartoon of two cavemen and two cavewomen standing around a fire. One woman says to the other, "They see a marvelous invention and I see more work for us." What occurred to me as I thought of that and listened to all of you was that the entire history of the law is full of circumstances like this. Let me mention just two. How about the statute of uses? How about the statute of wills? These were all enacted at times to solve a particular problem. And what happened as a result of that? A lot more work for us.

I would like to make one other comment relating to the statutory aspect because I've spent much time in the last two years in the halls of Congress talking to staff about legislative matters. One thing I believe now with all my heart and soul is that legislation is far from perfect. I can honestly tell you that there are three organizations in this country where there is no synergy that ever occurs. One of them is Congress. The second is the AMA and the other is the ABA.

Insofar as lawyers being humiliated, I am absolutely certain that there is nothing that can get a Pavlovian reaction from a doctor more than a lawsuit, especially if it comes from one of the 931,000 practicing lawyers out there. But what we learned in this legislation is that we get the same reaction if the lawsuit comes from one of the 16,000 patent attorneys. If we learned that all those doctors have more political influence than we, why were we surprised?

MR. RASSER:

Testing the Economic Incentive for Medical Procedures Patents. Not everybody knows this, but Procter & Gamble also has an active pharmaceutical industry. We are, in fact, a member of PhRMA. We have been following this particular case of sausage-making in Washington and we don't like the undercooked result, but we like it a lot better than the first proposal. We are, from a pragmatic point of view, happy with the outcome, but we also have a concern that this may only be a first step and that there may be other fights to be fought.

Let me go back to the basic principles of the patent system. The notion is that the patent system promotes inventiveness. If that concept is correct for medical procedures, you would expect that as a result of this act the total number of published new medical procedures would go down.

We could analyze the number of new procedures published in the form of a patent application or a journal article from the time before the bill and compare that with what happens from that point forward. If we see a decline, as the economic principle would predict, then we have a case. Then we can go back to Congress and say, "You made a mistake. You underestimated the economic incentive that comes from the patent system and you have been hurting the public because as a result of what you did the number of new medical procedures available to the public has decreased. That can't have been your objective."

I invite PhRMA to do this study and track the new medical procedures that are being published. If I am right, we will see a significant decline, and that will make our case. That way we will be ready if the next attack comes, on the Harvard Mouse or whatever; we will be ready and have the data in hand.

MR. SMITH:

Professional Recognition as Incentive for Research. I think Koos' proposed study would be very interesting. However, my guess is that there probably will not be a drop off. I think that in many of these cases, it is not the situation where millions of dollars of capital have to be raised for research and development. I suspect a pretty strong motivator here is professional recognition and having one's name on a widely used procedure rather than the economic benefit. I think anybody can

recognize that enforcing a medical procedure, or the use of it, even if licensing were possible, would be extremely difficult.

MR. PRAVEL:

Compulsory Licenses Relating to Public Health. As far as the statutory provisions are concerned, it seems to me that what we're talking about is an emotional thing in terms of the availability for doctors to use novel surgical procedures and the health of individual people.

It is not surprising that politicians will vote on this legislation simply to avoid being accused of not looking after the people who need surgery using novel medical techniques. This situation reminds me of the court decisions with compulsory licenses where public health concerns were involved. I throw that out for those of you who are more informed in this area as to what you think may be a compromise here to avoid such things as a compulsory license. That, to me, is more objectionable than the result that occurred in this legislation. Although I do not like the result in principle, I can see why it occurred.

MR. JORDA:

Effects on Health Care Costs. Bob asked me a while ago whether I will speak up. If nobody else does so, well, I'll be glad to put in my two cents' worth. I'm on record in the Germeshausen Center Newsletter and I think it is in your materials. It follows the article on Medical Procedures Patents by Marlene Shinn and it goes under the title of Editor's Forum. Thus, I stated my position. But that statement, even though it is in the Germeshausen Center Newsletter wouldn't get into the record here, unless I at least summarized and capsulized it. I took note of all the apologetic statements made here today about this bill and I was pleased to hear from Chico that maybe it's not all that bad and that we can live with it. I am still very much dismayed, however, about the way this bill passed and, in that respect, let's recall that Lyndon Johnson said that legislation can be compared to sausage-making. Something you do not want to see how it's made. But I am terribly chagrined that we have this law on the law books now for many of the reasons that have already been mentioned. Even though some segments of the industry apparently were in favor of the compromise that has been achieved, let's not forget that everybody else was against it. The American Bar Association, the Intellectual Property Owners, the American Intellectual Property Law Association, as well as the Administration. The Administration was against it for fears that this is going to impact the TRIPs regime we have put in place.

Costs have been mentioned and Senator Hatch made it rather clear that there is absolutely no substance to the argument of the medical profession that health care costs are going to explode. With respect to Dr. Pallin's stitchless cataract surgery, for instance, let's keep this in mind. Sure, he would have collected royalties. Karin mentioned $5.00

and according to Senator Hatch, it would have been $4.00 that he wanted to collect for an operation but each operation saved $17.00 because of the efficiency and simplification of the surgery.

Impact on Patent Law. I am also very much chagrined because of its impact on patent law. Sure, it's an indirect way in which it repeals patent protection but according to our patent system and as per our Supreme Court everything under the sun made by man is patentable. There should not be any exclusions. No direct or indirect exclusions. In our patent system, patenting is absolutely a neutral act and should not be used for social engineering. If there is need to control the commercialization or the practice of some inventions where public health issues are raised, well let's have separate legislation. In our country we can patent any and all medicines, pharmaceutical compositions, devices, et cetera but you cannot commercialize them until you have FDA approval. So, we have separate legislation. Patent Law which is open to protect any and all patentable inventions and the Food and Drug Laws which control the commercialization of new drugs.

Finland found an interesting solution recently. They passed legislation for biotechnology which, on the one hand, establishes that patentability of the biotech inventions are controlled by the patent laws. The same criteria apply regardless of the subject matter, regardless of the type of invention. But on the other hand, social and moral problems posed by the development and use of biotechnology should be addressed and are being addressed now in Finland in separate legislation in their Gene Technology Act. That's a much more rational and much more logical way of proceeding rather than bastardizing patent legislation.

TRIPs. And of course as far as TRIPs is concerned, maybe as a technical matter, Gerry Mossinghoff is right. There is no conflict between the provisions of TRIPs and this piece of legislation but the perception is clearly a different one. And the effect in foreign countries is going to be clearly different because it's already being realized that TRIPs is not going to work. TRIPs is not doable in developing countries. They are not going to be able to live by it. That is why they are now hashing out a new proposal, the so-called Rapid Patent, which is going to change, if it goes through, the patent system as we know it very radically. And the fact that we have changed our patent law and restricted it, is going to make it easier for them to rationalize whatever they feel they have to do in their respective countries.

MR. BREMER:

University Technology Transfer. I wanted to get the university perspective in, as I'm from the University of Wisconsin. Norm mentioned that there were people on university campuses that did not want to be entrepreneurial and tended to look at things from their ivory

towers. That dichotomy still exists and the argument is still going on after all these years, particularly in Europe.

Also, most of the really good research and procedures are done in teaching hospitals that are connected with universities. They are all part of the total picture. These kinds of procedures are normally looked at by a technology transfer group within the university as being inventions that are very difficult to police, if they can be policed at all.

If the procedures are licensable, they would probably be more easily licensed in a block approach. For example, a clinic would give a fixed fee to practice the procedures. Therefore, those inventions would be evaluated on their priorities with the discretionary money that's available to do patenting in the first place.

What I worry about is the slippery slope proposition. One need only go back and look at some of the papers that were exchanged between Madison and Jefferson when the Constitution was being drafted. They exempted intellectual property, as we refer to it today, from the general property laws. The fundamental idea was the feeling that the few creative persons shouldn't be sacrificed to the many. That is, anything that was created by the creative few, if it could help the public, was susceptible to confiscation for the benefit of the public and the rights of the creative few, therefore, would be taken away from them.

We have started down the slope, I think, with this kind of piecemeal legislation. I see it as politically good fodder. It is emotionally attractive and it's a populist approach to legislation which makes everybody look like they're protecting the public, but I think it is very dangerous.

MR. BENSON:

I have a couple of comments. I'd like to have those of you who have really looked into this subject address these issues in our second round. Number one, is the traditional way of protecting one's technology in the absence of patents, trade secrets, a viable alternative? I'm wondering how practical it is for a person who has an invention in this field to protect it by the use of trade secrets.

The other issue is where the industry itself gets together and governs itself. For instance, one particular industry may say that if you have an invention in the safety field, you make it available to your competitors after a year or two so that you don't exercise your exclusive rights on those particular patents after a particular point. In that way it seems to me we're circumventing the patent system to a degree and accomplishing pretty much what this legislation seems to be trying to accomplish. With these ideas in mind, we'll launch into the second round.

MS. GREGORY:

Patient Confidentiality Issues. I'd like to direct the discussion to the legislation, now that we are living with it. Is it accomplishing what it is that it set out to do, to protect the public and eliminate the concerns from the medical community? I'd like to make three brief points relating to that.

One of the major issues of concern was: how would one enforce such a patent? How would one gather evidence to actually demonstrate infringement? I think that would have been an issue. It raises a lot of patient confidentiality issues. There have certainly been comments that a patent holder could go to an insurance company. They could go to clinics. They could go to hospitals and HMOs and seek access to medical records. But all of that actually would interfere with the patient's right to confidential information and the physician-patient relationship. In fact, I think this legislation may actually have spoken to that issue.

Access to Medical Procedures. My second point goes to the issue of access. The proponents of this legislation believed strongly that doing anything short of enacting the legislation would inhibit a patient's or a physician's access to medical procedures. The proponents believed that it was important to be able to give a patient all possible options and all alternatives necessary to make an informed choice about their medical treatment or surgical procedure. It seems that this legislation has gone to great lengths to accomplish the goal of providing access. Physicians practicing another physician's invention will not have to worry about being sued over it. They will freely be able to practice it. They will be able to discuss it and learn from it.

Although there is certainly somewhat of a conflict on this issue because physicians want to publish novel techniques, with most medical publications or scientific publications there is no demand upon the author to fully disclose how to practice that procedure. In fact, it is more or less a chance to generate discussion about the procedure, but it certainly also serves to give credit where credit is due to the inventor or the discoverer of the procedure. So, in terms of disclosure, the patent law may do a better job of providing information to fully practice the invention. In this case, we think the legislation may have gone to accomplish that. If a physician goes to file a patent application and have a patent issued, that information would be available to any physician to learn completely how to practice that invention.

Cost Of Medical Care. My third point goes to the costs of medical care. Karl raised the point whether this really was a legitimate argument. Perhaps if you did a study on whether or not it would save money by having the licensing fee paid—if it was $4.00 to pay versus the

cost of $17.00 and the costs of the other aspects of the procedure—we may, in fact, find that that is not a good argument.

However, the other argument that was made regarding the costs of medical care is one that always benefits lawyers and it's always at the expense of physicians, and that is skyrocketing malpractice costs. The worry is that physicians will be sued because they are not using the best medical practice. If one of the patented procedures happens to define the applicable standard of care, it is possible that a particular physician would not have access to the procedure if they did not have the license to practice it or they weren't able to somehow get it or they refused to refer that patient to someone who, in fact, had the license to that procedure? Physicians may have found themselves being sued by a patient for failure to properly disclose and for failure to provide the proper standard of care. That has been an issue and perhaps this legislation helped eliminate that concern and that worry from the medical community.

MR. GHOLZ:

Enforceability of Patents on Medical Procedures. I'd like to respond to Ms. Gregory's first point having to do with the ability of patent practitioners to enforce patents on medical procedures where the patents are issued after the effective date of the legislation. I've given a good deal of thought to this act because it directly impacts a case I'm working on that is a patent interference. It involves two companies that manufacture medical devices but do not currently have patents on the medical device that would be used to practice this method. They're involved in an interference where the count recites the method.

Probably the one thing both sides agree on, as demonstrated by what the two sides are doing, is that it is worth spending boatloads of money to try to get the patent on the method. Obviously, both companies have decided that if they can get the patent, they can enforce it, but not against the doctors. I don't think that they would have, even without this statute. Medical device manufacturers do not go around suing doctors. They go around suing competitors that are manufacturing devices and encouraging doctors to use those devices. That is certainly what we anticipate doing if we win the interference.

I do not think that enforcement is going to be all that hard. We're going to have to prove that there is infringement. That involves getting a doctor or two or three on the stand testifying that they have carried out steps A, B, C, D, and E. We can find a friendly doctor to do that. That's not going to be a great challenge. I don't think the doctors are going to have to identify their patients, and even if they do, I suppose, the defendant might want to verify that the procedures actually took place.

It does not strike me that the quasi-religious relationship that allegedly exists between doctors and patients is going to stop a federal judge from permitting some kind of limited discovery which will verify that the doctor is telling the truth when he says he carried out a procedure. Doctors don't get away with saying, "I'm a doctor, leave me alone" in litigation. Sometimes they have to answer questions, and I think that the medical secrecy between doctor and patient is not going to be adequate to preclude proving that the procedure took place.

Certainly we are going to be able to prove that third party companies are making the currently nonpatented device and are encouraging it to be used in a particular procedure. I do not think it is going to be a problem. If any of the rest of you see a reason why we're not going to be able to enforce a patent if we get it in the manner that I have just outlined, I would certainly be interested in hearing how.

MR. BANNER:

Enforcement of Medical Procedures Patents. Two arguments were raised in opposition to medical procedures patents. Number one, how would one enforce these patents and number two, if these patents were allowed, would access to the medical procedures be limited?

These are internally inconsistent arguments. If you cannot enforce the patents, how could there be a limit on anything? The fact is they might be difficult to enforce, but Chico has a perfectly good approach and, in fact, many medical procedures are trumpeted in the journals by studies saying, "I've followed 50 patients for five years with this medical procedure." That is an admission, and if that procedure happens to be the patented one, I do not think the real issue would be difficulty of enforcement. Note also that it's difficult to enforce software protection. There are different types of industry solutions to enforcement procedures.

Access to Medical Procedures. Would medical procedures patents limit access to medical procedures? Sure, in some minor respects. Has it limited access to medical procedures since the beginning? Yes. Don't patents always limit, in some sense, access to something? Of course they do. They limit access to drugs; you have to pay for them. They limit access to medical devices. They limit access to all kinds of things. But they provide things as well.

Cost of Medical Procedures. Will costs go up? Costs do not go up because of patents. Procedures may make costs go up and go down. As Karl Jorda said, patents are essentially neutral. I remember in law school taking tax law, something I never wanted to practice. Our professor said that the first line of the Internal Revenue Code states that it is socially neutral. Everybody laughed. Of course, we read the first line. It said all income from whatever source shall be taxed. I haven't

read it in 20 years, but that's what I recall it said. All the rest created social engineering. That, I think, is the issue that this Act gets to. It may have no impact on business today. It may have very little impact that would show up on an economic study. But I predict that some other field of technology is going to be attacked next.

Drugs probably are going to be left alone because the average legislator does not understand chemistry. Biotechnology may be way down the pike for the same reason. So, I think maybe medical devices are likely to be attacked as not a proper subject for patents. After all, poor Mike Ditka has to limp. Wouldn't it be better if he had "free access" to a different, less painful, artificial hip joint. "Why not?" they will argue.

In a totally unrelated area, I think we are going to see some attack on the exclusive rights or, in this case, the right to enforce patents. I do not know what field it will be in, but it might be something in the automotive safety field or in the software field because there, in both instances, you have large groups of interested people who are off on the side of intellectual property and who might make a commando raid on Congress. That is why I think we have to pay attention to Congress and to what is happening there by unrelated industry groups.

MR. ARMITAGE:

Legislative History. We are all familiar with national disasters, and we're all familiar with legislative disasters. What you hear is that it was just God's will. "I was just following orders. The bill would have passed the Congress anyway."

There are many people in Washington, including Senator Orin Hatch and Mike Kirk, Executive Director of the American Intellectual Property Association, and many others who believe that there was no conceivable way that this legislation could have passed in this Congress but for the fact that at the most critical point in the legislative process there was not a critical mass of opposition. Now, I cannot predict the future. Nor can I predict the past. But, in the materials you'll see a paper from Rick Bergoon that will soon be published in the Baltimore Intellectual Property Law Journal. Rick quotes one of the opponents of this legislation as saying, "It isn't all that difficult to negotiate an unconditional surrender."

Let me just address one or two other points. I hope that when I lose a battle that I've fought very hard to win that the other side's victory is totally meaningless. And while we cannot be sure that the victory that we've provided the other side is totally meaningless, in my view, we came very, very close. That is why one can say in a very cavalier way that this probably does not sound the death knell for the research-based pharmaceutical industry in the United States because quite

frankly at the end of this long process I would urge you to read very carefully what was said in the legislative history.

There are two salient parts of the legislative history that you should consider. One is an express statement of what is not intended to be covered by this law. What will not be covered includes essentially everything that the pharmaceutical industry patents in the new drug development process. You will note that among the things not listed in the laundry list of things that are excluded from this legislation are "novel routes at administering drugs including by injection, implantation, fusion pump, or other means." That language was actually part of the legislative history. Those types of method patents are clearly excluded from the language of the statute. The only reason they are not in the legislative history itself is at the very last minute the proponents of this legislation realized that if they left that statement in, the anesthesiologist who very much supported this legislation would realize that they got nothing out of the bill.

Also, if you peruse the legislative history a little farther, you'll see some very bizarre statements about the ability of accused infringers to get out of litigation on summary judgment or other summary means. Talk about burdens of proof that will apply and other totally nonsensical things were put into the legislative history. The reality is that at the end of the day patent lawyers can indeed be more creative than the nonpatent lawyers hired by the AMA to draft legislation.

The key to assuring protection even if one is patenting only a medical procedure is to place in the medical procedure patent claim steps. For example, consider administering a composition of matter to the eye as a pre-operative procedure before you do the Pallin procedure by which no stitches are required when the surgical procedure is over. You will see from the legislative history that by appropriate patent claim drafting one can at least create an issue that will dispose of a case other than by a summary disposition.

As my final point, I question whether we are concerned that the patent system will compromise patient confidentiality, whether the patent system will compromise access to the finest medical care or whether the patent system will unduly burden the medical system with excess costs.

I would submit that we should not be at all concerned about those issues. If we have the slightest concern about those issues then what we are saying is that things like novel combinations of drugs used to treat AIDS, the very thing that research-based pharmaceutical companies this year will spend at least hundreds of millions of dollars testing and developing, should not be part of the patent system. I do not think anyone concerned about the health and well-being of the American public

would ever suggest that the interface between the patent system and the medical care system should to preclude patentability of anything, much less therapies that produce better health, better well-being and longer lives.

MR. MOSSINGHOFF:

Congressional Process. I'd like to comment on Bill Fryer's very thoughtful comments about watching Congress and what happens in Congress. He mentioned two bills.

First, the Economic Espionage Act was a classic case of all of the correct procedures and the correct committees being totally involved in what ended up being, in the view of Congress, a very important political thing to do. There was a joint hearing of the Judiciary Committee and the Senate Intelligence Committee, chaired by Senator Arlen Spector. There was a hearing on the House side and markup by the Judiciary Committee of the House. The subcommittee on Crime was totally involved. Thus, there were two hearings; there was a floor action in the House, a floor action in the Senate and the final legislation agreed to by a conference committee.

If you read a textbook on how our laws are to be made, every procedural rule was followed in enacting the Economic Espionage Act. It was seen by those in charge of politics both in the administration and on the Hill, and others that the spy apparatus which had been set up in the Cold War was now being used to steal trade secrets. In considering the Economic Espionage Act, there were two bills, two Spector bills. One had to do with foreign espionage; the other had to do with the theft of domestic trade secrets. Those were married very quickly, but everything was done totally in the open. The rules were almost classically followed. If you're going to teach how laws are made, every step was covered.

One possible exception was that there was a classified briefing. Having been involved in the defense-space area, I know there are open hearings where a lot of important things are said, but there are also classified briefings where things get more substantial. The classified briefing apparently convinced the Judiciary Committee in the Senate that they really should pass something and pass it soon. President Clinton used it in October as an example of a democratic president being able to work well with a republican Congress to aid U.S. business interests.

Omnibus Budge Reconciliation Acts. What really has to be watched is the OBRAs—the Omnibus Budge Reconciliation Acts that are about 18 inches thick. They are never printed until after they are enacted. At the end of the day, that is where classic House-Senate procedures are totally violated. Everything is done in almost a clandestine manner.

The Section 287 amendment did have support in the Senate. It was mentioned that the Senate didn't play. Senator Gregg was a major supporter of Senator Frist's bill and Senator Gregg happened to be Chairman of the subcommittee that had the Ganske Amendment before it. Things were moving into an appropriations cycle insuring that there was going to be an OBRA. Individual appropriations actions were all to be rolled together, and Senator Gregg said, "This is going in there unless you can come up with something that you can live with and we can live with." So, the Senate was very much involved.

I think it is a legitimate complaint that the Senate Judiciary Committee was not involved. But watch out. Because most of the law that is made, particularly when the Congress and the President being of different parties, is made in each year's OBRA. In fact, with respect to the precursor of H.R. 400, H.R. 3460, that bill came within about three hours of being enacted through OBRA last year and it finally dropped out in a little stalemate between the Speaker and the White House. About 18 things that were in OBRA got dropped out and H.R. 3460 was one of them. That bill was strongly supported by the patent bar and by a lot of other folks to improve the patent system.

I also want to state that I agree with Mark Banner's statement. When you have Senator Frist, one the best known heart transplant surgeons in the country—in the world, and Congressman Ganske, a practicing surgeon from Des Moines, Iowa, stand up in their respective chambers and say that patenting medical procedures is not good for medicine, people listen to them. Believe me, there are not too many lawyer-lobbyists who are going to go around and say that what these two eminent doctors say about the medical profession is not true.

What we ought to do is get Mark to run for Congress from Chicago. That would be my first suggestion. That way we would have an articulate spokesperson in Congress. Where we're really going to see what the patent bar politically can do is with the $92 million theft of patent fees. Mike Kirk is working very hard on it, but the question is "What's going to happen?" Whatever happens is going to happen in an OBRA. A congressperson can be against the diversion, but he or she has got to come up with $92 million to fill in the void if they don't steal the money from the inventors of the world. Also, let's watch H.R. 400. There is a very impressive coalition working on that. But I'll support Mark for Congress any time.

MR. BANNER:

I'm taking donations.

MR. GHOLZ:

We need to see the announcement first. Once we've got the announcement, I'll send a donation.

MR. BENSON:

Trade Secret Protection for Medical Procedures. I am going to share with you Gerry's answer to my question about trade secrets. He said that it is totally impractical to even think in terms of keeping any of these medical procedures a trade secret. Trade secret protection is not a viable alternative to getting patent protection.

MR. MOSSINGHOFF:

Disclosures to the FDA. That is certainly true of anything that is done in the pharmaceutical-biotechnology-device area, because everything has to be disclosed openly to the Food and Drug Administration to get approval.

MR. BALMER:

Implications of Election Year Politics. I've got several quick points. First, concepts such as community standards of care relating to liability with associated confidentiality issues are not unique to the medical profession. They effect the chemical industry, engineering, and many other areas. I do not see much difference in medical procedures as compared to other businesses and industries.

The other thing we should not forget is that last year was an election year. The Economic Espionage Act had some awfully good sound bites associated with it. Can you just imagine the sound bites that would occur on the Medical Procedures Act? "Your incumbent candidate voted against being able to give you the best medical treatment." It is just not going to fly. Members of Congress have one interest and that is to be re-elected.

Now to the slippery slope argument. There was one thing missing in the debate over the Medical Procedures Act and that is a direct interest that has a lot of money. Where is the money coming from to support a contrary legislative position? PhRMA did an excellent job of constraining this to a narrow field to one which an innovator would have a difficult time profiting from patent monopolies. It's not like the pharmaceutical industry or the device industry where a lot of research is turning into a lot of product being sold for significant amounts of money. Certainly, if this legislation were focused against pharmaceuticals, I think we would have had a much different result. There is a lot of financial interest there. Money speaks. We can just take a look at what has happened in Congress the past few sessions. The amount of effort that has been spent on the Rohrbacher bills and on H.R. 400 has been substantial. Contrast that with what happened with the 1952 Act where there was basically a yawn with a rubber-stamp. Yet there were fundamental changes to the patent system. We are living in a totally different era.

Trade Secret Protection for Medical Procedures. The last point I want to talk about is the trade secret alternative. Is it possible to

maintain a medical procedure a trade secret? Can a clinic keep a medical procedure to itself without having to go through FDA approvals and things of that sort? I do not know the answer to that. But, I was musing that it may be quite interesting for a clinic to come up with a procedure for treating heart conditions while another clinic purloins the procedure and uses it on Yeltsin. Then we'll apply the Economic Espionage Act and send some people to jail. Wouldn't that be interesting? Patents seem tame in comparison.

MR. MACKEY:

Compulsory Licensing. I'd like to borrow something from Mark Banner. At least he reminded all of us that while we are troubled by this piece of legislation as a possible trend, we should keep in mind that there exists today in the U.S. patent system compulsory licensing under Section 1498. There is a history of litigation, which I characterize as the activated sludge case where a patent was not enforceable. That may be helpful in keeping a perspective on how bad this really is; maybe it isn't so bad.

MR. GOLDSTEIN:

Trade Secret Protection. A very quick note on the trade secret issue. Quite apart from the FDA aspect, I think that the realities of the situation work against trade secret protection. Individual physicians want peer recognition for their work. Also, the way that scientific and medical procedures get recognized is by acceptance via peer review. The only way a physician will get that acceptance is by full disclosure of the invention. So, quite apart from the regulatory needs, the realities of medical practice eliminate trade secrets as an effective protection mode.

To me, the critical issue we must face is not this specific legislation, but instead the procedural aspect and what it means for the future. One of the things that Karin Gregory stated in support of the legislation is that it would enhance access to the best, most effective treatments. That is true because patents inherently limit access to some degree, but that argument is not only applicable to surgical treatments. The access issue is applicable to many types of technologies and that is the type of issue we have to be wary of in the future. This same argument could be raised for other types of inventions, but it must be countered by an understanding of the benefits patents provide.

Congressional Actions. Money is very important in the legislative process. Research costs and the potential money to be made by producing and marketing new inventions is very important. But there is also money on the other side of this debate as well. We're dealing in a context that we, as patent lawyers, are not necessarily accustomed to.

Even though there is a lot more public focus on IP matters now, you see issues like the current patent reform bill which take years to

muster the kind of interest and required support to get passage through Congress. Whereas the medical procedures legislation carries greater public interest. When you're dealing with medical treatment and pharmaceuticals, you're dealing with doctors. You're dealing with a public that is extremely sensitive to medical costs. You're dealing with a very hot political issue in terms of keeping medical costs down.

The other thing that hasn't been mentioned today is the relationship with insurance companies. I am not sure where the insurance companies were in the debate on the Surgical Procedures Act, but at some point I would not be surprised to hear insurance companies weigh in and say that the fact that a particular treatment or a particular pharmaceutical is patented keeps the cost of that treatment or pharmaceutical high. While there are other very strong arguments that can be made with regard to the beneficial effect of patents on innovation, those arguments are more difficult for the public to grasp than the very tangible, "It's going to keep your health care costs down."

My bottom line on this is that we have to be very vigilant. We have to watch congressional action on patent issues very carefully. When we see bills that act to decrease the scope of patent protection, we need to act early and in a very unified manner. We need to lobby very hard as a group to ensure those bills are decided on facts, not on emotion.

MR. FRYER:

Alternative Incentives for Medical Innovations. After covering a few other points, I'm going to answer my own question since no one has mentioned the clinical exception.

First, I suggest a hypothetical for discussion. Let's pass a bill providing for some kind of licensing fee or compulsory license. Let's allow the doctors who develop these techniques to get some reward. They are going to get a patent. Why are they going to get a patent? They are going to have a patent sitting there and they're not going to be able to enforce it. For discussion purposes, why not have another bill introduced that would provide for compulsory licensing or at least a policy that would give these doctors some reward?

If we really believe in the patent system as an incentive, then it seems to me you've got half a patent in this case. You have your patent but there is nothing you can do with it. The patent bar might want to get behind something that gives doctors who come up with patented medical technique inventions some reward.

I realize the patent bar's attitude toward compulsory licensing is fairly negative, to say the least. We should consider the way copyright law deals with some of their problems, like public broadcasting. Copyrighted broadcast materials are shared and go through a royalty determination process. We may be pushed in that direction.

Clinical Exception. As far as the clinical exception is concerned, it seems to me, at least where I used to live in South Dakota, that clinics are gigantic. There is usually one major clinic in a town. So, you're really looking at sizable businesses. The question is whether these clinics are going to become major problems for the exception built into this legislation allowing for noninfringement uses.

Insurance Companies as Potential Lobbyists. My final comment is about insurance companies. I have had personal experience with the role of insurance companies in trying to change the patent system. In the industrial design protection area, they are the major opponents to design protection improvement. Because of their financial interests in not protecting crash parts, they were against improvements in the intellectual property system. We might find a hidden sponsor behind the opposition to medical technique patents. Insurance companies do not necessarily show up as front line troops, but they are in the background sometimes. They have underwritten legislative opposition to intellectual property law proposals with tremendous amounts of money.

A very strong force of professional lobbyists is out there who are keenly observing every development in intellectual property legislation, and they are operating very effectively. They stopped, for the present, the improved U.S. design protection. They moved to Europe and used the same kind of strategies in connection with crash parts and have delayed enactment of the European Community Design Directive and Regulation for a couple of years. My point is that there could be more behind the medical technique legislation situation than meets the eye.

MR. MUIR:

Examining Bills Before Congress. Steve Goldstein said everything that I was going to say so, I'll just second that in a little different way. I believe much of the concern around the table today is about precedent setting. We've termed it the slippery slope. Steve has said to us that we must be diligent in examining bills before Congress. We're not saying that the people involved were not diligent in this particular instance; however, there is a cliché, "get me once, shame on you. Get me twice, shame on me." Perhaps that sums it up. For those of you who believe in your crystal ball, that this is precedent setting and the snowball will get bigger and bigger. I have written this note to myself: sell U.S. Surgical, buy Caterpillar.

MR. COLEMAN:

Public Disclosure. I haven't heard anybody around the table really talk about the morality issues involved. Should there be limits on what you can patent? For example, is it "immoral" for one of the big for-profit hospital corporations to patent processes in the field of medicine? Say a large for-profit clinic develops a medical procedure and

they patent it. What's to stop some big hospital corporation or some huge clinic, which specializes in some rare heart surgery, or liver disease, from monopolizing the procedure and not licensing others? Just think of that possibility. So, what do we do?

One argument supporting patent protection is that it assures disclosure, although perhaps this is done through the FDA procedure. I do not think this argument is persuasive, as it is my experience that the first thing doctors do whenever they make a discovery is to run out and publish. You can't hold them back. Hence, you do not need the patent for disclosure since publication usually results in earlier disclosure.

Compulsory Licensing. Now, with respect to the new Medical Procedures Act, let's consider the other side. Maybe there is no problem if licensing is assured. Should the law be modified? Maybe in this instance, even though it's a horrible word to patent practitioners, compulsory licensing should apply.

MR. BENSON:

Bob Armitage wants to answer all your questions for you.

MR. ARMITAGE:

Morality and the Patent System. As far as I know, both the patent system and the drug industry in one sense have nothing whatsoever to do with morality. For example, imagine that you had a cure for AIDS and decided that the only people worthy of enjoying your cure for AIDS were those who were not intravenous drug users. You believed that intravenous drug users should be condemned to death by AIDS rather than get your cure and you try exercising your monopoly power. I do not think it would take you very long to realize that the judicial system lives in the real world and that monopoly power could not be successfully exercised.

Now, the specter of people in grave need of, for example, heart surgery, having to travel to some remote place in southern Utah because the clinic there claimed that it would exercise its monopoly power and only allow the surgical procedure to be used there, to me, is equally ludicrous. The economic imperative of the patent system for people who sell drugs and for people who wish to profit from medical devices or surgical procedures is that they make more money when those procedures are available to the public.

The dilemma here is that while no one argues about whether procedures should be freely available, we seem to be caught up on the idea that some of the technology we've created should be available for free. Indeed what the opthalmological surgeons of this country have decided to do is grant each other royalty-free compulsory licenses for certain technology they create while on the other allowing some of their members make vast sums of money licensing either their names or their

patents in areas where they've decided there won't be royalty-free compulsory licensing. I would suggest that that isn't a greater exercise in morality simply because they have made these rather pragmatic economic decisions among themselves.

MR. JORDA:

Historical Footnote. Just a quick historical footnote. I think this fits in with Ed's questions and Bob's answers. It is one that I found in the *National Law Journal* of December 30 by Bob Kunstadt who is a partner at Pennie and Edmunds. He says, "Don't Tailor Patent Law for Special Interests." That's the title. And he says, "In 1896, the *Scientific America* magazine reported that the U.S. Patent Office was ready to grant patents on medicines, although it is an open question in professional ethics whether physicians should patent a remedy. Despite such initial misgivings, the patent system in the intervening years facilitated such advances in life-saving medical care as the vast array of miracle drugs and fabulous medical devices like the CAT scan and the pacemaker. The repeal of patent protection for medical procedures on the same ground of professional ethics that 100 years ago were leveled against drug patents disregards the proven value of patents in encouraging innovation in all fields." Now, can you imagine a world without the miracle drugs we have and the medical devices? I just hope that the Medical Procedures Act is not a drag on innovation in this field.

MR. BENSON:

Anybody else before we switch subjects? Karin?

MS. GREGORY:

I thought I would have the last word, since I had the first one.

Traveling to Clinics for Special Procedures. Just three comments, the first to Bob Armitage who was discussing the ludicrousy of having people travel to a clinic for a particular procedure. I think people routinely travel all over the word, cancer patients especially, to find the most appropriate and potentially life-saving chemotherapies, radiation therapies or other procedures, as do folks who are looking for transplants. So, I actually think that we see a lot of that in the medical industry.

Trade Secret Protection for Medical Procedures. My second point was to follow up on the comments on how inefficient it would be for the medical profession to use trade secrets if they were going to keep their procedures from others. I think that it's actually ludicrous to imagine that patients could keep a secret. Most patients, especially breast cancer patients who have received breast surgery and people who get cosmetic surgery, love to share the stories and actually oftentimes display the artwork that they have received from their physicians. So, in fact, I cannot imagine that patients could keep secret what the physician may want to keep a trade secret.

Genetic Engineering Ethical Issues. My last point goes to Mark who is worried that medical devices may be next in line to go by the wayside or perhaps be attacked. I'm a little more worried about something else. I am more concerned about genetic engineering right now. We are looking at "Dolly" and at commissions being put together fast and furiously around the country—in this country and in Europe where they're revisiting the moral, ethical and religious debate around the cloning of "Dollys" or the cloning of humans or animals. I am much more concerned that this will give more fuel to the fire. Since we've got people right now making these decisions, I am more interested in trying to lobby hard to make sure that we do not ban things like cloning and ban genetic engineering because that will certainly set some of our clients back hundreds of years.

V. ADDITIONAL MAJOR PROBLEMS

MR. BENSON:

What I want to do now is move over to the free-swinging part of our program in which each one of you has the opportunity to tell the rest of us what you see as the major problem facing the patent system today.

MR. SMITH:

No Problems. I have been thinking about that since this morning and I do not think the patent system has any problems at all.

MR. RASSER:

Cost of Worldwide Patent Protection. I disagree. We have several. The most important one in my mind is the cost of obtaining and maintaining patents around the world. It has come to a point where if one wants to protect an invention in a reasonable number of countries around the world and maintain that patent for its lifetime, you're looking at about a half million dollars for that one, single invention. That would be okay if that one single invention was going to make you a couple million dollars.

But, as you all know, you have to file quite a number of patents in order to get one product protected, not counting the ones that you file at the stage where you really do not know if they're going to pan out or not. So, one faces the decision of whether to seek protection or not and it strikes me that that is counter to what the patent system stands for. There are all kinds of reasons why this is so, not the least of which is that money paid to government agencies are not always used in support of the patent system. The $92 million here in this country is only one example. The lack of harmonization is a major source of cost. I could go on and on. My point is it's too expensive and much more expensive than it needs to be. It has reached a level where it is no longer possible to really use the system for what it's intended to do.

MR. PRAVEL:

Patent Fees Taken by Congress. I think the most evident problem in the system today is the way in which the money paid in by the people using this system to obtain patents is being taken by Congress. Of course, we are confronting that problem and dealing with it now, or trying to. But it does not seem to have much effect, at least as far as I can tell from the reports.

PTO as a Government Corporation. The only other thing that I think would be an improvement would be to have the Patent and Trademark Office as a government corporation. Then, it would be handled by people who know the system and, to some extent, it would take the government policies out of the picture and allow the system to run more like a normal business operation.

MR. MUIR:

Law Schools. I certainly agree with both of those comments. I would add to the list what I'd call a general category of lawyers, law schools and courts. Let me pick on the law schools first. The major problem with law schools is that they discriminate against engineers and thus hold down the supply of patent attorneys. The supply of patent attorneys, I think, is critical at this time. What do I mean by that? I know as a matter of fact that it is easier to get into law school with a straight "A" musical degree than it is with a "B" average if you're a chemical engineer. Maybe if you have a Ph.D. in chemistry it's easier. I'm not certain, I've not experienced that. We as a profession have not addressed the need for patent attorneys and right now, law school enrollments are down about 30 percent. I think it would be a marvelous opportunity for us to work on getting more engineers to enter the profession.

Franklin Pierce has done a wonderful job in turning out some fine patent attorneys. And we're thankful for that. That is probably the reason that all of us are here today. But in general, I submit that the average law school does not care. My undergraduate university is dear to my heart. It had a law school before it had an engineering school and I have offered to go there to lecture. But those lawyers that teach law really do not want me on their turf so, I come to Franklin Pierce. I'll leave it to you to judge which one has won and which one has lost.

Lawyers. I'm of the opinion that business and law and maybe all of us are like sheep. You know, it took me many, many years to realize that when I sang "I am Jesus little lamb" that I was giving myself an insult. There is not a dumber animal in the world. When I say we're all perhaps like sheep, I am not giving you a compliment.

Business and people tend to follow sports. In the 1920s, it was "it's not whether you win or lose, it's how you play the game." And the

practice of law was very much that way. Along came Vince Lombardi who said "winning isn't everything, it's the only thing." Then lawyers started to emphasize winning as the only thing.

I have seen, and I bet all of you have seen, the creation of evidence where none otherwise existed and submitted the same to the court. Lawyers are part of the problem. Where are we now in sports? It is not just winning. It's "in your face." If I can't beat you by 50 points in basketball, then it's not good enough. And now in courtroom practice it is the same principle. We've already heard speeches about "Rambo" lawyering. I was recently in a case against a lawyer—not a patent lawyer—who told me that he did not believe he was doing his job unless he was sanctioned. That is a problem. Now, I conveniently picked on the general attorney. But I see this more and more in the practice of patent law as well.

Courts. The courts are a problem too; not the judges, necessarily. I would never want to be on record as criticizing any judge. The courts are so overloaded with drug cases that it is hard to get an ordinary case to trial in a reasonable time. We all know that time equals money. Now we are back to the number one problem: cost. I do not know what we are going to do about the drug cases. I do not know whether we need more judges or some other solution. But courts are a problem.

The Federal Circuit, which we thought was going to bring some consistency, is still developing. I would say it is still in its adolescent period. We need to get through that a little faster and help it along. In fairness, I think we've had more Supreme Court decisions in intellectual property in recent years than we've had in the prior half century. So, I think the Supreme Court has gone a long way to help bring stability in the law. But back at the battle front, things are not as good as they should be.

MR. MOSSINGHOFF:

Borderless Patent System. I totally agree and will carry it a step further. I really believe that the biggest challenge we face is chauvinism and parochialism in the patent system by the people operating and using the patent system.

This country's patent bar should be the leader in the world in shunning parochialism and chauvinism and moving toward a patent system without borders, a patent system where we would have several regional offices of a unified world patent system. There would be a U.S. circuit of a world patent court, staffed by multi-national jurists. There would be automated searches of a single worldwide data base. We obviously would have to give up our rather curious first-to-invent system and go to first-to-file in order for that to work. We should do that very quickly. But it just seems to me that everyone in this room has a stake in solving the problem of the enormous cost of securing worldwide patent

protection. You do not solve it by tinkering with this or tinkering with that. You do not solve it from the bottom up. You solve it from the top down. And there really should be a move toward a patent system without borders.

People are talking now about the European Commission patent. I believe that is going to come into effect theoretically. It is never going to come into effect practically because one would have to submit nine different language documents to the Patent Office—whatever there is to administer the system. That soon is going to grow by three or four more so there will be thirteen languages in all. English should be the only language used in the world patent system, both for examination and enforcement. There should be an English system, just like there is an English system for worldwide air traffic control. Between 75 and 80 percent of the patents filed in the European Patent Office are in English now, with less than five percent in French.

Someone at a senior level in the patent bar should set a vision and move it from the top down to have as a goal by the year 2010 or 2015 for a borderless patent system that uses a single worldwide search of worldwide documents, issues worldwide patents and uses multi-national panels of jurists to enforce those patents. The cost of the present patent system is enormous. Governments around the world experience the same pressures that our government does and yet we have twenty different examinations done on a single invention, searching the same prior art, at least theoretically. That just defies logic in my opinion. So, I think the biggest challenge that the patent system has is to invent and get accepted this top down patent system without borders.

MR. MACKEY:

Patent Costs. These are very tough acts to follow. I think that about all of the problems with the patent system that occur to me can be summarized by saying that the cost of obtaining, maintaining and enforcing patents is too high and certainly could be considerably reduced by dealing with some of the matters that have just been mentioned. If you want to identify problems for some future session, you could look at one of the several subsets of any of these problems that have just been touched on.

MS. GREGORY:

Gene Therapy and Transgenic Animals. Even though I'm not a patent attorney, I hope I mimicked one well today. However, I do, in the course of my practice, work with patent attorneys all the time in advising my clients on technology transfer issues. One of the biggest complaints that I hear is the lack of understanding by the Patent Office about complex medical or scientific developments around gene therapy and transgenic animals. It seems to me that somehow that should be

addressed either through education or some other means. The Patent Office should not fear acknowledging that these types of inventions are, in fact, patentable.

MR. GOMEZ-SEGADE:

Translation Costs and Use. I am José Gomez-Segade, a professor at the University of Santiago de Compostela, Spain. I am now here at the Franklin Pierce Law Center for a month to teach International and Comparative Trademark Law. I have only a comment about the cost now. In the European system, the European Patent Office is starting a reduction of the cost because, as you know, if we average eight countries, the cost of a European patent is about $30,000. This is too much, really. So, for the first time the European Patent Office has reduced fees but the translation costs are still really enormous.

However, as you know, the matter of language poses a very difficult question because of political reasons, at least in Europe, and perhaps all around the world. To maintain all the information on technology in only one language—and English was proposed for the European patent system—it will be very difficult to implement because—well, is very difficult for Spanish speaking countries, not to mention France, to accept English as the only official language. But I do believe that the system must be improved. Translating everything into Finnish or into Greek is simply crazy, because as you know—or perhaps you don't know—the average use of translations into national languages is less than two percent. So, this amount of paper is gathering dust in the buildings of the European National Patent Office without any kind of benefit. This cannot go on, and the European Patent Office had it on the agenda at their March meeting in Naples, but I do not know the outcome.

MR. MACKEY:

I don't think there was any end result.

MR. GOMEZ-SEGADE:

Use of Translations. But the issue will not go away because recent studies about the use of translations have shown that it has gone down to only one percent.

MR. GOLDSTEIN:

Costs. I have to second the previous speakers who spoke about costs being the major issue. Particularly in the international arena, but also in the U.S. We have heard about the problems a large company has when trying to protect many technologies with a full blown international patent portfolio. That is all very true. It can be seen even more graphically with small companies, start up companies and even some universities. We have seen many cases where the driving force behind individual technologies is: "Can we pay the cost to get this patented? Can we afford to file in the United States? Can we pay the costs that are

necessary to file around the world?" It really can be a barrier. This is true even in the U.S. where the costs are relatively low.

In the U.S. there is also a value-for-money issue: the costs may be lower, but there are still issues, even with the new emphasis on consumer service, in terms of the quality of the services that you get. We've regularly seen instances over the past few years of lost files, low quality office actions and incomplete searches. We just had a case with over a two year delay before we received the first office action, an incomplete office action. There are also uncertainties regarding the enforceability of patents where an incomplete search has been made. So, even though the costs in the U.S. are lower than in other countries, it is still a significant amount of money and the quality of the services provided is not what it should be.

MR. GHOLZ:

Proposed Amendment to 35 U.S.C. § 135(b). I'm going to introduce a new topic. I know this is not the most important issue in the patent system, but it is an important issue which is very alive right now. It concerns H.R. 400 and an attempt being made by the A.I.P.L.A. and its executive director, Mike Kirk, to get an amendment made to the current draft of the bill. I will tell you what this is all about in a moment. The reason I am raising this is to attempt to get some help from people around this table right now because it is important now. By the time this is published in *IDEA*, the change is either going to have been made or it won't have been made. Thus, I hope to recruit some of you to help us.

It will not surprise several of you that I am focusing on 35 U.S.C. §135. That is the section that has to do with patent interferences. In particular, I am focusing on the amendments to section 135(b). As it currently stands, there is one element in section 135(b). It provides that you get a year after the issuance of a patent to present a claim that conflicts with at least one claim in that issued patent for the purpose of getting into an interference.

The proposed legislation, as it currently stands, will divide 135(b) into two sections: section (b)(1) and section (b)(2). Section (b)(1) will continue to give a year after the issuance of a patent to present a conflicting claim for purposes of an interference. Section (b)(2) will state that one has to have presented the conflicting claim prior to the publication of a published application in order to get into the interference. If, indeed, we go to published applications in the near future, section (b)(2) will always apply. Section (b)(1) will never apply because the only time section (b)(1) would apply is when a patent issues in less than six months and that never happens. So, practically speaking, the time frame that one will be working against is that set by section (b)(2).

The conflicting claim must be on file prior to publication of the published application.

That might not seem bad. In fact, the argument is made that if we do not have this rule, people will see the published application for the first time and then will run down and file a patent application in order to provoke an interference. I am sure that will happen from time to time with published applications because I know it happens from time to time when a patent is issued. Well, if you are just getting your patent application on file after the other guy's patent is issued, aren't you inevitably going to lose the interference anyway because you're going to be tremendously junior? No, because the situations where this arises in real life are cases of alleged derivation.

For instance, you may only file a patent application when you see that the company that you were previously working with on some sort of a confidential basis has filed what you believe to be an application on derived technology. You were not going to file an application. The other side did. Once the patent issues, you can file your patent application immediately, seek to provoke an interference, and prove derivation. That happens. This is a real life situation. I have seen it in my practice—not frequently, but on occasion.

What the A.I.P.L.A. and Mike Kirk are trying to do is to get section (b)(2) as it stands in the bill broken down into two separate subsections. The add-on subsection would provide that, if the party trying to provoke the interference alleges derivation, you get a year to file your patent application to provoke an interference.

This is something which is very alive right now. I have spent the last several days going back and forth with Mike Kirk on various versions of the language. Mike is now dealing with representatives of the university community. The reason I am turning to Howard at this point is because I think he is here as a representative of the university community. He may, in fact, be involved in this process. Mike is dealing with whoever he sees as a representative of the university community to attempt to persuade them that they also can be ripped off. People can work with a university and then file applications based on derived technology, and the university would not know that that was going on until the publication date. At that point, the university should have the opportunity to seek to provoke the interference.

So, I solicit support from those here. If you are persuaded by my pitch, please contact Congressman Cobal and indicate that you are in agreement with the amendments which the A.I.P.L.A. is seeking to make in the proposed re-write of 35 U.S.C. §135(b).

MR. FRYER:

Design Patents. One of my major efforts has involved working with design patents. There are some topics on industrial design protection that I should mention, as major issues needing review, like improving the effectiveness of design patents and providing some other simpler form of protection. I have a short list of other patent law related issues.

Transition of PTO to a New Form. My number one administrative concern involves reorganizing the examination groups into industry sectors. It's like moving a house to another location. We're going to have to reconnect the pipes. We are going to have to change a lot of things. During this time, problems can occur. Right now, within the PTO, there is much that is unsettled. Most concerns have to do with the fact that the money available is inadequate.

Patent Attorney Qualifications. Another administrative problem, which is a longer-term one, involves the qualifications necessary to practice as a patent attorney. The PTO is in the process of examining how people should qualify. There were more than a thousand people taking the PTO exam in 1996. Many of them are passing who don't know how to practice patent law. There is a real problem now about how to get people properly qualified, even if they have the technical degrees. The PTO, professional organizations and law schools have to deal with this problem.

First-to-file System. On my patent system list, the most important issue that has to be resolved is to finish interfacing effectively with the rest of the world's patent systems. In particular, if we are going to a first-to-file system, we need to plan how we're going to make that change. This detailed review has not happened yet.

We still have the issue of adding a prior user right that is not recommended by a lot of people. It is uncertain how this will work with and without first-to-file. My major concern in the patent system is how to change the U.S. utility patent system so it works properly. H.R. 400 includes some useful revisions, but these changes are not the complete answer.

MR. FIELD:

Education. I think a major problem is, and always has been, education. Bob Armitage's discussion had to with education: people who don't understand the system. This also ties into what Steve Goldstein said. I think small inventors, small firms and universities have a very serious problem.

Big firms have problems with costs. At least they have the personnel to do cost-benefit analyses to decide whether to file in the U.S. or to file in countries X, Y, and Z and whether to pay maintenance fees and so forth.

I'm on an e-mail list with people that are overwhelmingly ignorant about how to spend their money. Interestingly, they don't trust patent attorneys because they obviously have a buck to be made. I think that is a really serious problem. Where do these people turn?

MR. CROOKS:

PTO as a Government Corporation. I'll go forward to a problem I can foresee for the future. The one that concerns me relates to the establishment of the Patent and Trademark Office as a government-owned corporation.

I think it is fine that a profit-making organization like the PTO is going to have its own identity, but I am not so sure that it is going to be its own entity. So many of the matters mentioned in the version of H.R. 400 which I have—which may not be the up-to-the-minute version—require the Director to go through the Secretary of Commerce in his reports. Title I, Subtitle A, Section 3 states, "The management of the United States Patent and Trademark Office shall be vested in a Director of the United States Patent and Trademark Office . . . who shall be appointed by the President. . . ." That's paragraph one. But later in paragraph (2)(c), the Director is required to consult with a Management Advisory Board of twelve members. The Director is required to consult with them on a regular basis about matters relating to the operation of the Office, including budget proposals. Four of the members are appointed by the Speaker of the House of Representatives, four by the Majority Leader of the Senate and four by the President. The members would have staggered four year terms according to my version of the bill.

The function and modus operandi of the Management Advisory Board have not been spelled out in the bill though. It appears that the author envisioned a board of directors. But the proposed Management Advisory Board is not given the authority to act as a board of directors does in a business corporation. Moreover, the Director cannot nominate the members of the Board, as some chairmen do in commercial corporations, so as to secure the election of members who, by a mutual back-scratching arrangement, will do the will of the Chairman. Although the Director is required to consult with the Board on matters relating to the operation of the Office, is he or she bound by the actions of the Board? If the present text of the bill is not clarified, I can foresee a loosely defined and possibly malfunctioning organization. So, although that problem does not yet exist, I hope the ambiguous text will be cleared up before the problem in fact materializes.

MR. COLEMAN:

Patent Office Funding. My first comment relates to Patent Office funding and organization. It must really gall people that a good

portion of the cost to applicants for patent processing is going to the general fund instead of to enhance the services of the Patent Office.

Law Schools. The second issue concerns the shortage of patent attorneys. The hypothesis, as I understand it, is that law schools do not admit a sufficient number of those with engineering backgrounds. Or did you mean that those with engineering backgrounds do not have sufficient interest to enter law school?

MR. MUIR:

Number of People Going into the Sciences. Part of the problem is that we do not have sufficient numbers of young people going into the sciences as undergraduates. While I am critical of law schools for admitting vast numbers of others where I think there is over supply, and not taking enough engineers, the real need goes all the way back in the pipeline. You can even take it back into high schools and grade schools.

MR. COLEMAN:

Patent Bar Exam. So, the discussion relates to the source of that talent. But there is another interesting aspect that keeps down the number of new patent attorneys. Namely, only 30 to 35 percent are passing the patent bar exam. Further, now the PTO only gives the exam once, instead of twice a year, as had been the practice for years. Hence, for the purposes of enhancing the quality and number of attorneys, certainly that matter should be addressed.

MR. BREMER:

Cost of Protecting University Basic Research. I think from the university perspective, we have to dwell on costs and I'll attack that from a little different viewpoint. You have to realize that within the universities the government spends tax money to the extent of $4.6 billion a year for basic research. The universities are really the only place where truly blue sky research is done today. The results of that basic research cannot be protected—and it cannot because there is very little discretionary money, as Steve Goldstein pointed out, to do those things. That is giving away basic research results to foreign companies and foreign countries.

Because the universities still operate under the "publish or perish" paradigm, the information and results are going to be published regardless. I always say it is publish *and* perish because that "giveaway" can have a fundamental effect on global competitiveness. You're putting other people into the mix who are not part of it because you can't get the protection overseas. So, the cost of protection and fear of the cost of litigation are very important factors to universities.

One has to realize that it is tax money, your money, that is supporting all of this research and what comes out of the research is not the whole loaf. That is, you're only getting part of the loaf because

protection is lacking and they are unable to pursue protection under government sponsored research. That has been tried. It has failed every time. The government agencies will not consider intellectual property law protection, if you want to call it that broadly to sweep in everything, as a legitimate expenditure under a research grant.

MR. C. BENSON:

Law Schools and Recruiting. The last time we were here, I think virtually everybody complained about the cost of the patent system, whether it be obtaining or enforcing a patent. I am hearing a fairly common theme now. But before I get into my comments, I want to first address the subject of law schools and recruiting. Thirteen years ago I graduated from the University of Wisconsin Law School. When I was there between '81 and '84, I was treated like a second class citizen because I was and had been an engineer. But I'll tell you, things have changed. We hire people who are exclusively engineers or primarily engineers at our firm and we have 138 of them now. When I started, we had 38. So, in that period of time we've been able to call on a number of law students that do have those degrees, but I still think there is a shortfall in the schools. Interestingly, I recruit at various schools, including Wisconsin and everybody tells me that they are a patent attorney now. Whereas when I graduated, nobody would admit that they were even thinking of being a patent attorney.

Markman *Hearings.* Now I will get back to what I consider the biggest problem in the patent system. I am going to talk about litigation and, in particular, *Markman* hearings. I thought that the *Markman* decision would help us reduce the costs of litigation. I think it will, but the problem is the way the Federal Circuit handles claim construction on appeal. That is a big problem.

What's happening now is that virtually all defendants, and even some plaintiffs, request a Markman hearing right away so they can get the claims construed and narrowly focus the lawsuit. They think this will help them in discovery and they can use a rifleshot-type discovery. Typically, they then go through the rest of the case, which may involve a trial or just some summary judgment proceeding to a finding of infringement or no infringement. The case then goes up to the Federal Circuit. Then the Federal Circuit, without deference to what happened below, decides what it thinks the claim should mean. This is a big problem because it is a waste of judicial resources.

What we should do, if the Federal Circuit continues with this practice, is just file the suits in the Federal Circuit and ask them to construe the claims. I know that is impossible, but that is what is happening. Some trials cost a million dollars. Some cost a lot more than that and then the Federal Circuit decides what the claims mean. Often,

the Federal Circuit does not remand the case back to the district court, but instead renders its own decision.

We must rein in the Federal Circuit. We have got to tell them that they have to give deference to the trial court's claim construction and that if their claim construction is different than the district court's, or if it's different than either parties' proposed claim construction, the case must be remanded to the trial court.

You will notice there are many *cert.* petitions that have been filed on this very issue. We have got to address this issue because otherwise, we do not know how to advise our clients.

MR. BANNER:

Delays Involved in Enforcing Patents. I'll simply say that the biggest problem that I see is the delay involved in enforcing patents along with the associated costs.

MR. BALMER:

PTO Organization. Gordon Smith made an interesting comment when he said he thought there was nothing wrong with the patent system. I did a little bit of thinking about it. I had almost an hour to do that. It depends upon what you're looking at as to whether there is a problem. I'm not going to disagree with any of the comments made here. There are difficulties, there are challenges. But if we agree the patent system is there to promote innovation, can we say that the system is failing us? It has a lot of shortcomings, but I cannot say from a policy standpoint that the patent system is not doing its job. Can it do it better? I'm not sure what the result would be if it did do "better."

But with the 20,000 foot view expressed, now I can get down to my pet peeves. We talked about slippery slopes before. I think the Patent Office organization itself is on a slippery slope. We have, as Gerry Mossinghoff referred to, a tremendous amount of prior art being generated. We need to access that. That is going to be costly. Can any country really afford to do it by itself? Yet we are going down that path and we are doing it poorly. We're operating within a political environment. The sequestration of PTO funds occurred several years ago and the sequestration has ratcheted up to the detriment of infrastructure development. Where is this going to stop? We've got infrastructure problems within the Patent Office. How is that going to change?

It takes a policy shift. Who is the policymaker for intellectual property in the United States? Is that policymaker changing? Will that policy making be taken away from people that understand intellectual property and move more toward those looking for political tradeoffs?

Intellectual property has grown to the point where it is a significant bargaining chip and people who want to play that bargaining chip are pretty high up and pretty global in their viewpoints, which

means the policymaking role does not get down to people who know what they are doing.

A final point is that if you take a look at patent systems, they're basically the same kind of structure that we had when we first opened trade with Japan in the 1800s. The question is, are those structures relevant to today's world? Most of the companies, Caterpillar and others around here such as P & G, are international. They conduct research in many places around the world. No longer can a U.S. industry dominate the world as in the 1950s. These are the 1990s and we're slowly but surely losing even parity with the rest of the world.

MR. ARMITAGE:

First-to-File. After Carlos made his statements, I was convinced there was nothing for me to say because while you emphasize costs, I could equally emphasize waste. After Gerry Mossinghoff was finished speaking, I was sure that he had identified the most important problem that the English language should be the currency of patents. Translations do nothing more than degrade the technological disclosure and the more translations, the more expensive the degradation.

But then as we moved around the table and Chico spoke, I realized that indeed let's not forget that the most important problem facing the U.S. patent system today is that we still haven't introduced the first-to-file concept into our patent laws. As soon as we do this, we don't have to worry about whether 35 U.S.C. § 135(b)(1) and 35 U.S.C. § 135(b)(2), in fact, cover the contingency of derivation that I guess now will be in 35 U.S.C. § 135(b)(1)(I).

We have managed, through our own inattention, to allow the Uruguay Round Agreements Act to gut the only advantage the interference system provided the U.S. inventors. Namely, the ability to exclude foreign invention date proofs. We now have, as I am sure all of you who advise clients on interference matters are aware, the peculiar situation where our clients no longer have those marvelous notarized witnessed paper records of invention that demonstrate conception. They all do this electronically and now are worried about exotic systems for authenticating and verifying electronic dates of invention. Now our patent system no longer gives advantages to U.S. inventors, vis-à-vis their foreign counterparts. Why is it that we do not catch up with the reality that our first-to-invent system is a first-to-file system and what we do with interference practice merely costs us a lot of money, time and effort to prove what is almost always the self-evidence truth?

MR. BENSON:

Thanks, Bob. The next speaker is going to be Mort Goulder. Mort is the longest serving member of the Franklin Pierce Board of

Directors and he is not a patent attorney, but he sat here and took notes in addition to listening to all the things that were said today.

MR. GOULDER:

Amount of Time Required for Patents to Issue. Old age does remarkable things. I'm a physicist, but right now I host what is called a Breakfast Club and we are a bunch of fellows that have started hi-tech companies, been successful at them and hold breakfasts a couple of times a week. We invite in someone who has an idea and is trying to start a company.

Our problem with patents is very simple. Some of the software patents we are willing to finance before the patents are issued, but I would estimate that about half the companies coming through we will not finance until the patents are issued. A patent takes so long to get issued that these poor guys are just stretched out one to two years. To me, the greatest thing that could happen in the patent system would be to speed up patents. I do not understand why it is more than a 60-day problem to get a patent determined one way or the other from the point of the investor and the person starting the company.

Automatic Translation of Patents. The second item I want to comment on relates to translation. When I was the number two person in intelligence in the Pentagon about 20 years ago, we had computers that were doing automatic translation of all Russian technical documents and they were good enough that we were better off using the translations direct than having translators polish up the documents. This is technical translation. Today, it should be duck soup to do automatic translation of patents. And Darpa could handle this. There's got to be a market for it.

Single World Patent. A third thing, as a layman sitting here, I think how great it would be to have a patent issued by an organization like the United Nations. One place to go, one world patent.

MR. JORDA:

Rapid Patent System. I agree fully that we should switch to a first-to-file system and beyond that, we should have a world patent system. And I just became aware of something that's afoot abroad and you're going to hear a lot about it. It will be aired at the AIPPI Congress in Rio in May 1998. Some of you may have heard about it already. It's the Rapid Patent. It's not a deferred patent system. You file an application and it sits there as an application, unexamined for 20 years. If anybody wants to license it, wants to assert it, or if there are some other problems, then, of course, you can request examination. The third world is very much in favor of that. And there's some interest in Europe too because it would be very inexpensive. You have patent protection if and when you need it. It seems to have merit particularly because the

Third World has realized that they are not going to be able to live up to their obligations under TRIPs.

Reducing Interferences. And speaking about reducing costs, well, why don't we have the cake and eat it? Why don't we implement what I have been calling since 1982 the Mossinghoff Proposal? In 1982, at an ABA meeting in San Francisco, I remember it so well—Mossinghoff came out with a most meritorious proposal. Unfortunately, it fell into oblivion. It should be resurrected. It is the best of both worlds. You have a first-to-file system, while you retain the first-to-invent system because you never declare an interference between pending applications. The senior party, even if he or she is ahead by only one day, gets the patent. The junior party provokes an interference if he or she can. That would reduce the incidence of interferences tremendously because—remember—when the Patent Office reduced the time period from a two-year (or one-year pendency in the case of simple inventions) to one-half-year (and three-month) difference in filing dates, the incidence of interferences was cut in one-half. If we now reduce it down to zero, it would again be reduced tremendously. And you have a first-to-file system, which we have anyway, because of the old saw, it's better to be a first applicant than a first inventor. With this change, you still have the fairness of the first-to-invent system because the junior party has the opportunity to provoke an interference with the issued patent of the senior party.

Costs. Now, talking about attacking causes rather than symptoms. Cost is truly a big problem but one solution, one remedy is reducing interferences. Another one is to have a 25-year patent term and not have to deal with all these possibilities of extensions, and not knowing how long a patent lasts. The more exceptions or possibilities we have for extensions up to five years, past the 20-year term, the more complicated it gets. But if we had a 25-year term across the board—which is fully justified considering the long lead time it takes in all areas to get to the market place, we would reduce costs greatly. If we had a utility model system for protection in the "twilight zone of sub-patentable inventions," we would also improve the system and reduce costs. We should have more *sui generis* types of protection, the utility model, of course, would be one. *Sui generis* protection for data bases will be coming along soon. We already have one for microchips and it turns out to be improvidently rushed through. There seems to have been, in retrospect, no particular urgency or rationale for doing that.

We also need patents for services and we need patents for business methods as we are switching to a service industry and away from a world of manufacturing. All of that would be considered cheaper because these kinds of *sui generis* systems are largely for software. And we are going to talk about that tomorrow. They obviously would be much cheaper

because the term would be shorter. There would be an examination for formality only. Incidentally, in the "Rapid Patent" system, there would be an initial examination but only for formalities, not on the merits. And of course, patent litigation is absolutely out of control. The pendulum has swung much too far especially regarding damages, and something has to be done about that if we are serious about reducing costs.

MR. OMAN:

I think Senator Mathias, when he was Chairman of Subcommittee on Patents, Copyrights, and Trademarks, took care of all the problems and it has been clear sailing ever since. I'm going to pass.

JUDGE MICHEL:

I am Paul Michel from the Federal Circuit. I am very pleased to be once again at Franklin Pierce and attending this very thought-provoking conference. It is especially nice to be at Franklin Pierce in the season when it is being recognized as the number one intellectual property law school in the country and also the winner of the Giles Rich Moot Court Competition. So, double congratulations, Karl and the rest of you at Franklin Pierce for those signal accomplishments! I am very sorry that I was not able to join you all yesterday but the work of the Court, as many of you know and indeed help make so, is an endless flow of demanding tasks. So, I had to stay in Washington and take care of business until late last night.[7]

I certainly would agree with the consensus that I think is shared by so many that there are big problems with our patent system, as good as it is. It is the envy of the world, and is increasingly copied elsewhere. And so too with regard to protections for trademarks and their registration and copyright protections and the whole panoply of intellectual property rights and remedies. So, it is a very good system and we should always have that in mind. But certainly the problems of cost, of delay, and of unpredictability are serious.

But I want to highlight not those oft-mentioned problems, but a very different problem. That is because it is something that each of you and your colleagues, and I and my colleagues, can actually do something about, and very directly. If there is going to be *sua sponte* protection of software, obviously that will come from the Congress. And there, too, we see unpredictability. Whatever might be proposed by some consensus, whether it be of business people or academics, if there even could be anything approaching a consensus, what would finally emerge from the legislative sausage factory—where I once worked, so I can speak as a

[7] Judge Michel's comments, as well as the comments that follow in this section, took place during the conference on April 12, 1997, but have been inserted into this section for continuity of the discussion.

former insider—is very hard to predict. But there is one basic problem that I see—in the patent and trademark areas—because our court has less to do on a regular basis with copyrights but everything to do with patents and a fair share to do with trademark registrations.

The problem that I see concerns advocacy and it has two sides. The one side is that lawyers are too imaginative and the other side of the very same coin is that lawyers are not imaginative enough. By lawyers, I mean all of us. I mean the trial judges, the appeals court judges, corporate counsel, private practitioners, academics, commentators—all of the players, all of the participants in the dialogue. I'll just give a couple of examples.

We receive about 300 patent appeals a year, both from Patent Office rejections and from District Court actions for declaratory judgments or infringement. Each case involves 100 to 200 pages of briefs. I would say that the majority of those briefs argues what I will call is "overly imaginative positions," based usually on loose dicta (our fault) in prior cases which by a big stretch could be said to justify the actions of the client. Of course, I'm not suggesting that appeals not be taken except in the clearest cases of error below. And I'm not suggesting, either, that arguments not be made unless they are clearly winning arguments. I understand that you have big stakes in these cases and client pressures and other realities of the business world. But I do think that it is a discouraging aspect of the dialogue among all of us lawyers in this community that so many of the arguments made are very far out, because I think it degrades the nature of the dialogue. And it also tempts we judges to engage in the same kind of practice, which I think many of us do, all-too-often. We too cite loose dicta from prior decisions to justify a ruling in a particular case where the factual circumstance is so vastly different that the applicability of the cases cited is highly dubious. So, it is a "two-way street." I think that clients would be better served—and I'm rather sure that the process of trying to improve the administration of intellectual property laws would be better served—if far-out arguments were made less frequently. So much for the "too imaginative" side of it.

The too unimaginative side of it perhaps reflects the same attention to what courts have said in the past. As an Appeals Court judge, it always amazes me how much lawyers treat statements made in opinions that are not part of the holding, that are plainly dicta, as some kind of oracular statement, as if by God: "This is the ultimate. This is the truth. This is immutable. This has to be. This is the right thing." And, of course, it isn't. But there's a tendency to treat it that way, particularly if said by the Supreme Court, but, to a great extent, even if said by the Federal Circuit. And as a result, lawyers seem too reticent to challenge things just because they were said by our court. But if said

without basis, if said only as dicta, they ought to be challenged because they are not truly precedent. They do not bind the panel before whom your case now is being presented. Yet, so often lawyers are afraid to challenge anything that we've ever said. I would love to see that change. That may be a very different take on what the biggest problem is in the intellectual property law area, but in my view it really is. And, as I say, I fault us judges at least as much as those who litigate in our courts because we do exactly the same thing. We "trade" in far-out dicta and we are imprecise. We, also, unlike you, all-too-often give in to the temptation to let the pursuit of the perfect wreck the merely good. For example, in reviewing the District Court's application of the doctrine of equivalents in a particular case, many of us want to do some kind of ultimate justice. But so the more we give in to that temptation, the more unpredictable we make the application of the doctrine in many future cases. So, in the final analysis, I think that restraint on our part would contribute even more than restraint on yours.

And the same thing on the other side of the coin. If we have stated dicta in opinions that over time have transmogrified themselves into holdings—they start out as dicta, they get repeated five times a year for five years, and then you look at the way panels are treating them in year number six. They're treating them as binding authority, as much as if a legislative command, as if an absolute rule of judge-made law. If not *sua sponte*, certainly at the urging of imaginative counsel, we need to re-examine rules that have unwittingly come into being because of the endless requotation of dicta. But I think the impetus for it will have to come to you.

Now, it is the beginning of baseball season and some of you in this room are not too young to remember the celebrated double play combination of "Tinker to Evers to Chance." I want to suggest to you that the winning combination here is not run to Congress with every problem or run to the Commissioner with every problem. I think most of the problems in patent law are best solved by imaginative advocates like you men and women in this room. You understand the law and its nuances—and understand the real world, the facts of the cases, the business realities, and the science and technology—well enough to present innovative and careful arguments to the District Judge, and then to us. So, from you to the Trial Court to the Court of Appeals. That's the winning combination that would match Tinker to Evers to Chance.

MR. BENSON:

Thank you, Paul. Mr. Kazenske, the Deputy Assistant Commissioner of Patents, is next.

MR. KAZENSKE:

First of all, let me say, getting in the middle of this conversation, I regret not being here yesterday. But taking the Judge's Tinkers to Evers to Chance—though lately the Office has been more like "Who's on First," I'll tell you. But a couple of the problems, at least from my perspective, belong in a little different category. There's no doubt, I continuously hear of the cost. That cost is an international cost and not a national issue. When you go to such things as the Round Tables in Seville and hear chairmen get up and talk about us, it startles me that we're even on their radar screen, let alone that they know anything about patents and trademarks and anything like that.

But I think we have another issue. I think this latter issue may have an answer to the former issue of cost. It is an immediate issue, and it is made up of several issues that are currently pending in areas that I certainly do not have the control over. Specifically, the issues in Congress today that will impact, at least from my pragmatic view, the Patent and Trademark Office over the next three to four years. The impact of statutory changes or inactions on Judiciary or Appropriations or Budget for example, is going to determine and it may self-answer for us some of those long-term cost issues. We will end up in a situation where we will have to address them in a totally different fashion if we do not address them in at least this Congress or next Congress. I will talk a little more about that in my remarks at lunch today. But there are a myriad of bills that are currently pending. Some more thought out than others; some overlapping with others. But when I see actions (and I saw an article in here on the Medical Procedures Innovation and Affordability Act that was done here recently) and what we talk in an international arena here, I have great difficulty going to some of these international events with things like this or trying to go to the Russian Federation and wondering why there's nobody prosecuting their applications because all of the money is going into feeding people on the street. Then we do almost identical things in this country through this legislative process. I think it is one of the most significant things we face with this system today.

MR. GIBBONS:

My only experience with patent law is that I testified as an economist in some anti-trust counterclaims arising out of patent cases and consulted with patent lawyers on developing theories of their cases. I was an expert in building novel theories. I am afraid Paul might have been the victim of some of my novel theories. As I got to see patent lawyers in action a particular question kept arising in my mind: What counts as an argument in these cases? We would be in a situation in which the problem would be that we did not have much law on our side so the

lawyers would have to come up with some kind of a theory. I usually come up with three. I charged by three theories. I never charged for one alone. I give you a bulk rate on ten or more theories. In dealing with law, I had to understand what counts as an argument. What counts as an argument for, say, extending or reinterpreting or changing something in patent law?

What I got was that judges have lost their dedication to patent law. They do not give a rip any more about the American economy. They are all lefties and they care about the environment and this, that, and the other thing. And they have lost their sensitivity to commerce. Well, so what are we going to tell them then?

As that kind of discussion got nowhere, it began to dawn on me that the patent lawyers I was dealing with—it was nobody in this room—were all relating to patent rights as if they were similar to other forms of legal rights. I teach torts, for example, and in torts the underlying rights are dignitary. The right to respect, the right to physical integrity. Torts emerges from immutable rights. Rights that are organic, that nobody dreamed up. That is not the way it is at all with property rights. Property rights are made up. They are conventional. And they are tested by their ability to deliver the goods. If they do not deliver the goods, then they are not very good.

For example, if copyright does not work, well, we will find some other rights that will. The trouble is that for rights of the property rights sort, the nature of the argument to change or redevelop those rights is very different from the nature of an argument to change an organic right. You change an organic right because you see in human dignity something deeper, something more meaningful and you reveal that to the judge. "Reputation is crucial, Judge, because without reputation. . ." That's the nature of the argument.

That should not be the nature of the argument in property law. The nature of the argument in property law is, "We've got this fee simple and that's enough. We do not need the fee simple determinable. It just adds confusion, Judge. So let's just ignore this fee simple determinable language and let's treat it all as if it would just be fee simple. Fee simple determinable is just not working."

The interesting thing there is that the lawyers I was working with were not relating to patent rights as if they were instrumental. They kept citing the U.S. Constitution as if that was a demonstration that these rights really were organic, were immutable, not conventional. But here were these judges just not facing up to the humanness of it. That left the lawyers pretty unable to make any coherent arguments.

For instrumental rights, it is crucial that they are clear. Justice is not the question. The justice in an instrumental set of rights is that they

are clear and predictable so we know how to play the game. Not that they tap some deep human immutable spirit or soul.

Treating them as organic simply leads us to some ambiguous vacillation between various interpretations of what property really is. The crucial quality of any property law system is that the rules be well defined so the people can play by them.

The power of a property law system is that it allows you to tell how it is going. For example, if copyright law really isn't working well, then let's find a form of law or some mixed system or some other way of going about doing this. The thing that is significant is to ask where's the feedback loop here? How is this feedback loop, the one that tells us that the law is not working, going to happen? How are we going to know when there are other systems that might do better? What is the force that will close the loop on these property rules? If there is one problem I see in this, it's that the nature of the intellectual property system as a property rule system is not well understood. I think it is confused with being an organic rights kind of system and I think that is a huge area of confusion. The type of rules you need in the two systems are very different. The second thing is where is the feedback loop? Where is the data? Is there a systematic force for doing research on what counts as working? How do you know if the copyright system is working? What would be the indicia of it failing? What choices would be available to us if it did fail?

I mention the second part, which I consider to be a fundamental weakness, because traditionally legal education has not been a surmising forum. It has not been a place for that feedback loop to happen. If it happens, it happens serendipitously because a given faculty member wants to write an article saying that when it comes to look and feel, that's a real bad idea for copyright. But what is involved here is a much more systematic need, a need to assess and to reflect upon and to suggest policy changes. Changes in the property rights system must be based upon empirical data and a serious multi-disciplinary evaluation of that data. I do not see the mechanism. I do not see the impulse. Episodic forces are changing the system and I feel for Paul as he's sitting there trying to figure, "Should I follow that bit of dictum from that case or what is the right way to move this interpretation?" I think that, to me, from the outside, very far from the outside, seems to be a fundamental, serious problem in this system.

MR. OMAN:

Hugh, I just want to distinguish the copyright from the patent side. There are elements of personal honor and reputation on the copyright side that perhaps are not there on the patent side. An author's moral rights, "to every cow her calf," is very basic to the concept of

copyright. And it is an extension of the author's honor and reputation that has to be protected by giving them control over their works. I would quibble on one minor point, if I may further intrude on your kindness. We should keep clearly in mind that the right of private property is one of our most basic rights. It is one of the rules of nature that is incorporated into our legal system. Both patents and copyrights trade on the sanctity of private property and the prohibition on people taking other's property without authorization. It's fundamental to the concept.

MR. BENSON:

It's interesting how many of these issues have come up time and time again. Some of the issues that have been raised, like costs, have been the subject of previous conferences. This is very helpful to us in determining the appropriate subject matter for future conferences. Thank you.

VI. SOFTWARE PROTECTION

MR. BENSON:

The subject for this morning is software protection. And we start off with Ralph Oman.

MR. OMAN:

Introduction to Software Protection. I'm going to start in this room full of patent lawyers with a few of the underlying principles that relate to the copyright portfolio. Obviously, the patent and copyright clause of the Constitution is our Rock of Gibraltar, just as it is on the patent side. Copyright protects authors of original works of authorship. Copyright protects a whole host of works: novels, songs, poetry, photographs, plays, dolls, games, sculpture, paintings, newspapers, newsletters, jewelry, fabric, designs, the list goes on and on and gets longer as the years go by.

Copyright generally does not protect useful articles. Only patent law protects useful articles. A famous case involved a lamp with a Balinese dancer as the base. Copyright could protect the Balinese dancer but one couldn't get protection under copyright for the lamp itself. When I was the Register of Copyrights early on and Don Quigg was the Commissioner, someone sent a pair of edible panties to the Copyright Office for registration. They were, I think, raspberry flavored. We looked them over and, clothing being a useful article—covering your nakedness and keeping you warm—we decided that they were not copyrightable subject matter and we sent them over to the Patent and Trademark Office. I don't know what the Commissioner did with them. He may have eaten them.

The general rule, though, is that copyright does not protect useful articles. However, copyright has obviously protected useful articles

throughout history. The first copyright law of 1790 did protect maps and charts. They generally are not considered decorative or artistic creations. They're very useful. In the same way, computer programs are protected under copyright. They are very useful creations that are essentially operating instructions for machines. I'm going to get into some of the cases to show how the protection of copyright has evolved over the years and obviously, the courts have played a major role in defining the scope of copyright protection.

After resolving the basic issue of copyrightability of computer programs—the Copyright Office was innovative on this score—we started registering programs back in the early '60s without any direction from the courts, and without any direction from Congress. We determined that they were literary works. They were created the way literary works are normally created, and they were eligible for protection. The courts ratified that decision and then Congress jumped in in 1981 with the Software Protection Act. They locked in the level of protection that had been established by the courts.

Under U.S. law, computer programs are technically literary works. The new WIPO treaty says they will be protected *like* literary works, which is a slight variation that is not entirely satisfactory, but it's good enough for our purposes. The law also protects both the literal and non-literal aspects of a computer program.

The literal aspect of a computer program is actually the computer code, the object code, that is, the written aspects of it. The non-literal aspects of the computer program are things like the structure, the sequence, the organization, the equivalent of the plot of a novel. It's not something that is spelled out and you can hold in your hands and look at. But the non-literal aspect of a computer program is fully protectable.

But it's not, as you suspect, quite that simple. Copyright only protects the *expression* of ideas. The copyright law is very clear in saying that only expression is protected and not ideas. In copyright cases, the defense often claims that what it has borrowed is only unprotectable ideas rather than the expression of the idea that would be protectable.

Morrissey v. Procter & Gamble, one of the most famous cases on the subject, was not actually a computer software case, but did involve the issue of copyrightable expression. At issue were written instructions to a promotional contest. In that case, the circuit court stated the general principle that where a work is so simple and so straightforward as to leave available only a limited number of ways or a single way of expressing the idea, then the expression is not copyrightable. If there were only one way to say something, there could be no copyright protection because you would foreclose other opportunities, even if that expression is very

creative. And in the *Morrissey* case, it was a very detailed list of instructions on how one would enter and win a contest, but the court determined that if they gave copyright protection for that particular expression, it would foreclose other similar contests.

The idea essentially merged with the expression and therefore under the merger doctrine, no protection was permissible. The computer software idea-expression dichotomy is obviously very much in controversy and something we should be talking about today. In the computer software context, the argument is normally transformed into an inquiry as to whether or not copyright in a program gives the copyright owner monopoly over some very important technological function. By extrapolation, the courts have tried to fashion the copyright doctrine in a way that will not foreclose the development of technology in a way that would allow the creator to monopolize the technology, as would a monopoly on the patent side.

One of the first important cases in this area was *Whelan v. Jaslow*. In that case, the courts took a very simple and direct approach. In looking at the case to determine whether or not something had been copied, and whether or not what was copied was an idea or an expression of the idea, the judges looked to see whether or not other programs could be written that perform the same function as the copyrighted program. They reasoned that if other programs could be written to perform the same function, then the first program would be an expression of the idea and protected from copying. In *Whelan v. Jaslow*, the Court described the idea very generally. It was a computer program to manage a dentist's office. That was the idea—the starting point. Someone could design another program to run a dental office and everything that flowed from that idea was expression and could be protected.

One of the things we should talk about this morning is whether or not this approach to the law is viable in the computer program area. I've always been a real believer in the ability of authors to respond to these situations in a way that does not foreclose new technologies. And, increasingly as a true believer in intellectual property, I find myself taking an absolutist's approach to the copyright right, and I like to see someone who created something have protection for it. Someone could go out and create *exactly* the same program under the copyright law—unlike the patent law—and, as long as no copying occurred, not infringe the original work and get copyright protection for his or her work as well. As long as it is independently created, it passes muster.

So, it's tempting to take the absolutist approach and give pure copyright protection to every computer program on the theory that somebody can create an identical or very similar computer program independently and not have it infringe the original work. But unfortu-

nately or fortunately, depending on your point of view, that is not the way the law has developed over the years.

In 1992, the Second Circuit Court of Appeals in *Computer Associates v. Altai* dealt with the scope of protection of these non-literal aspects of a computer program, trying to determine what is idea and what is expression. Is it the very general idea, the organization of a dental office, or does one look to the various subheadings within that and consider those ideas as well, not protectable under the copyright law?

The *Altai* Court declined to find infringement even when faced with very strong evidence of copying of both the literal and non-literal elements of the program. The defendant actually admitted copying the actual code in one version of its software and paid damages of $350,000.00.

The real dispute concerned a second "clean" version of the program that Altai programmers created without actually seeing the original program or seeing the original source code. For this clean room version, the Appeals Court found that there was no copying of the literal computer code in a way that violated the copyright law, even though there were certain similarities—certain stock expressions appeared which is commonplace in the design of computer software. But after that initial inquiry, the court looked at the structure and the organization of the program and it looked for substantial similarity between the non-literal elements of both programs. It essentially found none. The structure, sequence and organization that was similar was not found to be a copyright infringement. In its analysis, the court applied what we call the abstraction test to determine whether or not the non-literal aspects of a computer program are substantially similar. The court also drew on the doctrines of merger, scènes-à-faire, and public domain.

Let me explain scènes-à-faire. It's a doctrine that holds that expression confined to certain stock expressions, standard literary devices is, in fact, uncopyrightable. In the literary area, boy meets girl, boy falls in love with girl, boy marries girl. That's a scènes-à-faire. You can't get copyright protection for that. That is a standard theatrical technique. In the computer program area that type of simplified analysis also eliminates a lot of the creativity that goes into the creation of a computer program. Trained computer programmers do things a certain way. It's the best way to do it. It's what they learn in school. If done any other way it wouldn't be efficient. So, there's going to be similarity in that aspect of the computer program.

Public domain in the copyright area is just the same as it is the patent area. When I was the Register, someone called the Copyright Office and asked, "where, in fact, is the public domain? Is it in Washington?" Our quick-witted public information specialist said that no, it

wasn't in Washington and she thought that actually it was someplace out west, and that it was very deep, and that's why things kept falling into it. They said thank you and hung up and we never heard from them again.

But with the doctrines of merger, scènes-à-faire, and the public domain, the court reached the most critical conclusion regarding the similarity between the plaintiffs' and the defendants' programs. The court said that the similarity in the structure between the plaintiffs' and the defendants' program "was dictated by the nature of other programs with which it was designed to interact" and thus not protected by copyright. It's important to note that the *Altai* Court accepts the principle that copyright protection can extend to the computer program's non-literal aspects but they do place limits on that protection.

Protection of computer screens is a related issue and one that continues to be controversial. The Supreme Court recently addressed the subject. I should probably mention that here in setting the scene, that the computer screen is part of what's known as the user interface. What you see, what you use to access and use the program. Computer programs generally do contain sufficient authorship to pass the test of copyrightability.

In the old days, in the literary world, we had a test of 25 words. If a literary work had 25 words or more, it was subject to copyright protection. It's not quite so simple in the computer program area. But generally speaking, most computer programs do qualify for protection in terms of the amount of creative authorship. Computer screens are another thing that are part of the overall computer program. And whether they are subject to independent protection or not has come up in several important cases. One of the founding principles of the copyright law is that blank forms are not protected under copyright. Nor are lists of common words. Both lack sufficient copyrightable authorship to qualify for protection.

Even so, in 1993 the district court just down the road in Boston, in the *Lotus v. Borland* case, found that a simple menu tree, a list of words, contained sufficient originality to be copyrightable. Even though functional considerations obviously played a part in the creation of the menu, the court found that those functional considerations did not dictate the result. The court pointed out that a variety of possible words and phrases could have accomplished the same effect.

The court gave several reasons for its finding. It pointed to the fact that Lotus' specific menu tree derived from the programmer's personal judgments and personal preferences among many possible choices. Second, the Court noted that even the user of the program can change the menu tree, so how can that menu tree be dictated by function? Third, the Court noted that many other spreadsheet programs were in

existence and that they all used different menu trees and mere functionality did not account for these differences. They were creative decisions made by the computer programmers.

In conclusion, the court found that Borland's menu tree was sufficiently similar to Lotus' to constitute copyright infringement. That decision did not survive appeal. In March of 1995, the First Circuit overturned the district court's decision and held that Lotus' menu tree, made up of words and phrases, was uncopyrightable subject matter as a matter of law. Citing section 102(b) of the Copyright Act, the court found that the textual menus, as opposed to a graphic menu with the icons or other animated user interfaces, are simply methods of operation, and methods of operation are specifically excluded from protection under the copyright law. The court explained in its language, "We think that method of operation refers to the means by which a person operates something. Whether it be a car, a food processor or a computer. In many ways, the Lotus menu command hierarchy is like the buttons used to control a video cassette recorder and therefore are not protectable under the copyright law."

That decision went to the Supreme Court and unfortunately, we got only a four-to-four decision out of the Supremes, which in effect affirmed the circuit court. We did not get what we were looking for, which was an opinion that would have clarified the law on that subject.

One last controversy to get into before turning it over to the experts, and that's the issue of reverse engineering, a very significant issue on the infringement side of the controversy. That is whether or not someone can reverse engineer a copyrighted program to produce a competing program. Generally, by reverse engineering, as all of you know, you can determine the physical composition, the electrical properties and other characteristics of electronic, mechanical, chemical and industrial products and then create your own based on that analysis.

As applied to computer programs, reverse engineering has come to refer to the whole range of activities from the studying of publicly available sources of information about a program to the process of creating what they called a pseudo-source code as well as decompilation or disassembly. We have to keep coming back to the same basic premise: that copyright protects expression and not ideas. Copyright does not protect the functionality of the program. Nothing in the copyright law prevents someone else from analyzing program code and taking those ideas, the algorithms and methods used to create that program and then creating another program. Patents could do that but not copyright law.

Reconstruction of the original source code from the object code is like doing a puzzle. You have a decompiler or you have a disassembly program that pulls it apart and analyzes it and sees what makes it work.

One can do this with the clean room method with one group of computer programmers actually looking at the computer program you want to replicate, breaking it apart, making detailed outlines and then turning that information over to an other group of programmers that has not seen the original program, taking those ideas and writing another program based on that detailed script. The question is whether or not they've taken too much in the way of ideas in detail to go over the border between protectable and nonprotectable expression.

The basic questions remains. Does decompilation appropriate more than unprotected ideas that were the basis for the original program in the creation of the new program? Decompilation does involve the reproduction and copying of a computer program, even if it is only as an intermediate step. That therefore is a prima facie infringement.

The rebuttal to this argument is that there's a concept in copyright known as fair use—section 107 of the copyright law. And the thought is that decompilation for academic research probably would qualify for fair use. Whether it qualifies for fair use in the commercial setting is subject to some controversy. Decompilers reject the claim that fair use isn't a shield against a charge of copyright infringement. They say that their purpose, which is to gain access to ideas, is a socially valuable one. They argue that software is the first and only copyrightable work that is not in itself transparent. Programs can't be read the way a book or poem can be read, or viewed the way a movie can be seen, or played the way music can be played and therefore does not clearly reveal its ideas as opposed to its expression. Since copyright does not protect ideas, they argue, they should be able to look into that program by decompiling it to figure out what is idea, what is expression, and allow them the right to use the ideas while avoiding the expression.

Decompilers also argue that the market factor weighs in their favor since the end result is, in effect, not infringing. Any market loss is attributable to appropriation of ideas and doing things better, not to copying of expression.

The Court of Appeals for the Federal Circuit addressed this issue in a case called *Atari Games v. Nintendo*. They looked at the issue of interoperability and reverse engineering of software. Nintendo had designed a program that was encoded to permit only Nintendo cartridges to work on Nintendo equipment. Both the master chip or lock on Nintendo's console and the slave chip on Nintendo cartridges were programmed to operate only on the Nintendo system. It was a way of keeping out the competition. Without the unlocking program, no other game cartridge could work on the Nintendo console.

Atari, in fact, copied the code—the unlocking code—and created a new game cartridge that would work on Nintendo's console. At the

same time Atari sued Nintendo on an anti-trust theory, Nintendo countersued claiming copyright infringement. There were also patent claims raised that brought the case to the Federal Circuit.

The Federal Circuit found that unlocking program contained protectable expression and affirmed the lower court's holding that Nintendo would likely establish that Atari infringed its locking program by copying the literal elements of the source code. However, and this is very important, Judge Rader noted an important qualification. He specifically reversed the lower court's finding that Atari's intermediate copying for the purpose of reverse engineering infringed Nintendo's copyright. The court found that such intermediate copying could be fair use.

Of course, the court did not say that the fair use doctrine authorizes unrestrained reverse engineering. Someone can reproduce the software only to the extent necessary to understand the uncopyrightable portions of the work. In the words of Judge Rader, "any reproduction of protectable expression must be strictly necessary to ascertain the bounds of protected information within the work." Those are the controversies. They continue. I have set the scene. And now let the show begin.

MR. BENSON:

Thank you very much for the very comprehensive introduction. I'm going to turn it over to Karl Jorda to give us other views on the controversy.

MR. JORDA:

Introduction to Software Protection. Ralph, we are very happy to have you here as the leading protagonist for the position that there is an emerging international consensus that copyright is the right way to protect software. However, I am not sure that this international consensus is not crumbling. First of all, there are more and more countries that follow the U.S. lead and provide patent protection for software. I have here the "1996 Update: *International Legal Protection For Software*" from the Fenwick and West firm listing a lot of countries that provide protection for software. If one compares this list with lists from prior years, there are many more countries listed now that, in addition to copyright protection, also grant patent protection. Australia, Austria, Belgium, Canada, Denmark, Ireland, Japan, Spain, Sweden and the U.S., to name but a few. And many more countries are listed here as "maybe." There are still a lot of countries on the list where one can get only copyright protection, e.g. in South America, but that list is getting smaller. Interestingly, there is also more and more literature in favor of providing a special *sui generis* kind of protection for software because neither copyright nor patents is an ideal way to protect it. We have a very venerable patent system but it's antiquated and when you try to fit

modern cutting-edge technologies into our patent system, it's like fitting guests into the proverbial bed of Procrustes.

Ralph is in very good company, though, because Professors Ginsburg, Gorman, Franzosi and other professors and authors adhere to the position that copyright is the established and the best way to protect software. Well, is it? What would provide better protection? Patents, trade secrets or *sui generis* protection? No one will dispute that trade secrets is not a good way to protect software because there are obvious limitations on that route for protection and relying only on trade secrets would be inadequate.

There are authors, and I'm going to mention a few, who believe that copyright protection is an artificial construct since the aims of copyright law and computer programming are diametrically opposed. Copyright stresses subjective individualistic creative elements, that is originality and creativity, while on the other hand, computer programming stresses objective, technical, scientific systematization.

Some of the recent articles in favor of patent protection as perhaps being better than copyright protection or being a good complement to copyright protection carry such expressive titles as "The Case for Software Patent Protection," "Mathematical Algorithms Should be Patentable," "Patents, Not Copyright, Poised For Bigger Byte Of Software," "Now You See It, Now You Don't. Was It a Patentable Machine or an Unpatentable Algorithm?" And the most recent article in the A.I.P.L.A. Quarterly Journal is headlined, "Justice Douglas Was Right: The Need for Congressional Action On Software Patents." You might think—what's the problem, it's all settled by now. We can protect software by way of patents and we can protect it by copyright and trade secrets and we can integrate all of these different forms of protection, exploit the overlap, and we have the best of all worlds. But that just doesn't appear to be true. Even with respect to patent protection, a good argument can be made that Congressional action is necessary because our patent system really is not that well suited to protect software.

Interestingly, many decisions have come down that expand the scope of patent protection for software, in spite of earlier Supreme Court decisions to the contrary. On the other hand, there have been a number of decisions that have limited the scope of copyright protection for software. So, given these problems and given the fact that you've got to fit software into a Procrustean bed if you try to get copyright protection for it or patent protection, it shouldn't come as a surprise that there's a strong notion afoot that a *sui generis* system, in addition to, in other words, as a supplement to, or in replacement of, the other forms of protection that we have mentioned, would be the best way to go.

Martin Lutz, who as you know, is the Executive Director of AIPPI in Zurich, concluded in an article that he wrote recently on "Protection of Computer Programs in Switzerland," that a *sui generis* industrial property right would have produced a more practical and convenient result.

Another commentator, Retsky, recently wrote an article on "Computer Software Protection In 1996: A Practitioner's Nightmare," and recommended the creation of a separate federal software statute that would bridge the gap that currently exists between patent and copyright protection for computer software. There's a middle ground that the legislature has not yet covered and a separate software statute can help plug this gap. Protection that would last for three to five years, in that range and would cover the non-literal aspects of the computer programs.

And of course, what comes immediately to mind when you talk about *sui generis* protection for software is the Manifesto. The famous Manifesto. The Manifesto by Professors Samuelson, Davis, Reichman and co-author Mitch Capor, the founder of Lotus Development. It came out in 1994 with the title "A Manifesto Concerning The Legal Protection Of Computer Programs." It's very comprehensive and very persuasive and very strongly advocates protection of software by way of a *sui generis* system of protection in addition to the systems we have now. This would not be a replacement as there would be an obvious problem replacing our present systems of patent and copyright protection for software. But they argue that there's a gap and a *sui generis* type of system should be enacted to fill it.

Richard Stearn in a 1993 article entitled "A *Sui Generis* Utility Model Law As An Alternative Legal Model For Protecting Software," also discussed in great detail the limitations of both patent law and copyright law as means and vehicles for protection of software, analogizing it to forcing a square peg into a round hole, and consequently argued that we should have a utility model system, like we are going to have before too long on databases. You can't fit databases under our traditional copyright or patent system. And like we implemented back in 1984 for semi-conductor chips. From what I have read there is considerable criticism about that and there was no real need for it. Thus, it seems to me that perhaps it was improvidently done. If we did it for microchips, why couldn't it have been done for software?

I remember a meeting in Washington in 1965 at the very beginning of the software developments where the question of protection came up. I remember very clearly that the first impulse was to provide a *sui generis* type of protection. That was the conclusion reached after a good deal of consideration as to how to protect this new-fangled thing called software and computer programs.

Let me conclude with a statement that I heard Commissioner Bruce Lehman make at one of the recent meetings of the Association of Corporate Patent Counsel. It was an admonition that we cannot have a "frozen in time, one-size-fits-all patent system." And that, of course, goes for the copyright system, too. So, *sui generis* is it.

MR. BENSON:

Thank you, Karl. Now, we're going to open this up for discussion.

MR. MOSSINGHOFF:

Semiconductor Chip Protection Act. I believe that there is a place, a strong place for copyright protection for the expressional part of computer programs, but I did not hear Ralph say that that was the only way to protect computer programs. There are other ways that can be used to protect the utilitarian aspects of computers.

I was very involved with the creation of computer chip protection but I don't think it has been used as much as its proponents forecasted in 1984. On the other hand, the latest data I saw indicate there are over 12,000 registrations and it is clearly an area where the United States has the world lead. Intel chips and others come from the U.S. and not from abroad so, I don't think anyone should say that the Semiconductor Chip Act has not been a success.

There were also a lot of false starts connected with the Washington Diplomatic Conference that, in effect, was "dead on arrival" when the delegates left because the U.S. and Japan said they were not going to ratify the Washington Treaty on Computer Chips. But TRIPs took care of all of that. We in the U.S. got everything we could possibly have wanted in the Washington conference in the articles of TRIPs. I believe it's article 35 of the TRIPs Agreement which, in effect, is the Washington Treaty on Computer Chips without the objectionable parts, namely, compulsory licensing. So, there is an international regime of protection of semiconductor chips which I would submit may not be working as well as we want it to but certainly is working well.

PTO Guidelines for Examining Computer Inventions. With respect to *sui generis* protection of computer programs, I think that is an idea that needs to be explored but I have yet to hear a lucid explanation of whether it would be a registration system or an examination system. And if someone suggests an examination system, the question is what exactly will be examined and what would the programs be examined against?

Before we leap into that, I would urge a very strong round of applause for the U.S. Patent and Trademark Office. I think that the examiner guidelines for the patenting of computer programs are excellent. They have far exceeded everyone's expectations. Some very

definite safe harbors were created where you have patent protection and there are very definite ground rules on how to decide whether a program is patentable or not.

The safe harbors are, first, if a machine is claimed, it is patentable under 35 U.S.C. § 101. There are no section 101 problems with a machine claim. Secondly, with claiming a process, which is where many problems were, if there are pre- or postcomputer steps, it's section 101 patentable subject matter. People working in the computer field know very well whether they have a pre- or postcomputer step connected with a computer program.

And then, finally, if there are neither of those, the question is: does it have practical application? The PTO has said that if a claim is directed to a machine readable form of literature or a machine readable form of music or something literary, it is not patentable; it does not fall under section 101. But if it has practical application and is not one of those things, it is patentable.

The only problem—although it's not truly a problem, as I believe the computer guidelines are working very well in the Patent Office—is that they are a bottom up set of guidelines as compared to, for example, the field of biotechnology which was a top down decision from the Supreme Court. In *Chakrabarty*, the Patent Office argued they did not want biotechnology or living organisms to be patentable and the Supreme Court disagreed in the *Chakrabarty* decision.

The only situation that we should be concerned with is that the examiner guidelines have not been explicitly blessed by the Supreme Court as such. Even the Court of Appeals for the Federal Circuit has a slightly different view. But assuming, as I do, that the Federal Circuit will apply and bless and use these guidelines, I think before we run off to *sui generis* protection when there are still major unresolved philosophical issues, we ought to use the Patent and Trademark Office guidelines for the protection of the utility side of software. And we should continue to use the copyright system for the artistic or expression side of software. I think this is a pretty good system that could very well be spread internationally.

MR. GHOLZ:

Term of Protection for Computer Programs. A general comment on what I see as the undesirability of the proliferation of *sui generis* forms of protection. When Karl was advocating *sui generis* protection for computer programs, he talked about giving them protection for three to five years. Well, three to five years is a lot less than under patent protection. It is true that some computer programs are of ephemeral interest. But many are not. I would be very opposed to a whittling away

of the term of protection that is available for technological improvements.

We spent a lot of time yesterday talking about the slippery slope argument as applied to the medical process legislation recently. If innovations in computer programs can be cut down to three to five years' worth of protection, how about innovations in earth-moving equipment? Why should those inventions get more protection than three to five years? Or diapers. Who's next? Each of us, I suppose, thinks that the industry that he or she is involved in certainly is worthy of 20 years from filing and/or 17 years from issuance or whatever. Why should the people that make computer program innovations be subject to such dramatically second class treatment?

MR. BALMER:

My question is: why is there an issue? If you take a look at traditional copyrights, we're talking about things like movies and books. Software copyrights are perhaps unique. There is an ability to control the market. It's not a like a movie. Somebody else can make and sell another movie. Somebody else can write another book. Competition can be provided. Software copyrights go quite beyond what I think were the original concepts of the societal benefits of the copyright system.

Why aren't companies involved in software expressing concerns about the negative effects of copyrights? Perhaps they believe that they too can grab the brass ring. Why shoot the goose that you may own later?

We should be concerned with the point where there may be government intervention, because copyrights prevent competition in the high-tech market areas.

One of the attractive aspects of going to a utility model for software protection as opposed to copyright would be the very limited duration that would be given to unpatentable software. Where is the line drawn? I don't think that it ought to be one form of protection or the other. One ought to have the opportunity to pursue a utility patent with all the utility patent bells and whistles for the allotted 20 years or alternatively, if it is not patentable, there ought to be some kind of protection and certainly a utility model or *sui generis* type protection would make some sense.

MR. ARMITAGE:

I would like to suggest that as a default assumption, we should consider that every form of intellectual property protection that should be legislated already has been legislated. I say that in large measure by looking at what we have in the current situation with respect to the special forms of intellectual property protection. Those that are not

patents and are not copyrights. And also what we have done with patent and copyright in this particular area and in fact in other areas.

First of all, we are faced with the reality that even as to existing forms of intellectual property protection it is very difficult to define what it is that is protectable, what is an infringement, and most importantly for the public, what it is that is not an infringement. I think we will see when we talk about the doctrine of equivalents that it is a doctrine that has been recognized in the patent laws for more than a century. When we look at literal infringement, it's a concept that certainly is at least 205 years old. And it is still very difficult to get it right. If we create a *sui generis* form of protection, we basically start over on a blank slate. And perhaps with the benefit of a few hundred years of precedent, we would get to the same point at which we are with the copyright system today.

For example, the Semi-Conductor Chip Act is now 13 years old. And there is, I believe, if my research is correct, one reported Federal Circuit decision to guide all of the principles of law in that particular piece of legislation. In regards to the Plant Patent Act there was recently a proposal by the Patent Office that we should take out the limitation on determining infringement of being asexually reproduced. If I read the Plant Patent Act correctly, it would make it totally impossible to determine whether one was a noninfringer since there is no disclosure other than a picture of a plant in a plant patent to tell you what the patented subject matter is.

In the Plant Variety Protection Act, there is the same degree of almost inscrutability as to what the patented subject matter is. Having recently been involved in some Plant Variety Protection enforcement, it basically is limited to what you actually had and you have to prove someone used what you had—that is the act of infringement

We also know that if it is worthwhile protecting computer programs, it's probably also worthwhile having *sui generis* protection for life insurance, mutual fund management and video games. I could go on and on and think of all sorts of industries, once they're established, who would love to have intellectual property protection to harass their competitors. I view the default assumption as what I suggested at the beginning; that is we should make sure we really, really know what we need to do and why we need to do it.

Finally, let me just say that having written some computer programs in my life, I consider them to be wonderfully literary. I can't imagine that Karl Jorda would actually believe that the beautiful, elegant computer programs that I've written aren't at least as good as some of the crummy stuff I see lawyers publishing.

MR. GOLDSTEIN:

Prior Art. It seems to me that by using the appropriate combination of copyrights and patents for a given case, we can, at least in theory, get strong protection on software. However, there are some real practical issues in terms of patent protection that need to be addressed.

Computer software is unique in certain ways. It's certainly commercially very important. It does give its owner the possibility of controlling an entire market segment. But at the same time, it is also a technology area where the prior art is not found in the traditional prior art places. One cannot necessarily go and search through patents and feel comfortable that the closest art has been found. Nor can one necessarily look at the published literature and feel confident that the closest prior art is known. There's a lot of prior art out that cannot be found in a prior art search.

A software development corporation is then faced with trying to make a business decision based on a patent without knowing what they really have. They may have a patent, but it is not known what the patent is really worth—whether it is enforceable—because one does not know if it was granted over the closest prior art.

If we are going to say, "Patents are the way to go," we need to have a way to assure the patentee, as well as competitors, that the most relevant art has actually been considered in the examination process. Of course, that's very difficult to do under the current system because the public (which may be the best source of prior art) does not know that a patent application is pending until it issues, and, under the current rules, re-examination is limited. Publication of applications should help in this regard because the public will know what is pending and they will have the opportunity to make available to the Patent Office information that may be relevant to the examination of the applications.

It seems to me that if we want patents to be a viable form of protection for software, we need to work on this issue. How do we make sure that the most relevant prior art, the commercial practice, is before the examiner? Publication may be the way. Expanded re-examination may be the way. But this is a very key issue in terms of the ability to use patents to protect software.

MR. OMAN:

Copyright Protection. I just wanted to make a few general comments and ask Karl a question. And I want to reassure Bob Armitage that a computer programmer has yet to win the Nobel Prize for Literature, but don't give up hope.

Most computer program developers, even the big ones like Microsoft, need more than three years to amortize their investment in the creation of that work. If they could not have more than three years,

they would have to charge such a huge price for the computer program at the front end that no one would buy it and it would never catch on.

One must also think in terms of foreign competition as well as the foreign markets. A pirate could get on the market with a competing product within three years under a *sui generis* form of protection—and, again, I'm taking the extreme view because copyright protection would be available for certain aspects of it, perhaps patent protection as well—but if as Pam Samuelson is suggesting, that we go to the *sui generis* form of protection exclusively, I think we would lose a great deal in terms of the U.S. competitive edge on foreign markets.

Professor Jorda talked, in a conclusory way, about the disadvantages of copyright protection and the disadvantages of patent protection, but he really did not describe them. It would be helpful to the discussion if anyone could describe the disadvantages of copyright protection. Is it that there are 75 years of protection and most computer programs are obsolete after ten years? Is that a disadvantage? It's really irrelevant. If the program is no longer of any economic significance, who cares if it has another 65 years of copyright protection before it expires? It doesn't make any difference. What are the disadvantages as you see them?

MR. JORDA:

Ten Year Term. I'm glad you asked the question, particularly, the first one about the term. I should have clarified this. While the term of three years was mentioned in one of the papers, the more general proposal would follow the utility model system in existence in some other countries. It would provide for ten years, which I think is a more realistic figure if we had the *sui generis* system and I doubt very much that anybody would agree to a three year term.

Shortcomings of Copyright Protection. As far as disadvantages are concerned, there is a very technical discussion in some of the papers mentioned in my introductory comments. I did not want to go into that. I am not an expert in computer programming and I'm not prepared now to give you any detailed technical explanations as to the disadvantages that have been pointed out. It certainly isn't the fact that it lasts for up to 100 years because you're correct that if the half-life of a computer program is but a few years, nobody cares whether the program becomes totally outdated and supplanted by improved programs. I would not argue at all that we should have *sui generis* protection to the exclusion of any other protections. In this regard I would side with Professors Samuelson and Reichman rather than with Richard Stern who argues for *sui generis* protection as sole protection.

MR. FRYER:

It's hard to know where to start on a subject that could easily take a whole semester or a major conference. I would like to make three points.

Interface Protection. First, on the interface between computer programs and intellectual property, there is the legal question of the relation between copyrights and patents. I think there is an issue where there is overlap, and the possibility exists of preemption. If copyright protection extends to program structure, within limits, as I think it does, at what point does copyright protection become effectively the same protection that would be provided by utility patents? I think the courts are trying to keep copyright and utility patent law's scope of protection separate.

Screen Display Protection. My second point relates to the protection of screen displays. As you may know, there now is computer-generated icon protection by design patent under the new guidelines. It's another valuable tool for protecting some aspects of what is generated by computer programs. This protection includes computer-generated typeface. Typeface design is a major creative industry. I happen to be involved in a case with Adobe, and I've seen, in detail, the creative skills that are involved in typeface design.

International Protection. My third point concerns the international protection of computer programs. There is major debate primarily among academics, on protection using a *sui generis* law, a separate law from copyright and patent law. The U.S. Semiconductor law was a successful *sui generis* effort. The 1990 to 1993 Industrial Design bills for *sui generis* protection did not get through. It's very hard to launch a *sui generis* protection system. At least for that reason it is certainly wise to exploit what we can out of the systems we have to protect computer programs.

As far as the academic debate on *sui generis* computer program protection, I do not see it as earthshaking. I agree there is a lot of literature out there, but I'm not sure that it has a strong practical basis. We need to carefully review the academics' work. We should address all the disadvantages and advantages of our present computer program protection systems and try to make them work more efficiently.

MR. MUIR:

Prior Art. I think we owe thanks for those who've spoken in their attempts to help us understand the situation. Let me try to muddy the waters. I'm a little cautious on *sui generis* protection because of what Bill Fryer said. It depends on whether this is additive or subtractive or exclusive, perhaps is a better way to put it. As we've gone through time, copyright protection and the related scope of protection has been

clarified tremendously. Patent protection of software has also been clarified. For example, one of the real issues at the beginning by many of the software users and software writers was that there was no collection of prior art. The University of Michigan put together a depository which has been very, very helpful. On the other hand, the Patent Office is not making use of that depository to my knowledge. We're probably getting an awful lot of patents on software that are wholly invalid.

U.C.C. Proposed Article 2B. My concern relates to the efforts that are going on right now regarding the U.C.C. and the fight relating to software protection under that. Because on one hand, those who want to protect software are trying to write into the U.C.C. a sort of shrink-wrap type of protection. In other words, if you ever obtain the software, you will be subjected to trade secret protection, thereby precluding the right to reverse engineer or decompile or anything else. So, merely having the software will preclude much of the development that is already lawful. My own view is that there probably should be a distinction between mass marketed software and that which is specially designed for a client or for a particular purpose. Right now, I have real concerns as to whether this U.C.C. effort is going to be public friendly when we get through it all.

MR. COLEMAN:

PTO Access to Software Prior Art. With respect to the examination of software patent applications, some would argue that there ought to be a different system. I am sure most, if not all of you, have been to presentations where a litany of examples of software patent claims are shown which are patently invalid. A big criticism presently in the computer programming field is that the patent system is not working there because the Patent Office is incapable of diligently examining these patents or having proper access to all of the prior art that's out there. For example, these presentations will put up 50 to 100 examples of patent claims on software. And you say, "What?" That can't be patentable because of what you just know from using software.

MR. GIBBONS:

Copyright Protection and Software Reverse Engineering. I do teach here at Franklin Pierce but I'm not a member of the intellectual property faculty. I'm here because of my perspective as a part-time software developer. This has been an interesting and illuminating discussion.

Let me introduce a couple of questions that cross my mind as we talk about protecting software. I assume it's axiomatic that the justification for the protection of anything, any ideas or expressions, is that by protecting them, we make it more likely that more will be produced. By allowing people to gain and retain commercial advantage, they are induced to produce more.

On the other hand, we do not protect them totally because that would tend to foreclose other people coming along and coming up with new ideas. This is a very serious problem in the software business particularly. I also am a sculptor. A huge difference between the software business and the sculpture business is that when I go to work on a piece of alabaster I can't really copy anything. I can't accidentally produce a Michelangelo rip-off.

That is not the case with software at all. There are certain common ways that everybody has to go by writing code and those ways are not copyrightable. But the difficulty there is that the copyright law is not formative. It does not tell me when what I'm doing is right and when what I'm doing is wrong. And the copyright law itself is more confusing as I look more deeply into it, and I have to look more deeply into it because I've got to get protection for our software and so on.

As I look into it, I find a situation where the really predatory people, the ones who are reverse engineering this stuff, have a good legal staff and they're able to tread a line—the fair use line—smack dab into the middle of my code. They can re-engineer the code and have it back on the street in no time. Moreover, that path is, if not a commendable path around copyright, at least totally legitimate. On the other hand, every piece of software I have on my own shelf has a shrink-wrap license on it that tells me I really do not own it. I am sort of renting it and the owners are going to call me on the phone if I do something wrong with it. Those are exertions of control over me that I am simply not going to recognize. They are not meaningful. They are extensions of copyright protection in ways and to people who are the customers and who are the people coming up with the next set of ideas.

If there is a problem with copyright, it seems to me that the concept of copyright doesn't fit the protection that I think people understand. To the user who takes the time to read the shrink-wrap license, there is an outrageous overextension of any reasonable understanding of what copyright might stand for. Even if it is justified, it's not explained.

On the other hand, there are the sophisticated users who can re-engineer anything they want well within the doctrine of fair use. For them, copyright is simply not a meaningful constraint. Those are the people I'm worried about.

As I've gone around this law school and talked to our graduates—I know more IP lawyers than I probably should—the answer I get is, "You had better get some serious patent protection or you really haven't got much of anything. Copyright costs very little, so you might as well send in the form, but there's nobody of any weight who's going to be slowed down by a copyright." It's the people with the weight I'm concerned

about. I'm not worried about my customers. They'll give each other copies, sure. I'm not going to enforce that any more than anybody else is going to enforce it. I'm worried about the people who are going to reverse engineer the software and go skipping off to market. I just do not see copyright addressing that kind of problem at all.

MR. GOMEZ-SEGADE:

Copyright Protection of Software. First of all, in my opinion the problem with software is that we are protecting with copyright something that is useful. Ralph Oman told us that copyright was intended to protect works that are not useful. This is the origin of the problem. Therefore when one tries to apply to computer software the provisions of the traditional author rights it does not work. Well, this means that many people doubt that copyright was an adequate way to protect computer software. Nevertheless, I think it is better to cover computer software with copyright than going for *sui generis* protection. Of course, if we begin with special *sui generis* protection, it could be a slippery slope.

Patent Protection of Software. In regards to patent protection, I was a little bit surprised when Karl Jorda showed a country list according to which there was a trend in Spain in favor of patent protection. The European Patent Convention expressly prohibits patentability of computer software. It prohibits the patentability of computer software as such. When part of a process, of course, it is different. And this is the common situation. It's possible because it is integrated in the process, in an industrial process. And in this case, of course, there is no problem. As a matter of fact, the European Patent Office has granted quite a lot of patents which have included computer software.

Utility Models. In connection with utility models, I like your suggestion, Karl. Utility models are not mentioned in TRIPs. This is very interesting. For many years, almost a century, they have existed in Japan, in Germany, in most of the European countries, and in Australia. And in countries that didn't have such an institution, they are now being created. For example, in Ireland, they instituted the so-called "short patent." The same occurred in Belgium. They protect small inventions by a less expensive form of protection, with a shorter term and fewer requirements. I think that it is a very interesting situation that you do not have these here in the U.S. as far as I know. But let me say that since utility models are created to protect industrial utilitarian products and software is copyrightable as a literary thing, utility models, at least in the European and international sense, do not go in principle with computer software, in my opinion. But it is used. And in the case of Europe, due to the high costs of regular patents, the interest is great especially by medium and small sized businesses. And now the European Union is starting to draft a European utility model law.

MR. BENSON:

Thank you. Now, we'll open it up for the second round.

MR. GHOLZ:

Peripheral Claims. Ralph Oman asked what was wrong with the protection under patent and copyright laws for computer programs. He challenged Karl to back up his statement that there were problems with patenting and copyright protection of computer programs. I think perhaps that Professor Gibbons provided the answer to that or at least an important answer. In my view, the problem with copyrights is the lack of peripheral claims. No one knows what a copyright claim means. A copyright claim is, in essence, a central claim, and nobody knows how far outside the central claim—outside the literal text that has been copyrighted—one has to get in order to avoid infringement.

Similarly, the problem with patents is the lack of defense of the periphery. We have peripheral claiming. It sounds wonderful. That's literal infringement. And then we have the doctrine of equivalents and what does that mean? Nobody really knows until the Federal Circuit has told us in any given case. The doctrine of equivalents, in essence, makes a mockery of the Doctrine of Peripheral Claiming. That, of course, is not limited to computer programs. It is not even more of problem with computer programs than it is with other areas of technology. It is a problem all over. It is a problem that effects the certainty that Professor Gibbons and everybody else who is worried about infringing a copyright or a patent has to face.

In copyrights, there is the central claim, and one has no idea how far you have to get away from it to avoid liability. In patents, you have a peripheral claim. However, the courts do not enforce the periphery, and you wind up with the same problem.

MR. FRYER:

Scope of Copyright Protection. I just wanted to add one more point on where copyright law is going in terms of protection of technology subject matter. I see a developing trend that is broadening the scope of copyright protection around the world. For example, with industrial designs, there has been a division across the world about how useful articles are treated. If you read the Berne Convention history, in Professor Ricketson's excellent book, you'll find that the countries could not agree on what should be protected by copyright law on useful articles. So, France protects essentially everything. Italy had a separability concept. The U.S. adopted a version of the separability concept. Now Italy is having to back away from this principle for several reasons.

I see a trend occurring internationally that suggests a more comfortable understanding of useful articles copyright protection. This trend should help develop firmer computer program protection.

The Berne Convention protection of architecture, and the U.S. acceptance as a Berne member, is evidence of this trend. The U.S. Copyright Office is now dealing with the layout of shopping centers, in outside and inside areas. The Copyright Office is becoming more comfortable dealing with useful articles protection and recognizing international interests, and that a basis exists for substantial protection.

While on the District of Columbia Court of Appeals, Justice Ginsberg suggested to the Copyright Office that it not be the gatekeeper on copyright protection of useful articles, with its broad discretionary powers. In my view, the Copyright Office should continue its practice of permitting registration, where arguments exist for and against registration. We should look to the courts to make the decision on what can be protected. This trend should help in resolving controversial areas concerning program protection.

MR. GOMEZ-SEGADE:

Originality & Infringement under European Laws. In the European directive and in European laws, the peculiarity of computer software is due first of all to the definition and the requirements for protection. The basic requirement is that it should be original. But the threshold of originality is so low that it is expressly stated in the directive that originality is not needed. Any kind of creative level, perhaps, in the traditional sense, will do. And the second point, in connection with problems in identifying an infringing act, especially in the case of reverse engineering, The European Directive and the Spanish, German and French, et cetera, laws reverse engineering and decompilation are allowed within narrow, strictly defined confines. Perhaps this can help establish boundaries. I think this policy behind the European directive is a better way to obtain safety and security.

MR. MACKEY:

Validity of Patents Being Issued. I want to speak about patent coverage when patents are granted. The perception—at least the perception of two young men I know and their colleagues—is that many patents are being issued that should never be issued. The software involved should not be entitled to any patent protection in large part because the database from which the examiners apparently are working is inadequate. Stated another way, many of the patents that we see should not have been granted because what is claimed is old. I thought that might be something for our Patent Office representative who has just arrived. I'm sure he's quite aware of it. I'm not sure what the cure is but it is an area of great concern to those working in the computer arts.

MR. MUIR:

Emerging Technologies and the Classification System. In a sense, this is deja vu all over again. Because at least twice in my career, when

there has been development of new technology, there have been the same criticisms. Part of it is, at least in one case that I remember, is the classification system. When there is a new technology, people tend to write their claims in different ways and will be filed in different parts of the Patent Office and they will never be found at all.

Emerging Technologies and Prior Art. To another extent, we live in a less than perfect world. All of the prior art is never available. We, as business people, like certainty. Our clients like certainty and we try to give them as much certainty as we can. But we can never be one hundred percent certain especially in emerging arts or emerging technologies. Accordingly, while I think it is magnified as it relates to computer programs, I am also very, very confident that history will repeat itself and that this will be less of a problem as time goes on. I think we are in the beginning of a period of difficulty and I have great hope that it will be better in the future.

MR. ARMITAGE:

Peripheral Claiming. I believe, if I understand what Ralph Oman said, that indeed the copyright system as we apply it to computer programs is a peripheral claiming system. Maybe it was not clear from what Ralph said, but you simply draw an imaginary line between idea and expression. The expression side is the periphery. And the idea side is outside the periphery. Isn't that right, Ralph? It's incredibly simple to do.

MR. OMAN:

You understand that well.

MR. ARMITAGE:

Level of Protection for Computer Programs. I am uninhibited by any substantive knowledge in this particular field, but the second issue of the appropriate level of protection for computer programs is also equally clear. The solution, of course, is just the right level. And just the right level, of course, is that level at which the protection provides some demonstrable benefit to the economy and to the industry.

Typically a demonstrable benefit is provided, particularly when you're talking about a legal system, when the benefit is something greater than a zero sum gain. Zero sum gain occurs when the holder of the intellectual property right receives some benefit and the potential infringer incurs some detriment. These two are balanced, remembering, of course, that legal fees are often involved.

One of the difficulties when the level of protection becomes too slight is the enormous number of disputes, actual and potential. The cost of managing those disputes, largely borne through lawyers and the legal system, becomes exceedingly burdensome. Finally, an entire industry proclaims, "Wouldn't we all be better off if instead of occupying

ourselves with what our lawyers tell us we can do and we can't do, we perhaps had a lesser degree of protection?" All of this leads me to repeat what I said earlier: we need to tread very lightly before we create new forms of protection for computer programs or anything else.

Second, we should try to focus much more intently on making the systems we have work with a greater deal of comprehensibility and certainty because, for example, I don't understand the difference between idea and expression perfectly as applied to computer programs. Also, I sometimes have a difficulty understanding, relative to the statutory classes of subject matter and the standard of nonobviousness, what an invention ought to be in the computer program area.

MR. COLEMAN:

PTO Examination of Software. I would like to comment further on the examination process for computer programs. I mentioned that there are presentations that show examples of patent claim after patent claim for computer programs. What I neglected to mention before is that the presenters will then refer to the prior art that has been referenced in these patents. In most cases there is no literature cited, except maybe one or two patents. The critic then illustrates that there is an abundance of relevant prior art literature. The claims are then compared with very prominent literature in the art that has not been cited. Of course, this appears to be mostly a complaint from small-entity software creators regarding the software payouts being obtained by large corporations such as I.B.M., and more recently Bill Gates. Where is the harm? It is argued that such patents are not an incentive to invent but instead have a chilling effect on the creation of new software by small entities, and that the larger companies are monopolizing the field. The critics also provide figures to show the great increase in litigation in the field of software patents.

MR. BREMER:

University Approach. What we have been experiencing on the campuses is interesting in the light of this discussion because it shows the adaptability of people to circumstances. In the universities this adaptability is through the tech transfer approach, where we are starting to believe the utility patent has advantages. The people in computer science have said, "Oh, we're sorry. We don't think there's much there; we'll classify all of our computer programs as scholarly works. Under scholarly works, we ourselves can copyright it and we ourselves can disseminate it for dollars." They are driven by the dollar value.

If one looks critically at the university sector, it is not the old approach where the effort was on behalf of the public and for advancement of science. We're doing this for ourselves. I just thought that should be an overlayment here to all of these commentaries because we

are talking about the possibility of *sui generis* protection. From talking with other colleagues, on all of the campuses it appears that there is a dichotomy within the university sector. Some people in this area say, "I want my programs to be given to everybody so everybody can use them," while others say, "I want to maximize my dollar return from this and the best way I can do that is by saying it's a scholarly work where I can get ownership to it."

MR. CROOKS:

Evolving Definition of Software Copyright Coverage. I was glad Bob Muir commented that some progress has been made in the definition of the scope of software copyright coverage. Some years ago we heard a lot about the "look and feel" of software. We don't hear those words now and this tends to bear out that some progress has been made. After all, "look and feel" was an extremely indefinite criterion of infringement.

MR. GIBBONS:

Non-literal Aspects of the Program. "Look and feel" was scary. The Apple suit made waves well beyond the legal profession. But I've got to say that there's another term I've heard today that's pretty scary and maybe not even as clear. That is the term "non-literal aspects" of the program—of the work. It was mentioned that there are two levels that are copyrightable or protectable or that copyright applies to: the code itself, the generative part of the work, and what it generates.

In art there could be the same kind of thing, but there it does not cause the same kind of problem. For example, there are performance art situations where the artist will create something that is kinetic, that moves, that flashes. The work of art is simultaneously an active entity and the expression that it generates. I gather that the whole thing is copyrightable.

In computer software, it is a little different because the thing that the underlying literal work generates is the look and feel of the software on the screen. That is what strikes the perception of the player. Now that we get into this sort of three level—object code, structure, sequence and organization and look and feel, the level of abstraction becomes so great that it is just not formative.

A well-meaning person, seriously wanting not to step on other people's copyrights, is going to have a very hard time telling, even with expert opinion, what it is they should and should not be doing. The tendency is going to be to trample on copyrights, to say, "Well, I'm not sure exactly what it is that's protected here and I'm not going to overconstrain myself. I'm not going to make believe that there is protection when I can't imagine what it is."

MR. BANNER:

Evolving Definition of the Property Right. The desire for certainty in determining when we or our clients have stepped on the intellectual property of another is a holy grail that we seek quite a bit. It is quite difficult in the software field for a variety of reasons, but is getting better.

I agree that the definition of the property right is evolving. Five or ten years ago, we would not have seriously recommended patent protection for software in the way we do now. Patent Office guidelines have been an excellent assistance in helping define where we can go. Copyright cases have helped us a great deal. But even today, when we have intellectual property brought to us by software creators, we have to consider a whole range of possible types of protection, each of which has its advantages and disadvantages. But ultimately, they come up with fuzzy borders. Borders, nevertheless, but the borders seem to be fuzzy. What I see becoming more and more helpful are greater opportunities to search nonpatent databases of software. Today, more and more pieces of code and descriptions of code are available in public libraries, if you will. Electronic libraries that one can find and attempt to define for clients, the prior art that might apply to that patent and that would go beyond what was cited to and in the Patent Office. It is by no means where I think it will be in just one or two years but they are beginning to be developed and they are quite helpful. When one gets that information, the borders become less fuzzy.

In the copyright area, we have what I like to think of as a very definitive four-to-four vote with the Supreme Court. I do not know how I can be terribly certain when through the frozen tundra of Washington, D.C. all kinds of people traipsed out to argue before the Supreme Court in four feet of snow and then they came up with a four-to-four decision. I do not think it is going to be clear today.

Bob's observation made me reflect upon the progress that has been made over just the past several years. I suspect in several more years, we will then be in a position to decide whether an additional form, a *sui generis* form of protection, is necessary because the spaces that are not protected are deemed socially worth protecting. At the present time, I do not think any additional *sui generis* form of protection is necessary because the evolution has not come to an end.

MR. MOSSINGHOFF:

Comparison to PTO's Examination System for Biotechnology. I agree with what Mark said, and there is another entirely exploding field of technology and that is biotechnology. That only came into existence legally with the *Chakrabarty* decision. Now, somewhere between 10 and 15 percent of the applications pending in the Patent Office directly

involve genomics or biotechnology. There the Patent and Trademark Office has done a very, very significantly good job in examining. And the same things that were thrown up in the *Chakrabarty* decision are thrown up now. It was said that one cannot search it, that one does not know what is patentable and all the rest. Well, the Patent Office has a totally unique examination system for biotechnology, and genomics in particular, where the examiners do not search them. They have special searches in a special area of the Patent Office that have the most elaborate connections to the world's databases.

So, applications involving the human genome are being filed. Sequences are being filed. These inventions are being examined against the best possible prior art. That same thing, I think, is going to happen with respect to computer programs. The guidelines are relatively new. The examining guidelines brought a lot of order out of a somewhat chaotic situation in the patent world and I think the Patent Office will do exactly the same thing for software. They will end up having technical literature. They will have automated searches of technical literature. Maybe the searches are not as good as we'd like now, but I think we can be very optimistic that in the very near future, there will be very good searches. And maybe, again, nonexaminers will do the searching at the direction of the examiners.

MR. BENSON:

As I said at the beginning of this, I will let the presenters have the last word if they want to.

MR. OMAN:

Concluding Remarks on Software Protection. Much of the discussion I've heard today about the inadequacies of copyright are not off the mark. I have heard many criticisms of traditional copyright protection over the years and certainly I am sensitive to those shortcomings. But the complaint that we cannot tell where the bright line is, or know what is legal or what is illegal, what is expression or what is idea, has a bearing and is significant only when one wants to copy another's work. If one wants to independently create a work, it is irrelevant. One can create exactly the same thing. One can use exactly the same structure, sequence, and organization, or anything else, as long as the first work is not copied. The fact that this industry seems to cross-fertilize itself to a great extent makes these difficult questions come to the fore. Under traditional copyright, it is a very liberal philosophy in terms of allowing creativity to blossom in every different corner, and software is no different.

On the issue of *sui generis* protection for software, I think it is fortunate that Washington does not have buildings over ten stories tall because people would be tempted to jump off of them if we decided to re-

open this issue after we have battled it around the world for the past 20 years to get pure copyright protection for software. If we did open it up and reexamine our position, that would give people who did not wish us well an opportunity to rethink their position on copyright protection and decide perhaps maybe some specialized form of protection would be the best way to go. The U.S. would have to negotiate a new international treaty. We'd have to confront the possibility of compulsory licensing and short terms of protection and all the other battles that we have fought at every other crossroads in this never ending battle to maintain high levels of protection around the world. I just do not think that this is the time or the place to be raising the possibility of a new form of protection when the other forms of protection seem to be working adequately. Most of the people who are involved in the subject around the world, other than the professional academics, feel that this issue is over and done with and should not be raised again.

I would like to have an extended discussion about the propriety of shrink-wrap licenses and contracts of adhesion and pushing a button on your Internet access provider's screen agreeing to every form of limitation on the use. This is the way business is going to be done in the future. Perhaps the days of individual transactions and negotiations over specific terms are gone with the wind. This is the way business is going to be done in the future with many copyrighted works whether we like it or not.

The observation that the entire concept of copyright does not somehow fit in your real world experience—I guess that is a legitimate concern. If it is not filling your needs, then there's something wrong with it. I had always thought that the Semi-Conductor Chip Protection Bill with which Gerry was instrumental in moving forward was not terribly useful to the industry. But recently, I have been hearing from people in the industry that it has been a tremendous benefit. Even though some of the major manufacturers do not use the registration system, it has acted as a restraint on piracy and the U.S. companies are thriving. The American companies, in combination with the Japanese companies, have 85 percent of the world's semiconductor chip market. It is a dynamic, innovative industry and it relies on the protection, even though that protection is very thin.

If copyright ultimately does not work for protection of software, I do not know what would take its place. I am not sure that any other form of protection or *sui generis* protection would not be an invitation for the nonproducing countries to take unfair advantage of the producing countries. Or for large companies with tremendous economic resources to take advantage of the small companies that produce software. I would think that any major software company could take a programmer's

innovative ideas, his or her innovative expression and invent around it in a matter of months and have the originator out on the street. That is something that we have got to guard against. I think that is what the copyright laws are intended to do. I'm reminded that W.C. Fields said, "If it's worth having, it's worth stealing." You see that more and more in the software industry. I do not think that is a good trend and certainly, if copyright law is not up to protecting this creativity, then we should think freshly about other possibilities.

I would also like to comment on the other issue Bill Fryer raised. Again, I could spend all day talking about whether or not the Copyright Office should be the gatekeeper. It was one of the criticisms that was leveled at me when I was the Register of Copyrights. We took our job very seriously. It was not that we were creating the standards. We were trying our level best to determine what it was that the courts wanted us to register and what they did not want us to register.

If we just had the "close your eyes, hold you nose and jump" philosophy, and registered everything, the registration certificate would not be worth anything. It now represents a considered judgment of the experts in the field. If we started registering everything, the courts could no longer accord it the presumption of validity. That deference is very important to copyright owners. And I think that is why the courts ultimately decided that what the Copyright Office was doing was correct. Occasionally, we err. In deciding what can and cannot be registered, we perhaps make a mistake from time to time, but that is understandable. It is not because of any attempt to aggrandize our powers or hold sway over the industry. We are just human beings and occasionally we make a mistake.

Justice Ginsberg found that I had abused my discretion in refusing to register a very rudimentary type of computer program involved with a computer game. It wasn't the computer program itself that was being registered, it was the screen display which consisted of a series of 20 rectangles, a circle and another rectangle, bouncing around a little bit. The game was called "Break Out." In the opinion of most of the experts in the Copyright Office, there was not sufficient human authorship involved with that computer game, the visualization of it on the screen, and we refused registration. It was not because we were being perverse or wanted to show our muscle. It was just that we made an honest judgment.

The Justice Department felt very strongly that we should stick by our guns because this was not a case of abuse of discretion. It was a difference of opinion. Under traditional administrative law, the courts should defer to the judgments of the expert agencies in these very narrow, technical cases. Justice Ginsberg (Judge Ginsberg at the time) gave us an out by reminding us that the Supreme Court had decided the first case just

recently and that we should reconsider our opinion based on the Supreme Court opinion. We did not have to be weather forecasters to know which way the wind was blowing at that point. We reconsidered our opinion and registered the game.

But again, acting as gatekeeper is not a function that we take lightly. We do see standards that the Court determines that should be used in judging the copyrightability of certain works and we try our best—we tried our best to do that. I suspect that despite Justice Ginsberg's views to the contrary, Mary Beth is doing exactly the same thing. Because she recognizes the value of the certificate and the value and importance of that initial judgment made by the Copyright Office.

Again, in conclusion, I reiterate that all of the concern about the difficulty of drawing lines, of finding what one can do in terms of reverse engineering stems from the fact that people want to copy other people's expression. That gives rise to the problems that we have been talking about today. My concluding remark is that when asked to name France's greatest poet, George Clemenceau, the French Premier during the First World War, said, "Victor Hugo, alas." And if I were asked to say which way is the best way to protect software, I would say, "Copyright, alas."

MR. BENSON:

Thanks, Ralph. Do you want to make a concluding comment Karl?

MR. JORDA:

Concluding Remarks on Software Protection. Well, just a very brief comment. I stand on my position. It's been established in this discussion that there are problems with copyright protection and there are problems with patent protection and there are obvious shortcomings with trade secret protection. But if you exploit the overlap, and combine all of the different ways to protect software, you end up with some very effective protection. I'm satisfied that we have the best of all worlds in that respect. There is a problem if you can rely only on copyright and it bothers me that in many foreign countries, and significant foreign countries, the only way to protect software is by way of copyright and that is not adequate because of the problems and shortcomings we discussed. There is a gap however, and to bridge or fill that gap a *sui generis* system should be considered.

VII. DOCTRINE OF EQUIVALENTS

MR. BENSON:

The next subject is the doctrine of equivalents. At the time we set up this conference, what we had before us, which all of you got in your package, was "As Looking Through The Crystal Ball" which was written

by Bill Pravel. Subsequent to that, we have the decision so Bill will introduce this topic.

MR. PRAVEL:

Introduction to Doctrine of Equivalents. Well, Bob, I'm going to talk about both to some extent. But primarily, I'm sure everybody is more interested in the Supreme Court's decision than in my looking at the crystal ball before the decision. I can say from my own view of it—of course, I'll leave it to your judgment if you read the article that I had before—that most of it was a pretty good prediction. The crystal ball wasn't too bad. There were a few cracks in it. I think the cracks were more or less surprises, at least to me and I think to some other people. Particularly with respect to the presumption that the Supreme Court raised with respect to a file wrapper estoppel in the absence of an explanation for the reasons for an amendment to claims. That one certainly caught me by surprise. Perhaps it shouldn't have. Maybe it didn't others.

The other one, I thought—I was somewhat surprised by the fact that the decision dealt with not only the basic issues of whether or not the doctrine of equivalents should continue to exist and whether or not a jury should be permitted to decide the doctrine of equivalents, but it dealt with a number of subsidiary issues related to the doctrine of equivalents that are important. And they were important in the sense of clarification maybe making the law more understandable with respect to the doctrine of equivalents. So, the third thing, I suppose, really, with respect to the surprise was that the Supreme Court did not deal with the jury issue as such. They left it as it came from the Federal Circuit thereby leaving the opportunity for a jury trial still in existence.

Now, with that as a preliminary in the comparison of the before and after the *Hilton Davis* decision by the Supreme Court, I'd like to list the main points of the decision because that will give us a basis for the comments here today. Then I would like to go back and briefly pick up some of the details in the decision that I think are the more important parts of it.

The first conclusion of the Supreme Court was to leave the doctrine of equivalents as a doctrine, but with several major limitations or restrictions as compared to what it was before. That presumption of the file wrapper estoppel that I mentioned is the first restriction. The second restriction was that the doctrine was to be tested on the basis of an element by element analysis. In other words, you have to have the doctrine of equivalents applied to each element of the claim, not to the invention as a whole. Both of those were in the decisions. Both of those were possibilities. Both of those were usually urged in litigation. So,

that's the first one. I think that's probably the primary thing that people have looked at when they have looked at this decision.

The consequences of both of those restrictions are important. And I think that's again something that could be discussed here today. With respect to the jury question, since the Court decided it did not have it squarely presented to it, of course, left us with the jury and, to some extent, there's no change. However, as you read the opinion, you see the Supreme Court saying that there were a number of the dissenters on the Federal Circuit who were concerned with what they called "the black box verdict." In other words, the Federal Circuit, at least the dissenters were saying, "We have a hard time figuring out at times how the jury decided this case. Did they decide it right or not?" They just get an answer that there's infringement. A literal infringement. An infringement under the doctrine of equivalents. They do not know how the jury came to it. So, that was a major concern by some of the dissenters and also, of course, it was raised as a factor in some of the amicus briefs that were presented to the Supreme Court. But the Supreme Court opinion in *Hilton Davis* did say to—I suppose they're talking to the Federal Circuit as well as to those of us who practice in this field—that there are things that should be done and can be done under our present rules in terms of getting jury interrogatories that are more specific to the issues. These are areas that are not unfamiliar to, certainly, the Federal Circuit judges or to practicing attorneys. But I think the way in which the opinion leaves that issue, there probably will be much effort—a much stronger effort by the Federal Circuit to insist upon that type of jury instruction and jury interrogatories.

As you know, as far as the doctrine of equivalents itself, whether it should be applied, there were contentions, particularly in the behalf of the petitioner and in some of the amicus briefs that there should be some equitable basis before you ever apply the doctrine of equivalents. Before you ever qualify. The threshold requirement. The *Hilton Davis* opinion, in effect, said well, it's true that piracy and copying are major things that are solved but they're not the thing that is required in order to invoke the doctrine of equivalents. So, in effect, this equitable trigger of copying or piracy as a basis for getting the doctrine into play in the case was eliminated. So, we no longer have to be concerned with that part.

The next point was the time for evaluating equivalency. The contention on the part of the petitioner and some of the amicus briefs was that you have to determine the doctrine of equivalents and the infringement issue at the time the patent application is filed. In other words, what is disclosed in the patent specification as an equivalent is the thing that should be looked at to determine the doctrine of equivalents. Most of the judges who looked at it in the Federal Circuit case said it

shouldn't be that restricted but it should be those equivalents that were known at the time of the pending application. The Supreme Court discarded both of those approaches and said to look at the doctrine of equivalents, and those things that were known as equivalents, at the time of the infringement. In a sense that made the doctrine of equivalents a little broader—a little stronger—doctrine. It gave the patentee more latitude than if the petitioner's view had been sustained.

Another interesting one was the question of intent and the Supreme Court came down very strongly and clearly that intent plays no part in deciding infringement. We've always known that with respect to the literal infringement. They added that it has no part in deciding infringement under the doctrine of equivalents. It really came down to the inferences that had been suggested. I do not know whether you would call it dicta or not, but it was suggested by the Federal Circuit in its decision in the *Hilton Davis* case that there would be an inference that the differences were substantial if there was some designing. Or insubstantial if there was a copy. Those are two sides of the same coin. In effect, the *Hilton Davis* Supreme Court decision said, "We do not think that either of those is clear and the inferences, in effect, were not a proper basis to go forward on."

There was a proposal by the petitioner, which the Supreme Court rejected, that any amendment to the claim, regardless of the reason for the amendment, should create an estoppel. In other words, if you amend your claim, regardless of your reason for it, there should be an estoppel to apply the doctrine of equivalents. The Supreme Court rejected that.

Then we get to this interesting area the Supreme Court called the linguistic framework. What they were talking about there was the question of how you look at the doctrine of equivalents. You will recall, of course, in the *Graver Tank* case, that the approach was the substantiality of the differences. That was carried over by the Federal Circuit in its opinion in the *Hilton Davis* case. Also, it had the function, way, and result approach. Those are the two approaches that exist right now for interpreting the doctrine of equivalents and deciding whether or not it's applied as well as how to apply it. I think the Federal Circuit gave a little more credence to the substantiality of the differences test because, in effect, it said, "Well, the function, way and result test has been applied but it's not 'the' test." So, in effect, they downplayed that test. I read the Supreme Court in the *Hilton Davis* case now as saying, "Well, we do not think that the substantiality of the difference is very helpful." As one of the amicus briefs said, it's somewhat amorphous. It's hard to put your finger on what is substantial and what is not substantial. Therefore, it is a difficult test to apply. They seem to stress more so the function, way and result test. This is where the Supreme Court, in effect, punted

and said, "We think that the Federal Circuit has the expertise to deal with this and figure out the best way to approach it." So, it's back in the Federal Circuit Court. As to whether or not they want to try to formulate something that's different, I suppose they could, or adopt one or the other or try to meld the two tests together.

In terms of the decision, with this new law the case has been remanded with respect to the presumption of the file wrapper estoppel, so that the Federal Circuit can figure out how to handle it. They also sent it back to the Federal Circuit to figure out how to deal with the linguistic framework of the doctrine of equivalents. To a large extent, they left us with some relatively large jury issues in fundamental areas in terms of clarification of the doctrine of equivalents. But they did give us some clarification and some help in the other areas that I mentioned.

Now, let's see briefly some of the areas of interest more in detail than I discussed at this point. Perhaps a very brief statement of the facts of the case and the facts are fairly simple. At least the pertinent facts of the patent related to an ultrafiltration process for the purification of the dye. The prior art in the case showed that in the process this pH of nine was used so that anything above a pH of nine was prior art. What happened is during the prosecution the claims were amended to put in a limitation of a pH from six to nine. So, anything above nine was clearly prior art. Below six, there was no prior art.

Well, the party that was accused—Warner-Jenkinson was the petitioner in the case—they had to use a pH of five. Clearly, not literal infringement. But its use raised the question of whether or not there was an infringement under the doctrine of equivalents. The record shows no reason as to why the applicant had put the limitation of six in there when there wasn't any prior art on the low end of the range. The Supreme Court said, "There's no record. We do not know how to resolve that question. We do not know whether there was a reason or not for the pH of six." And that is, of course, the reason they remanded it so that the Federal Circuit could see whether or not there really was a reason and whether or not it was appropriate to even consider it at that stage.

But what you have from the facts is that you must decide then is there any reason, is there any basis for the doctrine of equivalents. The petitioner, of course, pitched its case on the fact that the claims provide the definitional and notice requirements of a patent. Those are the two things that a patent claim should provide. The public needs to know what the scope of a patent is and the claim is supposed to tell you that. The claims are also supposed to define what the invention is. Essentially, that's the side of the person who advocates no doctrine of equivalents. Because if it's the claims, and you just look at the words, you have no

doctrine of equivalents. The other side of it, of course, is the historical basis for the doctrine of equivalents.

Going back 150 years ago to the seminal case, the *Winans* case, and in that case, they basically set forth the doctrine of equivalents and it was carried forward by the Supreme Court and, of course, by the other courts. Up until this case, the *Hilton Davis* case, and there, it was challenged. It had been challenged in the *Graver Tank* case. In fact, the Court itself reported in *Hilton Davis* that there was a vigorous, vigorous dissent by Justice Douglas in the *Graver Tank* case. That dissent was overruled by the majority in *Graver Tank* in which Justice Douglas said, "You shouldn't have the doctrine of equivalents. It should be a strict construction."

So, you have a dichotomy that was existing there before the *Hilton Davis* Court. The strict legal interpretation, literal, for a claim to provide this notice and this definition so that people would know the scope. Then you have this equitable aspect of the doctrine of equivalents that says, "Yeah, but wait a minute. We're trying to protect the substance of the claims and there are people who will just try to make minor changes. So, we need the doctrine of equivalents." So, that was the position in the case that came before the Supreme Court in the *Hilton Davis* case. Those were the factors that had to weighed. And I think, and this is just my personal reaction, I think from reading the opinion that the Supreme Court was very concerned about the doctrine of equivalents having too much of an effect on the notice requirement of claims and perhaps obscuring that notice requirement but yet, was unwilling to go so far as to throw out the doctrine of equivalents. I think being a court of law guided by *stare decisis* decisional cases, they just didn't think they should go back and say, "Well, we made a lot of mistakes. We made this mistake for 150 years." But they were willing to try and cut it back. That's what they did with the prosecution history estoppel presumption and they did it with limiting the use of the doctrine of equivalents to each element.

The reason that the Supreme Court was concerned about the effect of this decision was that it not only affects the litigants of the case before the Court—the *Hilton Davis* case—it affects all of the extant patents that we have out there. Or any of them, at least that are in this fact situation where you have claims that were granted without any reasons given for an amendment to the claim. And this is something that happens a lot of times in chemical cases, but not quite so much in other fields, as far as I know. That's my reading of it. I'm not into electrical cases much, so I do not know whether it would be true with that type of case but certainly it is true with chemical and mechanical cases. The chemical cases are more likely to have this problem than mechanical

cases. But the effect of that was of some concern to Justice Ginsburg and Justice Kennedy and they said they hoped that this test would not be applied woodenly, W-O-O-D-E-N-L-Y, for fear that in some instances, they said, "it might unfairly discount the expectations of a patentee who had no notice at the time of patent prosecution that such a presumption would apply." So, I think it is true that there will be concern by those of you who are litigating as to whether or not the file history shows a reason.

I was involved in a case just recently where the first thing I did was look at the file history to see whether there was any kind of reason for the claim language being amended. So, I think that's what we're going to have to do. And I think some of these patents are kind of hanging in the balance until that is done.

As far as the test for reasons—the test for estoppel being based upon the amendments regardless of the reasons for the change—I think that was a healthy thing to reject. I do not think that certainly would have been a good rule, and the Supreme Court analysis was really based upon this same concept of perhaps catching people who already had their patents without realizing that this was going to be a change. They just rejected that with this language: "To change so substantially the rules of the game now could very well subvert various balances the P.T.O. sought to strike when issuing the numerous patents which have not yet expired and which would be affected by our decision." So, in one sense they were willing to go and have an effect on the patents that have not expired and in another sense they were not. I do not think it was much of a surprise that the Court said there was no equitable trigger. Perhaps some of you feel that there should be an equitable trigger. I know a lot of people have been concerned about applying the doctrine of equivalents unless there was some really bad action on the part of the infringer. But that, I do not think, should have been a surprise in view of the way the Federal Circuit has basically dealt with the doctrine of equivalents in the past.

There are the so-called petitioner's primary arguments. There's only four as listed by the Supreme Court in the *Hilton Davis* case. First, the doctrine of equivalents is inconsistent with the statutory requirement for specific claiming. I think that's the gut issue right there. Whichever side you go on, if you think a patent claim has to be just a statutory definition, and if you do not literally have the claim words in the accused product or process, then if you apply the doctrine of equivalents you really do not follow that. You are subsequently into an area which is inconsistent with the statute, i.e., an area in which the claim doesn't give the notice that is expected of a patent claim.

Then the second one was the doctrine of equivalents circumvents the re-issue process. The argument made by a lot of amicus briefs that

the answer to correcting a patent instead of allowing the doctrine of equivalents is to just re-issue the patent. Of course, we know there are limitations on the re-issue process.

The third one was the doctrine of equivalents is inconsistent with the primacy of the P.T.O. in setting the scope of a patent through the prosecution process. So, in other words, the Patent and Trademark Office is the one who determines what the scope is and, if you ignore that and just forget about the language that was put in there during the prosecution, you are in effect ignoring what has been done in the Patent Office and, therefore, you shouldn't do that by having the doctrine of equivalents.

Finally, it was argued that the doctrine of equivalents was rejected by Congress by the specific and limited exclusion of equivalents regarding means claims. They said the means claims under section 112, paragraph 6, does refer to equivalents but the Supreme Court said that out of all these four, the first three were considered by the Supreme Court in the *Graver Tank* case and were rejected by the majority over a vigorous dissent by Justice Douglas, as I mentioned. The fourth one, they pointed out quite clearly and accurately that the means claim provision was put in there for a specific purpose to resolve this single means claim problem. But one of the things that nobody discussed in at least the decision, was what do you do about means claims.

We have, I think, still have some uncertainty in the decisions by the Federal Circuit as to how to deal with it. It's been said, "Well, it's not the function, way and result. You do not test equivalency in means claims by function, way and result. It's something else." But the something else is a little hard to figure out, at least from my standpoint, as to what they mean. How do you go about deciding whether something is equivalent when you're using section 112, paragraph 6? Is it something different than it is if you're over here talking about a claim that's not a means claim? I think that needs clarification by the Federal Circuit and hopefully we'll get it at some point. But there was an inkling of clarification by the Supreme Court in the *Hilton Davis* case in that they, in effect, when talking about this at least, it wouldn't be dictum but said that when they talked about equivalents in section 112, paragraph 6, it was talking about determining it as a function, way and result test.

As I see it the Supreme Court did some good in its decision. Personally, I was happy to see that the doctrine of equivalents remained. I also think they did some good in making some of the areas of the doctrine of equivalents more clear and more defined and more appropriate for the notice requirement of claims.

MR. BENSON:

Thank you for a very thorough explanation of what happened. We'll now open up the topic for discussion.

MR. C. BENSON:

I quite frankly applaud the decision of the Supreme Court here, although there are a number of things that I think are left open. But setting the test on an element by element basis will really help things. I'm going to have to rewrite a number of opinions that I've given clients over the years—over the last 13 years I've been practicing—but at least I'll now know what the test is.

Also, the discussion regarding the prosecution history estoppel and the amendment step will be helpful too. We have a case in front of the Federal Circuit right now which that will really help us on. As far as intent playing no role, the less intent—fewer intent issues we have in litigation, the better off we are. As far as the time of infringement, I thought that was a minor issue, but I'm glad that they resolved it. With respect to the jury versus the District Court judge deciding the issue of doctrine of equivalents infringement, they did not come to that issue, as Bill said, but they sure indicated that it's for the jury or—I should say for the factfinder. Whether it be the District Court judge or the jury. Because they cited the *Union Paper* case. They even said *Markman* was a case that supported that, at least in dictum.

What I'm interested in seeing is what the Federal Circuit is going to do with this case and the reason is: is this properly—should this properly go to the Federal Circuit to decide or should it be remanded by the Federal Circuit to the District Court because although the pH six limitation has got to be decided, and you have to look at reasons for that limitation. And Bill, I think you said that there were no reasons articulated. But if you look at the record below, I think there were some reasons discussed. And whether or not the Federal Circuit should handle that or the District Court judge allow the litigants to argue that is a big issue for me and I think it should go all the way down.

Also, there were some other things that were somewhat troubling in the opinion. First, going to the test, it's an element by element test. Right? But the Supreme Court did say, "It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety." What does that mean? That we can eliminate it partially in our analysis but you can't get rid of it all? This leaves me hanging.

There is also a good footnote on prosecution history estoppel in the opinion, footnote number seven. That footnote helps clear up some things that I had in a case last year with a former Commissioner of Patents, who is not sitting in this room. I took his deposition and he told

me that you can look at the rejection by the Office and look at the answer by the patent holder to that rejection and determine whether or not it was appropriate. If it wasn't appropriate, either by the P.T.O. or by the answering lawyer, you could work around that and figure out what it really meant. Now, they are saying you can't do that. If you write an amendment against prior art rejection, you are stuck with it. For some reason, I do not think that should have to be cleared up but I'm glad it was.

The Supreme Court said that intent plays no role. I think the language is, "The better view and one consistent with Graver Tank's predecessors and the objective approach to infringement is that intent plays no role in the application of the doctrine of equivalents." Well, I'm glad to see that but what about prosecution history estoppel?

You're looking at the intent there or at least the reasons for the amendment. That can appear inconsistent but I do not believe it really is. Again, I think it was very helpful that we got a decision on the doctrine of equivalents. Like I said, I've been practicing 13 years. Most of the time, the Federal Circuit's been here. And I have gone up and down on the doctrine of equivalents. I've written a lot of opinion letters and had a lot of trials involving it. I'm glad that we have at least some semblance of uniformity.

MR. GHOLZ:

Failure to Resolve the Judge-Jury Issue. My biggest disappointment with the Supreme Court's opinion is with its failure to resolve the judge-jury issue and with what I will stoutly contend is its dictum suggesting that doctrine of equivalents issues should go to the jury. If we are going to go to great trouble and expense to get the claims carefully construed by the judge and then send it to the jury to decide who has the most handsome and affable lawyer on the doctrine of equivalents, which I think is more or less how they decide DOE questions, I think we've wasted the time and effort spent on construing the claims in most cases.

Judge Michel, sounding like a law school professor, beat us over the head about the difference between holdings and dictum, and indeed that is fundamental to our system. The Supremes made it clear that they were *not* holding that the doctrine of equivalents issue has to go to the jury. Now, why they then wondered on suggesting that perhaps it should go to the jury is a question that we cannot answer. I think that it is still an open issue and that the Federal Circuit could change its mind.

Statutory Change. I think that they got *Markman* right and *Hilton Davis* wrong on which issues should go to the jury and that they still have the opportunity to correct their errors of the past.

If the Federal Circuit does not do that, then I think we need statutory change. Perhaps the Supreme Court felt in *Hilton Davis* that

they were governed by the dead hand of the past and had to go clear back to *Winans v. Denmead*, and that therefore we are stuck with the doctrine of equivalents. But to get to Professor Gibbons' question of does it work, the answer is that the doctrine of equivalents does not work. It's a bad idea.

I will get cross-examined shortly by Mark Banner, and I will tell you right now that I know the difference between what I think is a bad idea personally and what I think the law is. There is a doctrine of equivalents, and we can talk about what it means in our case.

We should have statutory overruling of a very bad idea that the Supreme Court promulgated a long time ago and that the Supreme Court has just given an extended life to. There is too much confusion, too much wasted effort, too much dysfunctional use of precious time and effort on the doctrine of equivalents. We should do away with it. Patent attorneys have a lot more experience in drafting peripheral claims now than they did in the time of *Winans v. Denmead*. It's time to rely on peripheral claim drafting to decide what should be protected.

MR. BANNER:

Arguments in Amicus Briefs. First, I think the decision was interesting for a variety of reasons. Many of which have been mentioned already. But one that has not been is that the decision of the Court really did not follow any of the amicus briefs or the arguments in the briefs that were presented. It was a different view. It took what it wanted from part A and then part B; took a little here and little there and it blended a very good opinion from a lot of different viewpoints, which surprised me. It did so without a dissent, which also surprised me. And it even did so in a cogent, relatively clear way, written by a general lawyer who became a Justice and, as far as I can tell, had no prior patent experience. That, I suggest, shows the wisdom in many respects of having these types of issues looked at from a variety of perspectives. Including from perspectives of people who do not practice every day, in and out, in the patent field or even in the doctrine of equivalents portion of our cabbage patch.

Element by Element Analysis. The key aspects of the decision that I think are most helpful to those of us who litigate and to those of us who prosecute patents are, number one, the final decision that we're going to have equivalents based on an element by element analysis. While predictable, I think this was helpful.

Intent. Two, the removal, as Chris Benson said, of intent largely from the analysis of whether something is substantively equivalent or not, I think is very helpful and will actually be helpful to those pressing their arguments to the jury. The Federal Circuit decision, I thought, was somewhat curious on this. It said copying is evidence of insubstantiality of the differences but designing around is relevant only to willfulness.

I've always thought the two were flip sides of the same coin, and you applied the words to be used after you decided who was the bad guy. Getting that largely out of the case will greatly help eliminate the confusion in the arguments that are made to the jury.

Equitable Trigger. Three, the elimination of the equitable trigger, which I also think was somewhat predictable. This was useful because that triggering mechanism, I thought, was a perfect example of the Rule of Unintended Consequences. Litigation, costs, and unpredictability were going to greatly expand because rather than acting as a door to the doctrine of equivalents, it was acting as a flood for all kinds of irrelevancies to be presented to the judge or jury.

Linguistic Framework. The fourth issue is the likely elimination of a rigid linguistic framework. I read the Federal Circuit opinion as Bill Pravel did—tending to favor the insubstantial differences test over the function, way, result triple identity test. I actually read it as saying function, way, result was a subtest—a way to arrive at insubstantiality of the differences. The Supreme Court, says, "Well, one may be good for one thing. One may be good for another. Let's not get hung up on the particular linguistic framework. Let's try to look at each individual element and determine whether an equivalent is present in the accused device." And I think that is a much more helpful rule, particularly as we've seen where some technologies lend themselves to function, way, result, others lend themselves to insubstantiality of the differences.

Jury Issue. I want to just comment briefly on what they did with the jury issue. My perspective on juries differs from Chico's dramatically. I do not believe they are swayed unduly in patent cases by the legal skills or even by the size or appearances of the parties. I think juries try to do the right thing. They try to listen to what sometimes is terribly presented evidence and they try to find out what the judge thinks their role is. And they listen very carefully to what are frequently lawyer-crafted, unbelievably difficult to understand instructions that all too often are not even objected to by either side once they are given in a language that is far from English. So, I think the juries try hard. And I think they usually and often come to correct results.

***Impact of* Hilton Davis.** I think the impact of *Hilton Davis* is going to be much the same as the impact of *Markman*, ironically. I think it is going to place a great deal more pressure on corporate patent counsel and outside counsel who are prosecuting patents. The role of the prosecution history was dramatically increased by both of those cases. Therefore, the care with which patents should be prosecuted, while it was always a difficult task, has just become a lot more difficult. We'll see the real impact of that in eight or nine years when patents issue and they are commercialized enough to be litigated.

That leads me to my final point. Chico says there is too much time and expense in fighting over the doctrine of equivalents. Well, I agree that there is a great deal of time and expense fighting over the doctrine of equivalents. But it takes two to fight. It takes two clients with an interest, financial and business-wise, to want to fight over the doctrine of equivalents. Therefore, if any one side thinks it is too much time and expense to fight over that doctrine, it can be ended. Just stop fighting.

The Supreme Court has noted and rejected the viewpoint that certainty and predictability is always a sufficient reason to adopt a bright line rule. Footnote number six makes very clear that merely because we seek bright lines does not mean that the ends always justify the means of getting there. And that is, I think, the real impact of *Hilton Davis*.

MR. GOLDSTEIN:

Affirmation of the Doctrine with Some Limits. I'm going to largely be a listener in this discussion. I need to be very circumspect in what I say on this topic because my firm, Frost & Jacobs, has represented Hilton Davis all the way through this litigation, including the remand, and Judge Michel may be hearing that remand. I should say that I think Bill's explanation of the decision was extremely well done. His speculation that the Supreme Court had concerns about the notice aspects of the doctrine of equivalents and tried to deal with it in its decision is very true. In fact, during the oral argument, at one point, Justice Breyer threw up his hands, basically, and said, "I can see the purpose of the doctrine. It serves an important purpose, but we need to define some limits for it. We need to know where the claimed subject matter ends." It seems to me that in order to get a unanimous decision the Court had to address these notice issues.

As far as the decision goes, my feeling is that whenever the Supreme Court picks up a case involving intellectual property, particularly a patent case, the bar awaits the decision with a mixture of excitement and trepidation in the hope that we'll get some clarification and help. But we never quite know what will happen when the Justices, who do not have any experience in the day-to-day aspects of patent law, do something that appears to be right but may not make sense when placed in the real world context. In fact, in that regard, I agree with Mark. I think the Court did quite a good job in the *Hilton Davis* decision in that we have a clear affirmation of the doctrine with at least some limits placed on it to help us in applying it.

Affirmation of C.A.F.C. Dealing with Patent Matters. There is another interesting procedural aspect that comes out of the decision. We've had quite a few IP appeals taken by the Supreme Court lately. The *Hilton Davis* decision provides a very explicit affirmation of the

Federal Circuit's position in dealing with patent matters, at least in terms of implementing the broad rules defined by the Court. A Court which has day-to-day experience in patent law will be making the lay patent law decisions. For me, that's a very good thing. It will be very interesting to see, from my perspective, whether the Supreme Court will be taking many patent cases in the near future. This appears to have been an important agenda item for the Court.

Protecting R&D Investments. Just for the record, in my own personal opinion, I think the doctrine of equivalents is very important in supporting and protecting R & D investments. Having spent over twenty years drafting and prosecuting patent applications, I believe it is very difficult and unrealistic to think that even the best patent attorney and the best inventor, the inventor and attorney having a great degree of forethought, can really anticipate all aspects of the invention they are defining in a patent application. That is true when you have a very well thought through patent application, and it is even more true when dealing with one which comes to you and needs to be drafted and filed by the following day because of an impending publication or statutory bar.

MR. MOSSINGHOFF:

Unanimous Decision of the Supreme Court. I would just say that I agree with everything Steve said and everything Mark said about the case, of course, Bill's very, very lucid explanation of it. I thought it was a remarkably clear decision. I think there were several areas where the Court really could have stepped into pot holes. One was paragraph six of section 112; they could have gotten themselves all tied up in that and they got around that very adroitly. I think the remarkable thing about it is that it is a unanimous decision of the Supreme Court. I think it shows how far the system has gone in appreciating intellectual property. I think if you were back in the days of the Douglas-Black Supreme Court, the idea that there would be a unanimous decision of the Supreme Court upholding a doctrine of equivalents was just out of the question. It was a unanimous Supreme Court and the only two specially concurring opinions showed concern not that the doctrine of equivalents would not define the metes and bounds but rather the concern that patentees who didn't know about the newly created rebuttable presumption may have fallen into some trap. They did not want the new rule—which is a new rule—woodenly applied, as Bill pointed out. I just think it's a very good opinion.

Apply Doctrine of Equivalents at the Time of Infringement. I disagree with my colleague, Chico. There are some cases where the doctrine of equivalents is absolutely essential. A classic example, which I think has been given before and occurred early in my career, was the substitution of transistors for vacuum tubes. Just before transistors were

introduced, careful patent attorneys were using words such as cathodes and anodes and grids or control grids and all of a sudden they saw bases, emitters, and collectors do exactly the same thing. So, there is a need for the doctrine of equivalents and it must be, in my view, applied at the time of infringement. It makes no sense at all, as was urged by some, that it be limited to either the time of the invention or the time of the filing of the application. It is at the time of infringement that makes any sense at all in my view.

JUDGE MICHEL:

***Supreme Court Decision in* Hilton Davis.** First, I'd like to commend and express my appreciation to all those who have spoken so far about *Hilton Davis* and the doctrine of equivalents. I thought every comment made by each of the prior commentators was right on target. I want to try to make a contribution to the dialogue by bringing up some new or different considerations that were not directly touched on in the unanimous Supreme Court decision itself, or for that matter, even in the underlying Federal Circuit short, per curium decision in *Hilton Davis*. And that is the notion that is hinted at when Justice Thomas quotes from the late Judge Helen Nies in her dissent where she talked about the only way to rationalize a claim-based system with the continued existence of the doctrine of equivalents is to think in terms of the scope not being enlarged. One way you could conceptualize it is to think of the literal scope of a patent as a somewhat irregular shape. Like maybe a flower shape with petals that protrude. What the doctrine of equivalents does is to fill in the space between the petals. That is not a very big space but it can be a very important space. The overall scope, the diameter of the circle, is the same. That is just one way you could think of it. Exactly how you think of it is not the important thing.

The hint there is that the doctrine of equivalents has a lot of limitations inherent in it that some of us may not have focused on before. At least that is what I read to be the hint in the Thomas opinion. I also think it is very significant that he openly suggested that many of the sub-issues or implementation of what the Supreme Court did decide would be left to the Federal Circuit. I think there is almost a hint there that they are very unlikely to grant *cert.* any time soon to consider a variety of what I'm referring to as the sub-issues not decided by them. They may take the *Hilton Davis* case again on *cert.* if the jury issue ripens in a way that would allow them to decide it as holding, not dicta. But with that one exception, my guess is the Supreme Court won't take another doctrine of equivalents case for a long time. Maybe even another 47 years, which was the interval between *Graver Tank* and *Warner-Jenkinson.*

Issues for the Federal Circuit. So, then what is left of really major practical import for the Federal Circuit to decide? It seems to me that drawing on the distinction Judge Nies made in her dissent from which Justice Thomas quoted, three or four paragraphs verbatim, in his opinion. It seems to me that she makes a basic distinction between "technological equivalency," which is a fact issue and which is for the jury, and the legal aspect of the issue. Let's call it "legal equivalency," just for a convenient label. If that is a meaningful distinction, as the Supreme Court seemed to suggest—and obviously the late Judge Nies thought—then the question in my mind is: Does that immediately trigger some existing Federal Circuit precedential case law? And I think the answer is "yes." There are a series of our cases which create what I'm going to call "blocking doctrines," where, as a matter of law, resort to the doctrine of equivalents is precluded. Of course, prosecution history is one of those blocking doctrines but it is not the only one. There is the rule of *Wilson Sporting Goods*, that if the accused infringer is only practicing the prior art, or even an obvious variation of the prior art, then by legal definition, his product or process cannot infringe under the doctrine of equivalents. That is a second blocking doctrine.

We have said generically and with regard to each of these blocking doctrines that they are issues of law. We have said, for example, using the terminology, "the maximum allowable range of equivalents," that it is a legal issue, just as prosecution history estoppel has been explicitly designated a legal issue. There is yet another blocking doctrine, which is also a bit vague, that talks about "pioneering" patents versus small "improvement" patents. Maybe, and this is not so clear and remains to be developed, but maybe inherent in that language is a notion that not only does the prior art (and obvious variations of the prior art) provide an outer limit for the applicability of the doctrine of equivalents but also that there is some notion of proportionality: the bigger the contribution to the art of a patent, the greater the range of allowable equivalents. And conversely, the more crowded the field and the smaller the improvement, the less the range. The *Autogiro* case in the Court of Claims contains useful language which talks about this notion of proportionality. Well, it is a little vague and it may not turn out to mean so much in practice. It is hard to be sure, but it's there in the case law. It is waiting to be developed.

I see two other, much more recent innovations, that I think also are fairly firmly implanted and waiting further development. One I would label the doctrine of "disclaiming." An example of that would be the *Dolly* case, where the language of the claim created a limitation that by its very nature put the asserted equivalent outside the contemplation of the inventor. What was he claiming his invention was? Is the techno-

logical variation to be covered under the doctrine of equivalents simply precluded by what the inventor said to describe and claim what he considered his invention? You can make a strong argument based on the *Dolly* case that if the language of the claims necessarily implies the exclusion of certain subject matter—just like subject matter that's intentionally surrendered during the prosecution history, for example, in order to overcome a prior art rejection—then the disclaimer is not retrievable. The surrender is not recapturable and likewise the disclaimer of subject matter is not retrievable under the doctrine of equivalents.

Second, there is another notion which shows up, I think, most clearly in our *Hoganas v. Dresser Industries* case. If the patentee fully disclosed and enabled some subject matter that he then chooses not to claim, the notion is that he's intentionally dedicated to the public domain that unclaimed subject matter.

None of these theories are highly developed. They are just embryonic, bits of holding and logic and dicta. They are just sitting out there and I am not predicting that they will be extended beyond where they will now reach, or that they won't be. Number one, I do not know and I guess if I knew, I probably shouldn't say. But I do not pretend to know. I just see the logic that would allow for an extension of the holding or the principle of those cases. So, we can call that the "doctrine of dedication" to the public. Now, we have four or five "blocking doctrines" that would altogether preclude referring to the jury—and I think it is a jury issue in the end, what may be technological equivalents. But on these questions of what Judge Nies liked to call "legal equivalence," they are clearly all questions of law.

I think what may happen is that, rather than every case being preceded by a so-called *Markman* hearing on claim construction, even more commonly most cases are going to preceded by what may come to be called a *Hilton* hearing. Procedurally, I predict, it would relate to either the filing of a motion in limine or a motion for summary judgment of noninfringement under the doctrine of equivalents. And at that hearing, whether it involves witnesses or merely attorney argument (I guess it would depend on the case), there will be some presentation by the accused infringer seeking to assert one or more of these blocking doctrines. If the accused infringer prevails at that stage and after that sort of a hearing, there isn't going to be any doctrine of equivalents issue left for the jury in that particular case.

Now, I'm not predicting that all cases will result in that kind of a pretrial judgment. I would assume actually a good number of cases will get to the jury on the doctrine of equivalents. But now virtually every case gets to the jury on the doctrine of equivalents. I think that will change a lot. If we say, crudely, maybe half the cases will continue to get to the

jury on the doctrine of equivalents, that is technological equivalence. But in the other half, it will be cut off, blocked by one of these blocking doctrines litigated on a pretrial basis.

Now, the one thing in Justice Thomas' opinion that I think is *not* illuminating is the fencing over language. Whether you use the language of "insubstantial change" or "function, way and result" and whether you consider one a subset of the other or the two as different ways of saying the same thing, whatever concept you want to put on those two little verbal formulas, as they say in the vernacular, "that's not where it's at," in my opinion. It is going to go to the jury under necessarily vague instructions in all those cases where it isn't blocked by one of the blocking doctrines. And the jury will do whatever it will do. I think it might help if there were special interrogatories or special verdicts to make it more reviewable but it might not change what the jury is going to do. The jury is going to do whatever the jury is going to do, as it has historically done in all those cases where the jury gets its hands on the issue at all. Therefore, I do not think we will get any more predictability by trying to have verbal refinements of "function, way and result" or "insubstantial change." I think all the action is going to be on the end of the playing field where the blocking doctrines can be applied and can be developed through case law.

Which brings me back to my vague reference when I spoke earlier about the double play combination of the advocate to the District Judge to the Court of Appeals, or "Tinker to Evers to Chance" in baseball. Because I think that if these blocking doctrines are the subject of litigation in real cases, properly selected and consistent with client interest, the question is whether with lawyers as imaginative.

MR. MOSSINGHOFF:

Particularly with Evers.

JUDGE MICHEL:

Well, really Tinker because what I'm suggesting is that nobody in the United States—nobody on the Supreme Court, nobody on the Federal Circuit, nobody in Congress, in my opinion—as is well equipped to shape these new variations or subdoctrines under the doctrine of equivalents as practitioners and scholars such as those of you right here in this room, and people like you elsewhere. My dream scenario is that these sorts of ideas will be developed. As far as their logic ought to carry, hopefully it will carry. And the District Courts and the Federal Circuit on appeal will be receptive and will do the right thing, whatever that is. And some of these doctrines maybe will stretch just a little bit beyond their present boundaries and others might stretch quite a bit beyond the particular case in which they first were given birth.

I myself think that that is a much better solution than running to Congress and saying get rid of the doctrine altogether, or you fellows shrink it. Because the ability of Congress to deal in nuance is limited. The ability of you men and women to deal in nuance and proportion and balancing is much greater and hopefully those of us who are lawyers like you but wear different color work clothes will also be able to do our part and complete the double play.

MR. MUIR:

I agree that it is wrong to run to Congress for every little thing; nonetheless, I want to remind you all that next week is likely to be a very, very important week in legislation. There's opportunity on Tuesday at the Inventor of the Year Award to talk to some Congressmen and I invite all of you who are in the area to join me in calling on Congress because on the 16th, which is Wednesday, it appears that hearings will be held on patent legislation that will be very important to the future of this profession.

Switching to the doctrine of equivalents. I do not know why but when I thought of *Markman* and *Hilton Davis* it reminded me of the O.J. Simpson trial. Before that ever started, I predicted that O.J. would get off and the driver of the vehicle would go to jail. Well, I was half right. When the Supreme Court came down with *Markman* and *Hilton Davis*, I thought they were half right. I enjoy or appreciate the distinction of a technical equivalent and I'll give you some background on that in just a minute. But it seems to me that by bifurcating one type of claim and calling it for the judge to decide and another type of claim for the jury to decide that they have created a little bit of monster that's going to take a little time to sort out.

Just as background, I have the court exhibits from the case of *Caterpillar v. Berco* which some believe was the high water mark on the doctrine of equivalents. It was the first case that the C.A.F.C. ever heard outside of Washington, D.C. It was heard in Chicago and many felt that this decision was the broadest statement of the doctrine of equivalents ever. But, if you understood the facts, it was not that at all. Since that time, what we saw in the cases was a little of searching, some might say waffling, to try to limit the doctrine of equivalents.

The facts of *Caterpillar v. Berco* also show that there really is a need for the doctrine of equivalents. I think that case could have been decided without the doctrine of equivalents. The problem in the case was that the specification used the word "flexible" in two different meanings. The defendants were able to use that weakness to confuse the issue. What was, I think, a direct infringement was decided on the doctrine of equivalents. That I submit is pure equity. That is what I think the doctrine of equivalents is intended to be. So, we're happy that it

survived. As with every new decision, there are some things to pick out and sort out and we look forward to that happening.

MR. ARMITAGE:

We Do not Have What We Need, But We Need What We Have. In my view, we do not have the doctrine of equivalents we need but we certainly need the doctrine of equivalents that we have. I was going to start out by saying that I totally agree with everything Judge Michel said but whenever I speak after Judge Michel I always say that.

JUDGE MICHEL:

And he never means it.

MR. ARMITAGE:

Quite the contrary. In fact, you said some, if not most, of what I was going to say. The other thing I usually say when I begin to speak is that I totally disagree with everything that Chico Gholz has said. At this point, I would like to ask Chico a question. Chico, do I understand it correctly that you believe that there should be interference between a patent you own and an accused infringer's patent who is not claiming literally the same subject matter that is your invention, but that you should not be able, nonetheless, to sue him for infringement? Is that really what you meant to say, Chico? Now I realize Chico is not here. But, of course, the answer Chico would give is yes. And to me, that answer demonstrates to me, independently of any other consideration, why indeed we need a doctrine of equivalents.

The Doctrine of Equivalents That We Need. But let me talk for a minute about the doctrine of equivalents that I think we need. And it is a very simple idea. It goes to the fact that language is, even in a technological field, a fairly imperfect and incomplete vehicle for expressing ideas, methods, and the like. We need some truly equitable doctrine to say that notwithstanding the interests of the public in certainty in claiming that there are circumstances where it is manifestly unfair that the patentee would be denied a remedy. And like other equitable doctrines, it may not always apply for good equitable reasons but, nonetheless, it prevents egregious results from being reached and most importantly, one does not need to get too much more complicated than that in describing what the doctrine is.

Unfortunately, in the development of the doctrine of equivalents in the United States we have probably, at least prior to the Supreme Court decision, spent too much time not looking at the equities as between the public's right to certainty and the patentee's need for a fair remedy and instead tended to focus on whether the accused infringer had equities, i.e., was a good guy or a bad guy relative to the patentee. In the best of all worlds this would be totally irrelevant. One's patent should not be more

or less valuable depending upon whether the person who is violating a patentee's rights is a scoundrel or a member of some religious order.

The Doctrine of Equivalents That We Have. But let's look at the doctrine of equivalents that we actually have now, which is a legal doctrine. It's to be applied in every case and it's part, I think we'll see, of every litigation and is going to be in a very mechanical way. There was a time not too long ago where I was asked to give a talk on possible statutory changes or statutory codification of the doctrine of equivalents. The exercise I went through was to read every relevant Federal Circuit decision, extract every relevant test applied by the Court of Appeals for the Federal Circuit, including the prosecution history estoppel test, the no recapture of the prior art, including the obvious variance test, the no recapture of disclaimed or unclaimed subject matter adequately disclosed in the patent specification, the requirement that the known interchangeability or at least interchangeability be known to a person skilled in the art. And when you actually diagram in a flow chart way all of the elements of proof in the doctrine of equivalents and all the limitations that would apply, in just about the same manner Judge Michel has suggested, you end up wondering why anybody in the world would ever attempt to prove the doctrine of equivalents was a basis for infringement.

Now, while Judge Michel referred to these as blocking doctrines it is indeed unclear to me why in the course of judicial development of this doctrine there are not going to be affirmative elements of proof for the accused infringer in which case the elements of proof certainly would be enormous.

The other cogent point on the doctrine of equivalents being a legal doctrine is it necessarily, for the sake of certainty for the public, requires that the doctrine be applied and construed very narrowly. Now, I believe it was Judge Michel who talked about the circle of constant diameter. In my view, that is exactly what we're talking about. We're talking about a circle that has a diameter that perhaps is subject at most to some insubstantial change based on the imprecision in measuring the actual diameter. But let's just look at one element of the doctrine of equivalents test according to the Supreme Court. That is the way in which the Supreme Court applies the all elements rule.

Now, what the term element means in a claim is not precisely defined. Although in a method claim, one might call a method step an element. In an apparatus claim, one might call a discrete component in an element. For example, a spring in some mechanical device. But indeed what Justice Thomas called was an element in the claim was a mere parameter. The pH in a process step was an element in a claim. In other words, what the Supreme Court, in my view, was saying is that every limitation, however slight, in a claim that has meaning that must be

construed is an element and we have now a limitation by limitation rule that applies essentially to every word and phrase in a claim whether it's a discrete component or not. There isn't any other way in my view to interpret a process parameter like pH. And if that is the case and the test is equivalents, limitation by limitation, then we very much are narrowing the doctrine of equivalents to reading the claim and reading the accused device and seeing quite a precise alignment between the two, save for whatever equivalents means.

I assert that the inevitable result of the doctrine of equivalents as it is now understood by the Supreme Court might best be viewed as a doctrine of de minimis changes. De minimis changes in the sense that almost any other kind of change, almost anything other than a linguistic variant or equivalent is likely to either run afoul of one of the blocking doctrines or additional affirmative elements of proof or otherwise fail to meet the limitation by limitation almost picture view of what a claim is and what an equivalent thereof is.

MR. RASSER:

Supreme Court Deference to the C.A.F.C. Let me highlight a point in the Supreme Court decision that I find particularly relevant and that is the deference that the Supreme Court gives to the C.A.F.C. Some people are disappointed by that and had preferred firm decisions on those issues. I think it's good that those issues are being sent back to the proper forum because we better have an answer that is correct and comes a bit later than an answer that is incorrect, even though it comes sooner. There is no doubt in my mind that we need a doctrine of equivalents. There is also no doubt in my mind that there cannot be a bright line. That's almost axiomatic when you deal with the doctrine of equivalents that tries to deal with the uncertainties of the future and of the language. That is exactly what the doctrine is for and it deals with the impossibility of drafting the perfect patent application that will be crystal clear for the entire 20 years of its existence. Well, if that isn't possible to do, then it is also impossible to have a bright line that defines exactly the scope and application of the doctrine of equivalents.

Having said that, there is an invitation in the *Hilton Davis* decision for the C.A.F.C. to at least develop a bright line for the operation of the file wrapper estoppel doctrine. The bright line that could be drawn here is one that says for the patentee to overcome the presumption that an amendment was made to overcome prior art, there can only be reference had to the file history of the patent. That is a very bright line rule. It is one I must admit that, for us as a holder of a very significant patent portfolio, will not always work in our favor. Yet I think it is the right rule to adopt because we also find ourselves very

frequently in a situation where we have to try to anticipate the outcome of possible litigation and the only tool we have at our disposition at that point is that file wrapper.

If we are supposed to speculate as to what evidence the patentee has if it comes to litigation, it will be simply impossible for us to predict the outcome of litigation. It will be impossible for us to give reliable advice to our clients. Even though the rule will work against us in some cases where we are patentees, I think, on balance, the system is better served by having this bright line rule. I would even go as far as having the rule apply to old patents that are already out there and old patents that are currently being prosecuted in the Patent Office. That obviously is very harsh and it is the point that was raised by the concurring opinion in the Supreme Court decision but there, again, I think on balance the legal certainty outweighs the potential harsh results that may come from it.

What got me to this conclusion in part is the *Hilton Davis* case itself. One of the attorneys in our office took the time to analyze the trial transcript. When you read the testimony of the inventor, it is very clear that the inventor knew that the process would operate at pH values below six. He also knew that the preferred embodiment was somewhere in the range from six to nine. I think it was simply a situation where the attorney and the inventor were not communicating. The attorney was asking questions about the operable range and the inventor answered the question as if it were the preferred embodiment. That is how the patent application was drafted the way it was drafted. And then I can only speculate as to why that in fact ended up in the claim because, to me, it looks like the prior art could have been overcome with just an upper limit on the pH and not a lower limit. But I wasn't there and the trial transcript was silent on that point.

So if my suggestion is followed, obviously the defendant will prevail and the patentee will have a claim that is more limited in scope than it had to be. But it came about this way because of the drafting of the patent attorney. And if I make a parallel to contract law, even though the parallel is not a perfect one, it is an axiom in contract law that if there is a problem with interpretation of the contract, typically that interpretation will be chosen that goes against the draftsman. After all, it is the draftsman who is in control of that language.

I also realize that Bob Muir's case might have come out differently if he adopted this rule because there may not be the safety net for catching drafting errors of the patent attorney. But if I weigh the rights and interest of the public that has no say in how the patent application is drafted and that of the patentee that does, I think that clearly the balance tips in favor of the public.

MR. BALMER:

Management of Risk. The day after the *Hilton Davis* case came down, I got a call from my general counsel. He was he reading the Wall Street Journal and he said, "What a terrible decision. We've got to do something about it. Get a memo out to all senior management." My first reaction was how could it possibly be a terrible decision? We, Union Carbide, participated on four amicus briefs, three on one side and one on the other. Then I realized the Supreme Court is located right across the street from the sausage factory. It could have been worse. The decision probably did have U.S.D.A. approval. But I think the other thing that is pretty clear from the decision, and Judge Michel pointed it out, is that the Supreme Court decided they are not in the patent adjudication business any more. That gives us a lot of heart.

Who are the winners in the case? I think one of the winners is professional liability insurer business—you know, the people that are worried about what we patent attorneys do. I think the other winning point for the public is that there will be a chance for summary judgment.

Now, why did my general counsel say this was a terrible decision? He is looking at it much the way we have to look at it inside corporations and that is management of risk. What did this case do for our management of risk? How can we provide reliable advice to our clients? Senior management says what do I do, tell me what the percentage is. So we are talking about probability and consequences. We are talking about risk analyses. In the *Hilton Davis* situation, the patent recites a pH range of six to nine. Does that mean that a pH of five infringes, four infringes, two? What is the limit? How does an attorney explain to the Vice President of Technology that six can be four?

Businesses are able to deal with uncertainties. That is what we do in corporations. Are we going to be able to sell this product? What are the chances of product liability? What happens when you come up with an analysis which says well, you've got maybe a two percent, maybe a half a percent chance of losing really big? The consequence could be billions of dollars. When it gets to that kind of number, even though the chances are down to a very small level, there is a lot of risk adverseness. It is just like walking on a steel beam. I would not be concerned if the beam is only doing that two feet off the ground. But at 20 stories, I will tell you, I am scared.

What is the effect of low probability and high consequences? The practical effect is that the doctrine is taking from the public domain that which should legitimately or perhaps be in the public domain.

What about designing around? There is no mechanism where a potential infringer can go into the Patent Office and say please re-examine this claim if it were this broad.

What I propose is analogous to archery. If one shoots an arrow into a target and hits the bulls eye, a literal infringement, damages ought to hit square on. And if you did it willfully, enhanced damages. But if you hit anywhere else in the target and you have the same consequences, it doesn't make any sense.

Now, there are some recent decisions in which juries reportedly reflected the fact that there was not literal infringement. Infringement was found under the doctrine of equivalents, therefore, the damages were reduced somewhat. It's an interesting way to approach it. If you are getting farther and farther away from the bulls eye, literal infringement, you know you are not going to get as many points levied against you in that situation. Intent can come into play in assessing damages. Intent would not affect whether there is an infringement or not an infringement under the doctrine. The situation where one defendant infringed and another did not infringe on the basis of intent would be avoided. That makes no sense but you could have two levels of damages for the two defendants based on intent.

MR. FRYER:

International Implications. My first comment is on the international implications of the Supreme Court decision in *Hilton Davis*. You may remember the WIPO patent law harmonization project, incorporating the doctrine of equivalents as a fundamental feature essentially to give greater patent protection. Some of us were wondering what we were importing into the international arena. There was inserted in the drafted treaty provisions which were the standard U.S. function, way and result test. It will be interesting to see just where the *Hilton Davis* case will take us, if we rejuvenate this particular aspect of the WIPO patent law harmonization treaty project. In other words, should the U.S. support the international application of what appears to be a more limited scope of the doctrine of equivalents as defined in the case?

Judge Michel's Description of the Doctrine of Equivalents. For my second point, I am glad that we have a lot of persons here who talk in terms of graphic design. We have been talking about how a circle can define the limit of patent protection and hitting the bulls eye, or getting close to the center of patent protection. I must say that Judge Michel has stimulated me, as always. He used some visual images in discussing the law of the doctrine of equivalents, such as his flower petal description of the limit for doctrine of equivalents protection.

I use a solid line circle and I add a dotted line concentric circle outside the solid line circle to show the doctrine of equivalents additional scope of protection. He has introduced visually, a new feature where there are pockets, or solid line or dotted line configuration changes to

show there is no protection inside a pocket or outside these lines. This deleted protection could be due to file wrapper estoppel, for example.

Disclosure. My next substantive law point is to ask the question: what is the effect of the patent disclosure or interpreting the doctrine of equivalents? We had the question raised by Judge Michel about disclosing and not claiming, suggesting it may block us from claiming the undisclosed subject matter.

We have in the concept of equivalency that we must look to the disclosure to see what is equivalent, which I think may be partial answer to his question. So, I see a dilemma now, in applying the doctrine of equivalents and preparing a patent disclosure. Where does the *Hilton Davis* decision take us in terms of what disclosure we should put in a patent application, and how do we interpret the doctrine of equivalents in relation to the disclosure?

In other words, is there a duty to claim subject matter that is disclosed in the patent which is not in the literal scope of the claim? I can see this question developing into a number of issues related to the relation of the claims and patent disclosure. These issues include what should be eliminated from the literal protection circle and what will be precluded from protection outside the dotted line circle representing the maximum scope of the doctrine of equivalents protection. I'm glad that we're back to the basics of graphic design in interpreting patent law.

MR. JORDA:

Abuse of the Doctrine of Equivalents. Bill Fryer's statement that everything that could be said about the doctrine of equivalents has been said notwithstanding, I'd like to make a couple of comments. I cannot disagree with all of you who have pointed out that we need the doctrine of equivalents. But I have a couple of concerns. I agree with the C.A.F.C. judges who rail against the fact that the doctrine is overused or misused, that it's used as knee-jerk reaction every time an infringement suit is filed and direct infringement is alleged. That is one concern. I'm not sure the potential for abuse or overuse has been eliminated by the Supreme Court decision and the fact that they deferred linguistic and other issues to the Court of Appeals for the Federal Circuit.

Let's not dismiss Chico's position too quickly because there's a distinguished C.A.F.C. judge who holds the a view that Chico took. As a matter of fact, this judge goes around the country and talks to patent law associations about the need for Congress to eliminate the doctrine of equivalents. I heard him very recently at a meeting of the Boston Patent Law Association urging attendees to go to Congress. Of course, he is also the gentleman who feels that the doctrine of equivalents should not be applied unless there is an equitable trigger. So, it's not just Chico and one person's opinion.

Now, another problem and that is why I thought Chico's comments were refreshing although a bit unusual coming from him an active practitioner because lawyers generally take the position "let the courts develop the law," even if it should take—as Bob Armitage points out—200-plus years. That also concerns me. The abuse and uncertainty will continue, while we are going to let the doctrine of equivalents develop slowly for another 200-plus years.

MR. COLEMAN:

Quote from Judge Nies. I would just like to quote Judge Nies' dissent in the en banc Federal Circuit Opinion in *Hilton Davis*:

> The meaning of the words in the claim must be defined by the court, a question of law. Also, the scope of protection which may be given the claim beyond its words is a question of law. In addition, the accused product or process must meet the limitations of the claim as defined by the court either literally or by equivalent means or steps, questions of fact.
>
> Even though the ultimate finding of infringement is one of fact, once the words of the claim are interpreted and the elements of the accused product or process have been determined, 'the correct application of the rule of equivalency' resolves itself into a question of law, whether trial is to the bench or to the jury.[8]

I think that admonition, very simply presented right at the beginning of Judge Neis' dissent should be followed through upon and perhaps clarified.

MR. BENSON:

As everyone has spoken, we'll start the second time around. Paul?

JUDGE MICHEL:

Known Interchangeability. One thing that I think is worth giving more emphasis than it has been given, although it's been mentioned in passing by several of commentators, is the phrase "known interchangeability." If you look at the pedigree of that phrase, it is very revealing. That phrase first came into prominence in the *Graver Tank* decision itself. And it was reiterated by the Federal Circuit in its *Hilton Davis* decision. And then it was reiterated yet again by the Supreme Court in what I guess we should properly call the *Warner-Jenkinson* decision, since they reversed the parties names, as they always do.

We have, as I recall, in our per curiam decision a sentence that goes something like this: "The strongest evidence of equivalence is known interchangeability." Of course, we now are quite clear that that means as of the time of the alleged infringement. Not earlier, but as of that time. But it captures the case that Gerry Mossinghoff was talking about where transistors replaced vacuum tubes, and a thousand variations of that basic kind of technological advancement. Certainly, that is one

[8] Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1550, 35 U.S.P.Q.2d (BNA) 1641, 1673 (Fed. Cir. 1995) (Nies, J., dissenting) (quotation and citation omitted).

purpose of the doctrine. And I take it the other is to recognize the limits of language, even when carefully used by experienced claim drafters. They may have left out something that really shouldn't have been left out. So, I take it those are the two purposes of the doctrine. And certainly the first purpose, if not also the second, is served by the notion of "known interchangeability."

Then the rest of the sentence in our per curiam opinion said something like, "in the absence of evidence of known interchangeability it will take unusually strong and clear evidence to show equivalence in any other fashion." My guess is that this is going to become the touchstone, not abstract verbal formula like "insubstantial change" and not the old formulation from *Graver Tank* of "function, way, and result," but "known interchangeability."

It will be a fact issue for the jury because there will be people who are artisans in the field speaking as of the relevant time and some of them are going to say this widget was known interchangeable, a ready substitute for the other kind of widget and therefore, of course, it is equivalent. And then there'll be the witnesses of the other side who will say the contrary. In those instances the jury will have to make a choice. And I think the reason that is such a good touchstone is that it solves the notice problems because you are a good patent lawyer and you have got technical people at your disposal in your company or in the client companies. So, you can look at the patent file and you can see what is covered, not only literally by the claims, but by the disclosure and the rest of the specification as well and you can get some sense as of the time you are trying to opine about infringement as to whether the variation—the technological variation represented by the accused device—the substitution therein—is known to be interchangeable with what was described explicitly in the patent file. So, it meets the notice function. It preserves some breadth of greater protection and, while it has a certain vagueness to it, I think it will turn out to be much more serviceable than the verbal formula "function, way, and result" which we so slavishly have been trying to follow for 47 years.

MR. ARMITAGE:

The Supreme Court managed to stop looking at the accused infringer as either a good guy or a bad guy. In a sense that has some bearing on whether or not he's an infringer or not an infringer. And one sad thing about the Supreme Court decision in my view—one of the few sad things—is that we still have the slow guy versus the fast guy problem which is a consequence of determining known interchangeability at the time the alleged infringement began.

Under the example given by Gerry Mossinghoff, it's quite clear that today if you had a patent that still had disclosure limited to a vacuum

tube there are many circumstances in which substituting a transistor would be known interchangeability. However, at an earlier stage in development of the art there would not have been any known interchangeability. There would not have been any art recognized interchangeability and indeed the consequence of this is that the patent starts out presumably with a disclosure that then doesn't capture the fast guy because he starts his infringement soon enough. But the slow guys who come on later may be spurred in part by seeing that the fast didn't get sued for infringement but are then stuck under the known interchangeability doctrine. Of course, this can be remedied by simply saying that it is known interchangeability at the time the application is filed because presumably a patent should cover what it does cover and what, provided all the other requirements for the doctrine are met, would simply be the known interchangeable equivalent elements to literally disclosed elements. So, I do have some concern that if this remains as one of the touchstones for limiting the doctrine that the timing works out right.

MR. MUIR:

Just a thought that perhaps we haven't touched on. What we've termed "good guy-bad guy," is not a precondition for looking at the doctrine of equivalents. It seems to me that all equitable issues still are part of the case. At least for damages. And certainly, if you're going before a jury for damages, I think all of these issues are still there. So, the emphasis, perhaps, has changed but I'm not certain that our proofs have changed any. Nor has the case been simplified. I think we've still got to present the same evidence to the jury.

MR. BANNER:

I agree with Bob's statement that in many ways the evidence of good guy-bad guy will still go before the jury because you will be trying to do what Norm was talking about. That is, you want to turn that dial up or down on the damages side. Whether it is a jury or a judge, the thought that being a good guy or a bad guy doesn't change the place that dial goes would be ridiculous. Judges behave, as do jurors, if they think that your client is a bad guy. They will find language from appropriate precedent to support having the dial up on hot. If they think your guy is a good guy, they will find language from precedent that puts that dial down on cold. So, the evidence will be there.

It makes a difference as to the linguistic framework that the trier of fact puts in his or her mind before the decision is made. It is important, on the doctrine of equivalents, whether or not you're a good guy or a bad guy, or a copyist or a "design arounder." Although your intent per se has been removed from the analysis, you'll never get to the damages side if ultimately this is just an infringement case.

Assume everybody agrees there is no literal infringement. That means it is doctrine of equivalents case. Now, how do I judge it? As a judge or a member of a jury, the determination of whether or not the alleged infringer is a good guy or a bad guy may well tip the scale toward no liability at all. And then you never have to worry about the temperature setting.

By the way, reflecting on Karl Jorda's comments, the record should reflect we did not lightly reject Chico's comments. We did so after deliberation.

MR. FRYER:

Reverse Doctrine of Equivalents. I want to follow up on Bob Armitage's comment concerning the timing of filing a patent application and the possible effect of scope of protection. There is, as always, interesting logic in what Bob says. As I mentioned earlier it is very important to recognize that, perhaps, we haven't fully thought through the relation of the claims to the patent disclosure in determining scope of patent protection. I call to your attention the concept of the reverse doctrine of equivalents that makes the graphic protection circle shrink.

For example, if you have a claim that's much broader than you should have based on the disclosure, all of a sudden the doctrine of equivalents graphic, the dotted line circle I mentioned before disappears, and the solid line literally scope shrinks. The reverse doctrine of equivalents principle relates closely to inventive contribution. With that point in mind, you go back and see what has been disclosed, based on the embodiments in the patent, to determine protection scope.

Time of Filing the Application. Another related point is that the extent of disclosure is dependent on the timing of filing the application. The quickly filed application, to beat a bar date, or obtain a constructive reduction to practice date, may have less disclosure, fewer embodiments, resulting in a narrower protection scope. I'm just elaborating a little bit on what Bob Armitage has said. I want to show you that the *Hilton Davis* case does not answer all the questions on the doctrine of equivalents and there are some very important issues remaining.

Amending Claims. I have a question: what is going to be stated in the patent file by the attorney when a claim is amended? Mr. Kazenske said, essentially, the examiner will carefully document the interview remarks. The examiner's notes will be a critical part of the patent file, due to the file wrapper estoppel doctrine used to interpret claim scope. It will be interesting to discuss how the bar is going to handle this part of patent prosecution. As a patent attorney, I would state where appropriate, that my amendment merely clarifies the claim. In the patent file I would summarize each interview, expressing my view of what was said and why the amendment was made.

JUDGE MICHEL:

I can't imagine that it would hold up for very long to lace the prosecution history record with statements that, "Okay, you rejected me as obvious in view of X and Y and I'm making a change but it is only to clarify the prior stuff." I can't imagine that a court is going to feel constrained by that kind of disclaimer. We have a whole lot of case law already that says we look to see what the real reason seemed to be for the narrowing amendment, or the statement to the examiner that construed words in a way that had a narrowing effect. So, I imagine that that same case law would allow us to look beyond statements that try to hide an amendment that was to overcome prior art by calling it a mere clarification.

I think there is actually a deeper problem, however. In the Supreme Court opinion, to me, there is ambiguity. In some places, Justice Thomas talks about overcoming rejections based on prior art, when he talks about the silence that will work surrender that will create an estoppel. But then elsewhere, he just talks about "patentability." If it was done for patentability purposes, the surrender is going to stick. That makes a big difference, of course, because if there is a 103 rejection and there is a narrowing amendment or statement, okay. We know what he thinks is going to happen then. The surrender will stick. But what if the surrender was not for 103 purposes but 101 purposes or for meeting other requirements of patentability not related directly to prior art? And even a question of what do you mean, related or not related to prior art. For example, in the *Hilton* case itself—this is just my recollection and maybe I'm not remembering this correctly—but even though the Supreme Court said that it was a total mystery of why the bottom parameter of a pH of six was inserted. My recollection is that it wasn't mysterious at all. There was a problem of severe foaming of the membrane at pH levels starting just below six and certainly to include five and lower numbers. Therefore, there was some concern about whether the invention was an operable invention below 5.8 or 5.7 or wherever the foaming precisely began to be a serious problem. And the only reason that the defendant in this case was able to operate at pH five and below was that the defendant created a new technique for beating the foaming problem.

So, maybe we do have an issue going to patentability, although not strictly speaking to a prior art rejection, right in this very case. So, it will be quite interesting, as many of you have already suggested, to see what will happen either at the Federal Circuit in banc level or the Federal Circuit panel level or back in front of the trial judge, whichever it turns out to be. Because there was a lot of uncertainty left dangling on this particular point by the Supreme Court opinion.

MR. ARMITAGE:

It seemed to me when I read the Supreme Court decision the most striking aspect of it was how they could possibly not figure out that the amendment was made to distinguish over the prior art. Now, as I recall, there was no pH limitation, there was prior art that specified a pH, and they put in a pH limitation. It seems to me they put in a limitation to overcome the prior art. Now, the only conceivable argument would be well, they could have put in a limitation, that they didn't put in, that would also have overcome the prior art. But the whole idea of prosecution history estoppel is you're estopped. You're not allowed to argue what you might have been able to claim if you didn't claim what you did claim because you changed your claim to overcome the prior art. So, as we go back to the Federal Circuit, I'm dying to find out whether this self-evidence truth is equally self-evident to whatever panel might hear the case on remand.

MR. MUIR:

I wanted to remind you all of the case of *Ex Parte Quail* in which there was an attempt to cleanse the file wrapper by refiling a case after allowance and that failed. More recently, there's been suggestions that the proper way to preclude file wrapper estoppel would be to cancel all your claims and start all over again. I'm willing to predict that we are going to see that practice reoccur and it is going to make it very difficult to read the file history. But ultimately it is going to be a lot of wasted effort by those who undertake that practice because we're going to compare the new claims against the old claims and they're going to be considered amendments to the claims and it's just going to make it—what was that cartoon again—more work for us.

MR. BENSON:

At this point we'll let Bill Pravel summarize.

MR. PRAVEL:

Well, first I want to take on Bob Armitage's comment about why in the world would you put in the six. Why wouldn't that be an estoppel? Of course, if you adopt that view then you go contrary to the *Hilton Davis* decision that says they reject the idea of it being an estoppel just because you amend the claim without regard to the reasons for the amendment. The reason for the amendment is to clarify or to make the claim operative. You have a reason for the amendment. I think the *Hilton Davis* case actually rejects that broad approach of an estoppel just because you amend the claim. So, putting a six by and of itself doesn't indicate that there should be an estoppel.

Now, as Judge Michel points out, the Federal Circuit also dealt with that question because they referred to the fact that there was some foaming problem. There was a foaming problem that was alleged to be

the basis for the amendment by the petitioner. In other words, the petitioner was arguing they had to put that language in there because of the foaming requirement but the record itself did not disclose that reason. That is what the Court actually ended up saying, "Because the respondent has not proffered in this Court a reason for the addition of a lower pH limit it is impossible to tell whether the reason for that addition could properly avoid an estoppel." So, the Supreme Court was looking at it on the basis of the record before the Court. As Chris Benson mentioned, it goes back now to the Federal Circuit or back to the trial level to resolve that issue. The file history may very well provide a basis that would explain it. Again, looking at the *Hilton Davis* case, if that explanation is something that does not relate to patentability then it should not be an estoppel. That's what the Supreme Court is telling us here.

I'm not going to try to take everybody's comments and analyze them. Obviously, I think the position of Chico Gholz hasn't fared very well with this group and I certainly do not agree with his approach. I think the doctrine of equivalents is important from the standpoint of giving substantive protection to a patentee. It is virtually impossible to be sure that you've covered every possibility in patent claiming from my experience. It is very helpful to have some latitude at the point where there is an infringer out there who you know is trying to steal your invention. That's what the Supreme Court is trying to do.

As far as the blocking law is concerned, that's an interesting approach to it and I think that's there for the Court to consider. It certainly is important of terms of maybe narrowing down the area that the jury will get to consider from the standpoint of the doctrine of equivalents. They have all of these legal issues that block the use of the doctrine of equivalents. That's helpful. It provides more of a notice that satisfies the claim notice that the statute requires.

Now, this business of the known interchangeability. I do not know whether I would go so far as to say it is a substitute for function, way and result and so forth. I do not think that Judge Michel said that either. But certainly, if you read the decision going back to *Graver Tank* where they placed the emphasis on known interchangeability and read the Federal Circuit's decision where they said interchangeability is potent evidence of equivalents. Then you read *Graver Tank*, and what they said here was "the known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention." So, whether we like it or not, I think it is going to be a touchstone for the doctrine of equivalents.

I think Bill Fryer's comment about how one deals with the doctrine of equivalents in terms of prosecuting an application was

instructive. I think one does have to look at the doctrine of equivalents from the standpoint of whether or not it is related to patentability. I do not think one can have a phony position before the Patent Office that just says it's not related to patentability when, in fact, it is. The court's not going to buy that. But certainly, if one has a reason for an amendment that is not related to patentability, that's the approach to take in the prosecution history.

MR. BENSON:

I want to thank everybody for coming. I especially want to express my appreciation to all of you on behalf of the school. These conferences really are great for the people who attend them and get to share and exchange their views. When this is published in *IDEA*, the proceedings are very well read, including, believe it or not, by some people in Congress. It's a wide distribution and it is a good public relations tool for the school. So, we really appreciate the time you have given up to come up here and participate. Thank you very much.

VIII. REMARKS BY THE DEPUTY ASSISTANT COMMISSIONER OF PATENTS

MR. KAZENSKE:

First of all, let me express that Bruce Lehman is sorry he could not be here because of his travel commitments. Also, let me just refer to a comment Gerry made earlier about guidelines. I want to thank him for that comment. But it gets to Ralph's point, I think, earlier on. We take our best stabs with what resources we've got, we try to digest as much as we can, try to strike that medium the best we can, and lead this the best we can. I'm glad we've taken a good stab at it. Thank you, Gerry for the biotech and the software guidelines. Gerry was involved with the software guidelines.

The second point, let me just say to Len about those who have questions regarding the prior art we're missing and the patents we're issuing in the software community. We had numerous hearings on this but I think a couple of examples come to mind. I had a great opportunity to meet with a gentleman by the name of Andy Grove from Intel. We were talking a little bit about this. It dawned on me, Len, what was happening here. There is a different view for a scientist in this technology of what they believe prior art is and what the legal statutory requirements in patent law call prior art. It really dawned on me when we were talking about some of Andy Groves' chips. And in talking about certain types of technology that was only about six months old, and he considered that prior art. It was only six months old and he had moved on by that time. So, there was a different meaning to what is prior art in this field, and what is meant by a scientist, and what is meant by many of

you in this room and how the courts have interpreted that prior art. Notwithstanding, we certainly have a problem in that area, though, and we're working diligently to correct that. I'll talk about that a little later.

But let me be a little pragmatic here. First of all, let me just talk about a few generic views as I see them in Washington and where we're going on some issues. And then be a little pragmatic and get into the Office a little bit and where I see the Office. I do not usually have an opportunity after day-to-day exercises in this to get into an academic setting where you sit back and actually reflect on where the law is going and what we should be doing with it. Sometimes you do not stick your head above the trench too high on this in day-to-day activities. I want to make a point. I've been back on the patent side and away from the policy office for a little over two years now. Heading up the patent side, you become a little more of a pragmatist than sitting in the Commissioner's Office worried about a hearing and which way we should be steering the guidelines or the laws or the treaties.

I want to make the statement that the Patent and Trademark Office, in and of itself today, is a business. People may have other ideas about it and have great ideologies about what it should be or should not be. I would be glad to discuss that at another time, but the truth of the matter is that it is a business and it is a very big business to operate. It is a $753 million business and growing every year. It will approach a billion dollar business—now we do not have all of that money and I will get to that in a minute too—but it will be a billion dollar business by about 1999, just in our office.

I have a Board of Directors. And that Board of Directors really consists of our elected officers. Whether it be the President or Congress, my Board of Directors makes priorities of my budget and I live with those priorities. I do not say they're good. I do not say they're bad. It is what my Board of Directors tells me. My view is, without sitting here talking about the legality of what I can say, you control the Board of Directors. That is about as simple a fact as I can give you right now. And I'm going to get to some of those points a little later on.

We hear various viewpoints. There are people that believe, and really rightly so, that the Office is some type of safe harbor, with a very fixed status in this institution, and this should remain so in view of its history. And a very admirable history it is, believe me. Then there is another faction that I believe kind of looks at us as a vessel that evolves and helps you, the customers, navigate your future business and its growth. There is a real conflict between those two philosophies right now as we approach many changes in this system. I'm not saying which philosophy is right. Both sides have legitimate points. I think it is a personal view. But there are three facts I've had an opportunity to see

and this observation is not any more pertinent to patents or the patent system than it is to life in general.

We're facing globalization, whether it's the patent system or whether it's the economies of the country, or whatever it is. We are facing a world that is in a capitalistic system. You've seen that happen quicker and quicker. And you have seen a world in which knowledge and technology is a driving force. It is the pure knowledge and information that's doing it. They call it the Information Age but what is protecting that? I do not know any other system we have today that glues those three things together to make that twenty-first century a few years from now move forward. As long as those three things are on us. We can say we're national and we're going to focus on that. But no matter what we are, those three factors are on us constantly. And I see that more and more.

I had an opportunity to spend three weeks at Harvard Business School last summer working with IP and some of their business issues. There is the traditional economic triangle of purpose, resources, and players. My view, though, is that IP and the P.T.O., in conjunction with the Copyright Office, are almost in a corner of that triangle right now. Look at the economy, how we play that role in the economy, and what we will evolve in that economy when we have information. Because there is no other ball game, you've got to play when information in and of itself is the tangible medium that you're trying to create or evolve your businesses on. I had this thought about Seville two years ago with Secretary Brown, when Alex Trotman got up there and made a huge point on intellectual property and the cost of intellectual property to Ford Motor Company. He looked at Bruce Lehman and stared him right in the eye there and said, "And what in the hell are you doing for the cost of this?" That kind of set a tone for the whole meeting very quickly. I think it is important to Trotman and Ford.

Industry Sectors Rather Than Examining Groups. Let me move into some pragmatic aspects. Everyone in this room has probably heard that we're using the phrase re-engineering. You can call it re-inventing. You can call it T.Q.M. You can call it quality management. You can just call it good management, if you want, or looking at your business. Whatever it is, we are certainly doing that. And we have a lot of issues on the table. One of the first things I want to talk about is one of the initiatives that came out of reengineering, we're using the coined phrase "industry sectors" and we're moving away from examining groups. Now, why in the world would I ever want to do that? The groups work, no problem. Everyone knows what a group is. Well, over a period of about 20 years the Office has reorganized so many times, that if you file your application in a certain order I have no idea which group it's going to go

to. Because if you claim the method one way, it's going to go to one group. If you claim the apparatus one way, it's going to a different group. And if you put a process on it, who knows where it's going to end up. So, what we're trying to do is sort through 562 classes and where those examiners are located and put them back together. Why? Because one of the main pressures on me from around the world and also probably in this room is unity. Where are we going with unity?

I came into an organization and discovered that there are a myriad of issues why the Office has problems moving it. One issue was we're not structurally organized to handle it. Well, my first management instinct says I am inept as a manager if I can't put the people in the way that makes that argument go away. There might be other arguments but I can't allow that one. That's one major factor. I do not want the argument there.

Also, what's the reason for the bottleneck in pre-exam which results in the situation that nobody's getting filing receipts on time? It's just human beings trying to classify these cases as they come in the door. It's a bottleneck. Now, I can go out and spend your money and hire about 26 classifiers and classify them. I've got six. Or I could get rid of six and find a piece of software that can hit six places rather than 16 places. That's my goal. I know I can put a piece of software up there that will hit six places 100 percent of the time with no bodies. It's called presumptive classifications. It's a little form of linguistics right now. We might have to reformat a little bit but it's possible and I can hit it a lot and get those out.

The other thing we're doing because of these sectors is we're putting the resources back to where the work is being done. We had a lot of friction. We used to have a separate classification division. Well, there were a lot of arguments between the director and the director of classifications on the priority of which art gets reclassified. Well, I sat through about six of those meetings and decided that system was not working real well. So, let's put classification back to where the examiners are doing the work. One director makes the decision of who's going to classify what, when, why, and how and get it done and move those resources back.

Automating the PTO. That's another aspect of it. Moving to industry sectors also has a resource implication. We are trying to do some pragmatic things in the Office to keep your costs down and keep the resources in hand. Now, one other part of this re-engineering is automation. I sat through more—and probably a gentleman at this table, Gerry, did as well—meetings than anybody around here on the topic of automating the Patent and Trademark Office. It took me a while to understand the jargon of the automation people. It's like speaking to

statisticians. They literally speak in their own code. It's tough to go through five-year I.T. plans and how we're going to build the next U.S.S. Nimitz here at $100 billion. But I do have a little bit of knowledge with a little bit of scientific background on some computers way back. What I started doing is going through this I.T. plan and picking and choosing what we deliver today and put on a screen and what we'll deliver three years from now. And hold people responsible at the end of the year for what is on the screen this year.

I put a lot of pressure on them and yes, if you're talking about the quality of work, we stopped putting paper foreign documents in the shoes last year. We did. We stopped. Not that we've been doing it well for the last 15 years but we quit whatever we were putting in there because examiners weren't putting it in there. We had clerks putting them in the shoes. So, they may have made it. They may have not.

But yesterday, before I left—and one reason I wasn't here—we were running the first macro against what will be a global first page database. Every examiner now is given a desktop Pentium top class computer. Yesterday we loaded and ran the first macro. Examiners will search all foreign first page data off their macros. It's at their fingertips as far back as Europe has put in electronic format. We loaded it and it's now on the system. By July, my next step is at the flip of an icon the examiners will have the U.S. prior art, the U.S. classification system and the ECLA system on their desktops. They will search our prior art and the first page data base against the European system and against our system. There have been arguments that our system is great and arguments when I go to Europe that ECLA is great. A lot of it evolves over law. Not so much that we just came up with a random classification system. We didn't. It came from a very specific form.

Electronic Filing of Applications. Also, we have been piloting the electronic filing of applications. However, it has really slowed down. We were working with about eight major companies out there and we have almost come to a screeching halt. The reason? My guess is unless things change beginning October 1, there will not be enough money to continue the project. There just will not. And I'll get to that in a little bit of the impacts of some of this on the budget. We are looking at other aspects of that. Hopefully, we can take pieces of that project and begin automating all of pre-exam. At least the major portions, except, maybe, for the fees right now, but we are even looking at that.

We have met with members of A.I.P.L.A., and specifically Charles Berman from California, and worked with a group there on some initiatives to pilot rapid prototypes of new systems and find out what the costs and incentives are. Those have been stopped. I do not have enough dollars to continue them and I won't waste dollars on something I

can't continue. I will have to stop it October 1. There just are not enough dollars for that.

PTO Budget. Let me talk about those dollars a minute and the impact of their loss. All of you know what the numbers are. When you lose $54 million, you make choices at the Office. You can keep the operation going pretty well as is but you can not build to the future and keep it going as is, so you make tradeoffs. When you're approaching a loss of $100 million, you have to make very, very tough management decisions. They're even ugly. You can imagine your budget at the rate of growth you've got and your reaction if somebody came in and said that 24 percent of your budget is history. Now, move forward. That's what we will face October 1 as we currently stand. We are not going to be hiring patent examiners. I can't pay their salary.

I'll give you some examples of budget costs. Everyone talks about the great patent paper systems we have in the public search room and publishing and disseminating that paper around the world. I paid $28 million a year of your fees to generate that paper. To pay typical government comps and benefits for the 5,000 people we employ, it's $67 million of your fees. That's not their salary. That's just life insurance, overheads, health insurance, retirement systems. Not their salaries; just the benefits. We will get to a point where over 80 percent of all your fees will be salaries, comps, space, printing, and pipeline issues within the next budget cycle. Looking at where you can cut, you're going to get close to the people. So, we're not going to be bringing examiners on right away.

You're going to probably hear about some hiring, though. The reason I can do that is from our projection, we are getting more work than is in the plan. So, with the delta over what the plan was, I will hire and compensate that delta for the added increase over the budget plan. We'll try to bring as many bodies on as we can in that delta cost.

Pendency of Applications. Let me talk about pendency. There is no doubt overall pendency is going to rise. My objective is to maintain first action pendency constant this year, whatever it takes. I will be cutting down details and other non-examining activities. The reason is that if I can maintain the first action pendency, I can dig out of that hole pretty quick. The rest of it's a matter of your calculator and your arithmetic. If that first action pendency starts to rise, then total pendency will start increasing. This year total pendency will probably be about 21.5 to 22 months. But first action pendency will be exactly as it was last year, 10.5 months. I probably could put my paycheck on it. We've got it that fine tuned. However, I will not be able to do that for a second continuous year. The workloads are too great.

I will give you an example. There are 34,000 pending software applications in the electrical cluster. I can show you the room they're in. We're wondering if we're going to have enough space in there if we do not do something soon. There's no doubt this area has the fastest growth around as I listen to this software discussion here today. It's the same situation as America Online was facing. You've got your customers coming faster than you can build your business. It's a 20 to 22 percent growth rate. You can hardly build a business at a 22 percent growth rate. You can't make companies that quick. You can't bring competent people up that quick. It's growing very rapidly. We'll have to make very hard decisions how we'll do work. We just will.

Those are a few of the major things. The bio area, I must say, is stabilized, even on filings. It's growing at a little more normal pace. It's flattening to a normal rate in the bio area and we're no longer seeing huge surges. I think the cases are getting much more complex, there's no doubt about that. But actual numbers are not increasing at the rate the software cases are. We brought in a second—and Gerry was referring to our search engines—a second mass parallel processor. We've recently struck a research agreement with the University of San Diego in La Jolla related to how we search the newer breed of biotechnology applications that are coming in. The problem with those computers is that we would have to re-software them. They are Vector computers and not mass parallel processors. Even though they're super-computers, they need to have mass parallel processing because they will only search the DNA in a unilateral direction and will not search the reverse spiral. And you have to be able to search that in reverse in order to get an obvious or a 102 from your counterpart of the spiral on the DNA. So, we are moving forward on those. We seem to have the tools under hand.

Classification System. Everyone talks about the criticality of a classification system. I've talked to over 100 examiners and haven't found one that's used it yet to search an application. It's real tough to find relevant in the shoes. The smallest shoe must be about eight inches thick. I do not know how you'd digest it. That is the problem we have. We need a piece of software, a linguistic tool, which will digest a search that's generated. A person looking at an actual generated search now—a human mind—I do not care if the person has five years of post-doc in this has a very difficult time digesting the data that's given to him or her. And the difficulty of the analysis depends on how big a fragment is being claimed. The larger the fragment, of course, the better it is. The smaller the fragment, the more permutations you have. And when variables are in there, you've got many more hits. So, you get a huge printout of cases. Because that database is growing very, very fast. Some of the

printouts now are getting so big, we're going to need some tool to break the results down.

Cooperative Efforts Between the US and the EPO. I had the opportunity to meet with the EPO's President Kober. We had dinner in Washington and talked about some initiatives. He has lots of concerns and is a very pragmatic man, it appears to be. His major concern is, of course, costs and Commissioner Lehman and I will probably be meeting with him in July. We may be looking at some cooperative efforts between the E.P.O. and the United States on costs and practices. There's a whole list of things, such as worldwide electronic filing and translations for most of us that would have considerations in Europe. One significant thing that always comes up is, "Well, let's share search and have some type of reciprocity on search." To do that, though, we'd best get a grace period because we're citing different art to each other. Even back and forth. Unless we have the same ground rules of what an examiner constitutes as prior art by our own rules. So, grace period, unity on our part, assignee filing and common search tools were on the list. That's a big issue. If you're going to get to some type of reciprocity, all the examiners have got to be doing the same searching. You've got to have commonality across the board. You can't have somebody searching one database and someone else searching another database.

One thing in Europe which I thought was a positive sign—I think it's like us with first-to-file—for them to put that on the table politically now, I do not know what I would do with it. We can't even get—Bruce Lehman can't—legislation passed—there's a controversy over pre-grant publication. I couldn't imagine first-to-file on the table. But one clear thing was article 52 in Europe and the impact that has on the software issue; how far we could go in that arena. But it was interesting that Kober brought up the fact he would like a project to start sharing our computer software databases.

Prior Art Data Base. Let me talk about the databases a minute because it gets to Len's issue of prior art. We've been going at this for I do not know how long. For three years we have been trying to get a database. We got S.P.I. up and other databases have kind of surpassed them. We've created a total electronic library in this division. You can go in there and look around. We have five professional searchers. They search the database, the internet, CD-ROMS, the M.I.T. interlinks. But I'll tell you what the problem is on this one and it's not for lack of S.P.I. or anything. It reminds me of when you go to a party and there's a swimming pool and everybody kind of stands around the pool waiting to see who's going to jump into the pool first because no one wants to get their stuff wet. That's kind of the situation we're in. Nobody wants to

roll their stuff into the pool until everybody else rolls their stuff into the pool. And there's a lot of data missing.

Before I went to a meeting out in California and I talked to the Commissioner on this issue. I had very clear marching orders but it was kind of ironic. They were calling me to the meeting to see if the Office could donate $2 million to help develop a database in a community that wants the database. I could not figure this meeting out. In the budget situation we are facing, and this is the industry I am talking to, we were being asked to contribute to enhance this database. My point was, "I hope gentlemen, you are enhancing this database that we may all use and help your product move along because we do not have a budget to give $2 million to do that right now." That was the kind of marching orders that were given to me.

Hilton Davis. I'm very interested in this *Hilton Davis* issue. It is certainly very significant to us. Prosecution history of files, what does that mean, where is that all going, what goes in those files? What is an examiner's interview summary today, what is it going to need to be into it the future? What is the response from the applicant, when do we hold it nonresponsive; when it is responsive, when do we need to correct it; when do we need it elaborated? We have had numerous meetings over this. We're waiting for the Court, of course, but we should preparing for this. What can I do with what's out there? You all know what I can do with what's out there. Zero and nothing. And we'll all have to live with that, but I can certainly move what we have inside should those decisions be made at some time to move that practice forward, start digesting that a little more and determine where we're going.

Patent Re-examinations. Then there are the more recent cases that have come out on what is re-exam. Question the newest case here and find out what we are doing on re-exam. I won't get into that today but it certainly raises an issue on that one as to what business we're in.

Pending Legislation. Let me just give you a quick synopsis. As I said earlier, I think some of the major issues facing the system now are pending in this Congress. And it could be an administrative re-organization It's HR-400, it's S-507, it's HR-811, it's HR-812. You can kind of go down the list. The administration's attempt to probably push through the Vice President's office some type of a P.B.O. legislation, which is a template and means that we may fall under a template of a new administrative act. I do not know. Because what goes into Congress never comes out of Congress so, who knows on this one. Ralph knows that better than I, probably. It's very significant to me because there are issues up in front of Appropriations now.

HR-400 will probably be on the floor next week. My concern is how many of you are interested in your manager's amendments or the

manager's amendments that are currently being touted? I do not know how gracious the Chair is going to tolerate some of this. My feeling is that there's another key bill that got wrapped into that. That's HR-673, which got rolled into 400. I'm not going to say what the positions of who are on what, but my feeling is that if 400 went south with 673, then we have a very difficult time with resurrecting 673. That's just my read on this. There are avenues that that could be taken but I would say if you are a Congressperson, you're going to look at that very tightly once a vote has been made. And I think that is very critical to us for Fiscal Year '99.

I think 673 is one of the most important pieces of legislation for this system we have sitting out there right now. No matter which way the organization or structure of how we operate, or what gets published what doesn't get published, 673 impacts the total system. It just does.

With that, I will answer any questions, or will take a few minutes here to say just that I merely listen to the Board of Directors, we do the best we can on those Board decisions. When the Board of Directors make the decisions, we try to manage an organization to the best we can with those decisions and we will continue to do so. It's a struggle every day. Some of you that have been in the Office at different times or worked there, I think—Renee Teytmeyer and I—Renee had my job more years than any other gentleman I know. I spent two days with him. Renee's final words were, "I am glad I am retired." With that, I'll open it up to the floor to anyone who has questions about the Office; I'll try to answer them the best I can.

MR. BENSON:

Any questions?

MR. RASSER:

There is an aspect to the sequestration of funds that goes beyond running the operation and increased backlogs and all that. We're already seeing it. It used to be that the United States could take the high road in approaching other countries and bitching about the high costs of their systems. We are rapidly losing that and it strikes me that that is probably a point that has not been very well considered at the time the decisions were made to—what I am referring to now is that the changes, not just the amount but also that it's now the administration in the act rather than just Congress. And I do not very well see how that is to be reconciled with the heroic efforts that Commissioner Lehman has been levying against the Japanese and the Europeans.

MR. KAZENSKE:

I think it makes it very difficult to leverage that with the Europeans. However, as I said in this—I was very careful about what I said—I think one of the top priorities of the Board of Directors is the

budget deficit. And when they make that decision, that's their decision to make and that's the way it is. The Commissioner is part of this administration, as I am also. The Board of Directors has made certain decisions and it doesn't matter if it's on the Hill or in the administration. The number one public issue is deficit reduction and that is what's being looked at. But I agree with you when you get into discussions of excluding types of technology or whatever from protection or how we handle that. It is very difficult in the international arena and it affects how we make arguments and what our efforts are in that arena. You are right.

MR. BENSON:

Len, you had a question?

MR. MACKEY:

I think Kaz is beginning to flush it out. The administration says it's fine to sequester a good deal of the fees that are supposed to be used to run the Office. The next question is what are you going to do about it?

MR. KAZENSKE:

What we were going to do about, we've done about it. We have put forth probably as strong an argument on your behalf as was possible. I've never seen a Commissioner in several days work as hard as he has on an issue. Where that decision comes down is where that decision comes down. I think that part is, probably for the Commissioner, he accepts what the boss is saying on that. That has to come more so not from within but from without. I think that's a significant point. It wasn't if it was going to happen. It was only a matter of time when it was going to happen.

You could see it three years ago when they took $26 million and made their own Congressional priorities. Well, you know, you've been around Washington, Len, a long time. And how you use the money controls your priorities of how you want to move in certain aspects. You could see it three years ago where this would start evolving. As long as we stayed in this thing of OBRA on that. And that's why I say you can argue what you want and we've taken valiant efforts in two Congresses now and all of us in this small fraternity are well aware of it but the community at large is not and the votes were not there when the votes needed to be there. No matter what. And that is why I said if I see the system it is 673 right now. That is a critical piece of legislation for all of us to face. It really is. The sad part of all this, and I've known all of you a long time. When the OBRA came in and you all got a 65 percent increase in fees because of the OBRA promises that were made and then turn around and use that. I totally appreciate that. I really do. I lived through that myself but I think that time has spoken. I just do not have more to say on that issue at this point. People talked about how everyone

was going to hold hands and we would all have a budget by May. I thought is was very symbolic this week when they passed a bill that they won't have a government shutdown come October 1. It certainly sent a signal as to when they're going to resolve the budget to me. That was a clear signal. They're not going to hold hands real close on this.

HILTON DAVIS AND THE DOCTRINE OF EQUIVALENTS: A LITTLE CHANGE, A LITTLE MISCHIEF

BY JOHN MCDERMOTT*

After waiting for nearly five months to see what the Supreme Court would do about the much-criticized "doctrine of equivalents"[1] ("DOE"), we finally got the answer: Not much!

- We had hoped the Court would reconsider whether the DOE is fundamentally inconsistent with the requirement of 35 U.S.C. § 112 that an inventor's patent application "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention" . . . but it declined to do so.[2]

- We had hoped the Court would reconsider whether the DOE is fundamentally inconsistent with 35 U.S.C. §§ 251-252 which govern reissue, the statutory provision for correcting claims that have been drafted too narrowly, . . . but it declined to do so.[3]

- We had hoped the Court would reconsider whether the "triple identity" test established by the Court nearly 50 years ago in *Graver Tank*[4] — generally referred to as the function-way-result test — is the appropriate framework for applying the DOE or

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1 According to the Court, "[u]nder this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 117 S. Ct. 1040, 1045, 41 U.S.P.Q.2d (BNA) 1865, 1868 (1997) (citing Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609, 85 U.S.P.Q. (BNA) 328, 331-32 (1950)).

2 *See Hilton Davis*, 117 S. Ct. at 1047-48, 41 U.S.P.Q.2d (BNA) at 1870.

3 *See id.*

4 *Graver Tank*, 339 U.S. at 608, 85 U.S.P.Q. (BNA) at 330.

whether the "insubstantial difference" test proposed by the Federal Circuit's majority[5] is an acceptable alternative . . . but it declined to do so.[6]

- We had hoped (or at least I had hoped) the Court would decide that the DOE applies to the "unscrupulous copyist" who seeks a way of committing "fraud on a patent"[7] but not to the innocent infringer who independently creates an invention . . . but it declined to do so.[8]

- Some even had hoped the Court would decide whether the application of the DOE is a question of law for the court or a question of fact for the jury[9] . . . but it declined to do so.[10]

- And there *may* have been some who had hoped the Court would resolve the long standing dispute among the members of the Federal Circuit whether the DOE should be applied to the invention *as a whole* or to *each element* of the invention . . . *and it did!*[11]

- But I certainly did not expect the court to change the "timing" of the determination of equivalency from when the original invention was made to when the alleged infringement occurred . . . *but it did!*[12]

- And I doubt there were any who had expected the Court to make a fundamental change in the application of prosecution history estoppel . . . *but it did!*[13]

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5 Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1521, 35 U.S.P.Q.2d (BNA) 1641, 1648 (Fed. Cir. 1995) (en banc).

6 *See Hilton Davis*, 117 S. Ct. at 1054, 41 U.S.P.Q.2d (BNA) at 1875-76.

7 *Graver Tank*, 339 U.S. at 609, 85 U.S.P.Q. (BNA) at 330.

8 *See Hilton Davis*, 117 S. Ct. at 1052, 41 U.S.P.Q.2d (BNA) at 1873-74.

9 That may have been wishful thinking as it did not seem that the issue was within the Court's grant of certiorari. *See id.* at 1053, 41 U.S.P.Q.2d (BNA) at 1874.

10 *See id.*, 41 U.S.P.Q.2d (BNA) at 1874-75.

11 *See id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1871. Justice Thomas relied heavily on the late Judge Nies' analysis, thereby making the Court's decision a eulogy to her and a fitting tribute to one of the finest judges to have served on any federal court.

12 *See id.* at 1053, 41 U.S.P.Q.2d (BNA) at 1874.

13 *See id.* at 1051, 41 U.S.P.Q.2d (BNA) at 1873.

I. THE *REALLY BIG QUESTION*: IS THE DOE STILL VIABLE?

There are those who had hoped the Court would pronounce the DOE to be DOA — Dead on Arrival. The petitioner certainly hoped for that result.[14] Four of the judges of the Federal Circuit hoped for the same thing.[15] And so did I.

Writing for a unanimous Court[16] and relying on the petitioner's brief, Justice Thomas identified four arguments for "pulling the plug" on the DOE:

> (1) the doctrine of equivalents is inconsistent with the statutory requirement that a patentee specifically "claim" the invention covered by a patent, 35 U.S.C. § 112;
> (2) the doctrine circumvents the patent reissue process — designed to correct mistakes in drafting or the like — and avoids the express limitations on that process, 35 U.S.C. §§ 251-252;
> (3) the doctrine is inconsistent with the primacy of the Patent and Trademark Office (PTO) in setting the scope of a patent through the patent prosecution process; and
> (4) the doctrine was implicitly rejected as a general matter by Congress' specific and limited inclusion of the doctrine in one section regarding "means" claiming, 35 U.S.C. § 112, ¶ 6.[17]

Justice Thomas brushed off the first three arguments merely by pointing out that they "were made in *Graver Tank* in the context of the 1870 Patent Act, and failed to command a majority."[18] He noted that there was a "vigorous dissent" by Justice Black on precisely these grounds in *Graver Tank*,[19] and in addition noted a similar objection to the DOE at the time of its birth, nearly 100 years before *Graver Tank*,[20] in *Winans v.*

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[14] In the Court's view, "[p]etitioner, which was found to have infringed upon respondent's patent under the doctrine of equivalents, invites us to speak the death of that doctrine." *Id.* at 1045, 41 U.S.P.Q.2d (BNA) at 1868.

[15] As the Court explained, "[f]our of the five dissenting judges viewed the doctrine of equivalents as allowing an improper expansion of claim scope, contrary to this Court's numerous holdings that it is the claim that defines the invention and gives notice to the public of the limits of the patent monopoly." *Id.* at 1046, 41 U.S.P.Q.2d (BNA) at 1869 (citing Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1537-38, 35 U.S.P.Q.2d (BNA) 1641, 1662 (Plager, J., dissenting)).

[16] Justice Ginsburg added a "cautionary note" in which she was joined by Justice Kennedy. *See Hilton Davis*, 117 S. Ct. at 1054, 41 U.S.P.Q.2d (BNA) at 1876 (Ginsburg, J. concurring).

[17] *Id.* at 1047, 41 U.S.P.Q.2d (BNA) at 1869-70.

[18] *Id.*, 41 U.S.P.Q.2d (BNA) at 1870.

[19] *Id.* at 1047 n.3, 41 U.S.P.Q.2d (BNA) at 1870 n.3.

[20] *Id.*

Denmead.[21] *Winans* was a 5-4 decision with a dissenting opinion as vigorous as Justice Black's dissent in *Graver Tank*. Justice Thomas interpreted the *Winans* dissent as arguing that "the majority result [which introduced the doctrine of equivalents] was inconsistent with the requirement in the 1836 Patent Act that the applicant 'particularly "specify and point" out what he claims as his invention.'"[22] But neither the fact that the DOE has been controversial from its birth to the present,[23] nor the confusion surrounding the doctrine, suggested by "significant disagreement within the Court of Appeals for the Federal Circuit concerning the application of *Graver Tank*,"[24] nor even the Court's concern "that the doctrine of equivalents, as it has come to be applied since *Graver Tank*, has taken on a life of its own, unbounded by the patent claims"[25] gave this Court a sufficient reason to reconsider these three fundamental questions.[26]

The only challenge to the continued viability of the DOE considered in any detail by the Court was "[p]etitioner's fourth argument for an implied congressional negation of the doctrine of equivalents."[27] That argument was based on the reference to "equivalents" in 35 U.S.C. § 112, ¶ 6[28] which may be read to suggest that Congress intended to overrule the much-broader DOE which originated in *Winans* and was

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21 56 U.S. (15 How.) 330 (1854).

22 *Hilton Davis*, 117 S. Ct. at 1047 n.3, 41 U.S.P.Q.2d (BNA) at 1870 n.3 (quoting *Winans*, 56 U.S. (15 How.) at 347 (Campbell, J., dissenting)).

23 Note the split decisions and strong dissents in both *Winans*, 56 U.S. (15 How.) at 343 (Campbell, J., dissenting) and *Graver Tank*, 339 U.S. at 612 (Black, J., dissenting).

24 *Hilton Davis*, 117 S. Ct. at 1045, 41 U.S.P.Q.2d (BNA) at 1868.

25 *Id.* at 1048-49, 41 U.S.P.Q.2d (BNA) at 1871.

26 Indeed, not even the fact that *Graver Tank* had been decided prior to the adoption of the current Patent Act was sufficient to persuade the Court to reconsider these issues. The Court reasoned that "[t]he 1952 Patent Act is not materially different from the 1870 Act with regard to claiming, reissue, and the role of the PTO." *Id.* at 1047, 41 U.S.P.Q.2d (BNA) at 1870.

27 *Id.* at 1048, 41 U.S.P.Q.2d (BNA) at 1870.

28 This provision, which was not contained in the 1870 patent act but was added in 1952 states that "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. § 112 (1994).

reaffirmed in *Graver Tank*. The Court also gave this argument short shrift, disposing of it in two brief paragraphs.[29]

Justice Thomas pointed out that "Congress enacted § 112, ¶ 6 in response to *Halliburton Oil Well Cementing Co. v. Walker*,[30] which rejected claims that 'do not describe the invention but use "conveniently functional language at the exact point of novelty."'"[31] Section 112, ¶ 6 was added expressly to allow "so-called 'means' claims, with the proviso that application of the broad literal language of such claims must be limited to only those means that are 'equivalent' to the actual means shown in the patent specification."[32]

But, as Justice Thomas noted, this new provision "is silent on the doctrine of equivalents as applied where there is no literal infringement."[33] In view of the fact that § 112, ¶ 6 was enacted to "cure a specific problem," Justice Thomas cautioned that "such limited congressional action should not be overread for negative implications" further stating that "[a]bsent something more compelling than the dubious negative inference offered by the petitioner, the lengthy history of the doctrine of equivalents strongly supports adherence to our refusal in *Graver Tank* to find that the Patent Act conflicts with that doctrine."[34] Perhaps most decisive is Justice Thomas' view that "Congress in 1952 could easily have responded to *Graver Tank* as it did to the *Halliburton* decision. But it did not."[35]

II. THE *OTHER BIG QUESTION*: IS THE DOE BEING APPLIED PROPERLY BY THE FEDERAL CIRCUIT?

The Court did seem to recognize problems with the way the Federal Circuit had applied the doctrine of equivalents.[36] It seemed disturbed that this "specialized court," which was created specifically to

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[29] *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1870-71. In fairness to the Court, this argument is not very convincing and indeed may not have deserved any further attention.

[30] 329 U.S. 1, 71 U.S.P.Q. (BNA) 175 (1946).

[31] *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1870 (quoting *Halliburton*, 329 U.S. at 8, 71 U.S.P.Q. (BNA) at 178 (citation omitted)).

[32] *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1870.

[33] *Id.*, 41 U.S.P.Q.2d (BNA) at 1871.

[34] *Id.*

[35] *Id.*

[36] *Id.* at 1045, 41 U.S.P.Q.2d (BNA) at 1868.

bring consistency, predictability and uniformity to the patent law, could not even agree on whether the doctrine was still viable and, if it was, how it should be applied. Here the Court seemed to side with the five Federal Circuit judges[37] below who dissented:

> We do, however, share the concern of the dissenters below that the doctrine of equivalents, as it has come to be applied since *Graver Tank*, has taken on a life of its own, unbounded by the patent claims. There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement.[38]

Concluding that the doctrine as currently applied was "not free from confusion," the Court "endeavor[ed] to clarify the proper scope of the doctrine."[39]

The Federal Circuit itself recognized the confusion and conflict accompanying the DOE and sought the advice of counsel when it granted rehearing en banc.[40] Before oral argument, the Federal Circuit asked the parties to brief several specific questions, including:

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[37] The Court viewed the Federal Circuit's decision as representing a 7-5 split, with the majority favoring the status quo and the dissent urging substantial revision of the doctrine of equivalents. *See id.* at 1046, 41 U.S.P.Q.2d (BNA) at 1869. However, this vote count is misleading because Senior Judge Cowen was counted among the seven. Judge Cowen participated in the en banc rehearing only because he was one of the members of the original Federal Circuit panel of three judges who first heard the appeal. Excluding Judge Cowen, the vote becomes even closer: 6-5. Additionally, there is Judge Newman's "concurring opinion." Although she joined in the *per curium* holding because "our conclusion is in accord with precedent," she expressed serious misgivings over the doctrine of equivalents and called for legislative rather than judicial reform:

> I have, however, come to doubt that the doctrine of equivalents is the best way to achieve the result for which it arose, and I encourage the technology-user community to consider whether new procedures, through the legislative process, may better serve the national interest.

Hilton Davis, 62 F.3d at 1529, 35 U.S.P.Q.2d at 1654 (Newman, J., concurring). Judge Newman should have been counted with the dissent, among those unhappy with the current state of the doctrine of equivalents and, if she is so counted, the "dissent" becomes a 6-5 majority. In reality, the Supreme Court sided with a majority of the Federal Circuit judges who were active at the time *Hilton Davis* was decided.

[38] *Hilton Davis*, 117 S. Ct. at 1048-49, 41 U.S.P.Q.2d (BNA) at 1871.

[39] *Id.* at 1045, 41 U.S.P.Q.2d (BNA) at 1868.

[40] It would seem that the court received more advice that it could use as *amicus curiae* briefs were submitted by nine individuals and organizations, including Professor Donald Chisum, the American Intellectual Property Law Association, the American Bar Association, the Iowa State Bar Association, the Houston Intellectual Property

> Does a finding of infringement under the doctrine of equivalents require anything in addition to proof of the facts that there are the same or substantially the same (a) function, (b) way, and (c) result, the so-called triple identity test of *Graver Tank* and cases relied on therein? If yes, what?[41]

After oral argument — long after it[42] — the majority concluded:

> [A] finding of infringement under the doctrine of equivalents requires proof of *insubstantial differences between the claimed and accused products or processes.* Often the function-way-result test will suffice to show the extent of the differences. In such cases, the parties will understandably focus on the evidence of function, way, and result, and the fact-finder will apply the doctrine based on that evidence. Other factors, however, such as evidence of copying or designing around, may also inform the test for infringement under the doctrine of equivalents.[43]

If the Supreme Court had wanted to eliminate the basic cause of the confusion associated with the DOE, then it would have needed to deal with the elusive issue of when a substituted element is or is not an equivalent for the element it replaced. And if the test is whether the difference between the substituted element and the element it replaced is a "substantial difference," then the Court would have needed to explain how a pH difference of 1 full point could be considered *insubstantial.*[44]

But the Court ducked these difficult issues by concluding that all problems associated with the DOE could be harmoniously resolved simply by requiring that "the doctrine of equivalents must be applied to

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Law Association, the Intellectual Property Law Institute, and the California Association for the Advancement of Technology and Invention. *See* Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1514, 35 U.S.P.Q.2d (BNA) 1641, 1642.

[41] *Id.* at 1516, 35 U.S.P.Q.2d (BNA) at 1644 (citation omitted).

[42] It took the Federal Circuit nearly a year and a half to render its en banc decision in *Hilton Davis.* The Supreme Court was much quicker; it took it less than five months. But after reading the Court's decision, one wonders: What took so long!

[43] *Id.* at 1521-22, 35 U.S.P.Q.2d (BNA) at 1648 (emphasis added).

[44] That the Court appreciated the magnitude of a one-point difference in pH is evident from Justice Thomas' initial footnote which acknowledged that pH is measured "on a logarithmic scale, with each whole number difference representing a ten-fold difference in acidity . . . ." *Hilton Davis,* 117 S. Ct. at 1045 n.1, 41 U.S.P.Q.2d (BNA) at 1868 n.1. But what everyone seems to have overlooked is that the trial court prohibited the defendant from "practicing ultrafiltration except at pressures above 500 p.s.i.g. and pHs above 9.01." *Hilton Davis,* 62 F.3d at 1516, 35 U.S.P.Q.2d (BNA) at 1644. Thus a process using a pH of 1 would be barred by the doctrine of equivalents. A solution with a pH of 1 is 100,000 times less acidic than a solution with a pH of 6. Is that also an *insubstantial difference*?

individual elements of the claim, not to the invention as a whole"[45] and then leaving it to the "special expertise" of the Federal Circuit to "refine the formulation of the test for equivalence in the orderly course of case-by-case determinations . . . ."[46] The Court continued:

> A focus on individual elements and a special vigilance against allowing the concept of equivalence to eliminate completely any such elements should reduce considerably the imprecision of whatever language is used. An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element. With these limiting principles as a backdrop, we see no purpose in going further and micro-managing the Federal Circuit's particular word-choice for analyzing equivalence.[47]

But that's what the Federal Circuit has been doing for the past 15 years and look at the mess it's gotten us into!

The only issue receiving more than a superficial analysis from the Court was petitioner's claim that application of the doctrine of equivalents to give the protection of respondent's patent to a process operating at a pH of 5 was barred by "a well-established limit on non-literal infringement, known variously as 'prosecution history estoppel' and 'file wrapper estoppel.'"[48] There seems no doubt that respondent could not rely on the DOE to reach a process operating above a pH of 9 since the phrase "at a pH from approximately 6.0 to 9.0" was added to the claim during patent prosecution in response to an objection by the patent examiner due to a perceived overlap with U.S. Patent No. 4,189,380, to Booth, et al. (the Booth patent), which revealed an ultrafiltration process operating at a pH above 9.0.[49] There is no disagreement that any surrender of subject matter during patent prosecution in order to "avoid the prior art, or otherwise to address a specific concern — such as obviousness — that arguably would have rendered the claimed subject matter unpatentable" precludes recapturing

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[45] *Hilton Davis*, 117 S. Ct. at 1049, 41 U.S.P.Q.2d (BNA) at 1871.

[46] *Id.* at 1054, 41 U.S.P.Q.2d (BNA) at 1876.

[47] *Id.*, 41 U.S.P.Q.2d (BNA) at 1875-76. The Court characterized the issue as merely a "debate regarding the linguistic framework under which 'equivalence' is determined." *Id.*, 41 U.S.P.Q.2d (BNA) at 1875. Perhaps the Court will next tell us that the controversy over pornography on the internet is merely a debate regarding the linguistic framework under which 'freedom of speech' is determined.

[48] *Id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1871 (quoting Bayer Aktiengesellschaft v. Duphar Int'l Research B.V., 738 F.2d 1237, 1238 222 U.S.P.Q.2d 649, 650 (Fed. Cir. 1984)).

[49] *Hilton Davis*, 117 S. Ct. at 1050, 41 U.S.P.Q.2d (BNA) at 1872.

any part of that subject matter, even if it is equivalent to the matter expressly claimed.[50]

The problem in this case is that "[w]hile it is undisputed that the upper limit of 9.0 was added in order to distinguish the Booth patent, the reason for adding the lower limit of 6.0 is unclear."[51] Petitioner argued that prosecution history estoppel should apply to "any surrender of subject matter during patent prosecution *regardless of the reason for such surrender.*"[52] The Court rejected this argument, pointing out that its "prior cases have consistently applied prosecution history estoppel only where claims have been amended for a limited set of reasons,"[53] and it was not persuaded that it should change the law "to a more rigid rule invoking an estoppel regardless of the reasons for a change."[54] But then in what must have been a surprise to some, the Court placed the burden on the patentee to explain why the amendment was made rather than requiring the alleged infringer to do so:[55]

> In our view, holding that certain reasons for a claim amendment may avoid the application of prosecution history estoppel is not tantamount to holding that the *absence* of a reason for an amendment may similarly avoid such an estoppel. Mindful that claims do indeed serve both a definitional and a notice function, we think the better rule is to place the burden on the patent-holder to establish the reason for an amendment required during patent prosecution. The court then would decide whether that reason is sufficient to overcome prosecution history estoppel as a bar to application of the doctrine of equivalents to the element added by that amendment.[56]

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50 *Id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1872.

51 *Id.* at 1050, 41 U.S.P.Q.2d (BNA) at 1872. Specifically, "[t]he lower limit certainly did not serve to distinguish the Booth patent, which said nothing about pH levels below 6.0." *Id.* Furthermore, "[t]he parties disagree[d] as to why the low-end pH limit of 6.0 was included as part of the claim." *Id.* at 1046, 41 U.S.P.Q.2d (BNA) at 1868. Petitioner opined that the lower limit was added because below a pH of 6.0 the patented process created "foaming" problems and had not been shown to work below that pH level. Respondent disagreed, indicating that the process had been successfully tested to pH levels as low as 2.2, but offered no explanation as to why a pH of 6.0 rather than 2.2 had been selected. *See id.* at 1050 n.2, 41 U.S.P.Q.2d (BNA) at 1872 n.2.

52 *Id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1871 (emphasis added).

53 *Id.* at 1050, 41 U.S.P.Q.2d (BNA) at 1872.

54 *Id.*

55 The challenger has the burden of proving an issued patent invalid by clear and convincing evidence. *See* 35 U.S.C. § 282 (1994). But the burden has always been on the patentee to prove infringement by the preponderance of the evidence. *See, e.g.*, Bene v. Jeantet, 129 U.S. 683 (1889).

56 *Hilton Davis,* 117 S. Ct. at 1051, 41 U.S.P.Q.2d (BNA) at 1873.

The Court then established a *reverse presumption*: "Where no explanation is established, however, the court should *presume* that the PTO had *a substantial reason related to patentability* for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine [of] equivalents as to that element."[57] Since the respondent had not established the reason it added a *lower* pH limit, the matter was remanded to the Federal Circuit to determine whether reasons for that portion of the amendment were offered during patent prosecution, and if not, whether it would be appropriate to give the respondent the further opportunity to do so.[58]

This requirement, while not *per se* unreasonable, will prove troublesome and will increase litigation since in many cases the prosecution history will not reveal why certain changes were made to the language of some claims. "Resourceful counsel" for patentees will be tempted to suggest reasons which will *not* undermine the assertion of infringement under the DOE. Counsel for the putative infringers will have no factual basis to refute such assertions, regardless of how "creative" they are. This will thus become a "factual issue" to be decided by the Federal Circuit on an inadequate appellate record.

III. THE *"FAIRNESS" QUESTION*: DOES THE DOE APPLY TO "INNOCENT INFRINGERS" WHO INDEPENDENTLY "INVENT" THE INFRINGING DEVICE OR PRODUCT?

The Court in *Graver Tank* seemed preoccupied with the problem of an "unscrupulous copyist"— a pirate who committed a "fraud on a patent."[59] Consistent with this concern, the Court in *Graver Tank* appeared to suggest that independent experimentation by the alleged infringer *might* support an equitable defense to the doctrine of equivalents.[60] It would seem only reasonable that a truly innocent inventor — who was not even aware of the plaintiff's patent and therefore was not a "copyist" ("unscrupulous" or otherwise) — should not be held liable for infringing a patent under doctrine of equivalents.

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57 *Id.* (emphasis added).

58 *See id.*

59 Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609, 85 U.S.P.Q. (BNA) 328, 330 (1950).

60 *See id.*, 85 U.S.P.Q. (BNA) at 331.

Indeed, Congress has expressed concern for those who infringe a reissued patent with broader claims by providing for intervening rights.[61]

While the court recognized that *Graver Tank* refers to the prevention of copying and piracy when it described the benefits of the doctrine of equivalents, the Court was not convinced that the doctrine should be so limited. Justice Thomas noted that in *Winans*, the Court viewed the doctrine of equivalents "as growing out of a *legally implied* term in each patent claim that 'the claim extends to the thing patented, however its form or proportions may be varied.'"[62] The Court reasoned that "[i]f the essential predicate of the doctrine of equivalents is the notion of identity between a patented invention and its equivalent, there is no basis for treating an infringing equivalent any differently than a device that infringes the express terms of the patent."[63] Since an innocent infringer can be found liable for literal infringement, the court saw no reason why an innocent infringer should not be found liable for infringement under the doctrine of equivalents.[64]

There is some logic to this argument. An *innocent infringer* who is completely unaware of the dominant patent cannot rely on his or her lack of knowledge to avoid being held liable for infringing the patent claims. Similarly, an innocent infringer who is aware of the dominant patent but who has been advised by independent patent counsel that his or her process or product does not literally infringe the patent claims cannot rely on "honest belief" to avoid being held liable for infringing the patent claims.

But infringement under the doctrine of equivalents is fundamentally different from literal infringement. If "an innocent" infringes literally, it will be due to his/her innocent mistake either in failing to do a patent search or in erroneously believing that his/her product or process did not infringe literally.[65] In neither case will the patentee be in any way responsible for the innocent infringement. However, if "an innocent" infringes under the doctrine of equivalents, it will be due to the innocent mistake *of the patentee* in not properly "claiming" his/her invention when the application was originally filed.

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[61] *See* 35 U.S.C. § 252 (1994).

[62] *Hilton Davis*, 117 S. Ct. at 1051, 41 U.S.P.Q.2d (BNA) at 1873 (quoting Winans v. Denmead, 56 U.S. (15 How.) 330, 343 (1854)) (emphasis added).

[63] *Hilton Davis*, 117 S. Ct. at 1052, 41 U.S.P.Q.2d (BNA) at 1873.

[64] *See id.*

[65] To be deemed "an innocent," the infringer will generally be expected to have sought advice of independent counsel. Therefore, an infringer's innocent mistake will either be in selecting counsel or in relying on the innocent mistake of counsel.

The *Hilton Davis* case may provide the best example of the difference. Had the inventor indicated a low-end pH limit of 2.2 in its claim, even the petitioner's "independent development" of its process and its complete unawareness of the respondent's patent would not have shielded him from liability. Although "innocent," the petitioner could not point to anything the inventor did to cause the infringement. However, the inventor claimed a low-end pH limit of 6.0. This caused the petitioner to believe that its process — operating at a pH of 5.0 — was outside the respondent's claim. Even if also "innocent," the respondent could have and should have included a lower pH limit of 5.0 or below. Its failure to do so should have barred a claim for DOE infringement against a truly innocent infringer.[66] But the Court refused to apply principles of equity or fundamental fairness and concluded that they play "no role in the application of the doctrine of equivalents."[67]

It this were not enough, the Court took away the one absolute defense *Graver Tank* gave to the innocent infringer, the requirement that the doctrine should be limited to equivalents that were known at the time the patent issued, and should not extend to after-arising equivalents. The Court held that "the proper time for evaluating equivalency — and thus knowledge of interchangeability between elements — is at the time of infringement, not at the time the patent issued."[68] More than anything else in Justice Thomas' opinion, this statement reflects a fundamental misunderstanding of basic patent law principles.

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[66] Justice Thomas "wonder[ed] how ever to distinguish between the intentional copyist making minor changes to lower the risk of legal action, and the incremental innovator designing around the claims, yet seeking to capture as much as is permissible of the patented advance." *Id.*, 41 U.S.P.Q.2d (BNA) at 1874. In Justice Thomas' view, the Federal Circuit suggested that "a person aiming to copy or aiming to avoid a patent is imagined to be at least marginally skilled at copying or avoidance, and thus intentional copying raises an inference — rebuttable by proof of independent development — of having only insubstantial differences, and [that] intentionally designing around a patent claim raises an inference of substantial differences." *Id.* Justice Thomas thought this approach "leaves much to be desired," *id.*, and so it does. The distinction *should* be between the independent developer and the one who tries to design around a patent of which he or she is well aware. Such a person can and should be held to the risk that his or her way of attempting to design around the patent failed either literally or under the doctrine of equivalents. While he or she may honestly believe that they have succeeded in avoiding the claim which was designed around, it will be up to an independent third party — judge or jury — to determine if he or she has succeeded.

[67] *Id.* The Court used the term "intent" rather than "equity" or "fairness," but its analysis made no provision for the independent developer who does not "intend" anything.

[68] *Id.* at 1053, 41 U.S.P.Q.2d (BNA) at 1874.

The doctrine of equivalents is, in a sense, a "mirror image" of the doctrine of obviousness. The DOE teaches that a person cannot avoid infringement by substituting an element for one recited in a claim if the substitution would have been obvious to one skilled in the art. The doctrine of obviousness teaches that a person cannot obtain a new patent by substituting an element for one recited in a claim of a prior patent if the substitution would have been obvious to one skilled in the art. The determination of obviousness had been, since *Graver Tank*, based on the knowledge of a person skilled in the art at the time the first invention was made, not when the second "invention" was made. And that was the law under *Graver Tank.*

But with a stroke of his pen, Justice Thomas has changed this fundamental calculus so that the original inventor gets the benefit of an enlargement of the claim which neither he nor anyone else skilled in the art would have contemplated when the invention was made. Again, the facts of this case prove the point. There was evidence that when the respondent's invention was made, neither he nor one skilled in the art would have expected the process to work below a pH of 6.[69] *Subsequent* development by the petitioner demonstrated that the process could be made to work at a pH below 5. This was a new, non-obvious invention.[70] But the Court held it to be within the scope of the earlier invention. This turns both the doctrine of equivalents and the doctrine of obviousness on their heads!

IV. THE *CONSTITUTIONAL QUESTION*: IS THE DOE AN ISSUE OF LAW OR AN ISSUE OF FACT?

There were great hopes that the Court would decide whether application of the doctrine of equivalents is a task for the judge or for the jury under the Seventh Amendment to the Constitution. But the Court concluded that the issue was not "squarely presented" to it by the petitioner who only made "passing reference" to it, and the Court chose to put off resolving the issue.[71] Justice Thomas did suggest that there was "ample support" in the Court's prior cases for the Federal Circuit's

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[69] *See* footnote 51, *supra.*

[70] It would have been non-obvious because the existing "art" taught away from using the lower pH. Thus, petitioner should have been able to patent its non-obvious, new and useful invention. But under the Court's decision, it could not practice the invention because it was included within the scope of the original invention. How absurd!

[71] *Id.*, 41 U.S.P.Q.2d (BNA) at 1874-75.

conclusion that it was for the jury to decide whether the accused process was equivalent to the claimed process.[72] He added that nothing in the Court's "recent *Markman* decision necessitates a different result than that reached by the Federal Circuit."[73] More interestingly, the Court seemed to respond to those who argued that juries were incapable of deciding such issues by suggesting that proper use of the Federal Rules of Civil Procedure would minimize the inconsistency of jury verdicts:

> With regard to the concern over unreviewability due to black-box jury verdicts, we offer only guidance, not a specific mandate. Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment. If there has been a reluctance to do so by some courts due to unfamiliarity with the subject matter, we are confident that the Federal Circuit can remedy the problem. Of course, the various legal limitations on the application of the doctrine of equivalents are to be determined by the court, either on a pretrial motion for partial summary judgment or on a motion for judgment as a matter of law at the close of the evidence and after the jury verdict. Thus, under the particular facts of a case, if prosecution history estoppel would apply or if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further *material* issue for the jury to resolve. Finally, in cases that reach the jury, a special verdict and/or interrogatories on each claim element could be very useful in facilitating review, uniformity, and possibly postverdict judgments as a matter of law. We leave it to the Federal Circuit how best to implement procedural improvements to promote certainty, consistency, and reviewability to this area of the law.[74]

The Court's opinion sounds like an invitation for the Federal Circuit to sanction "*Markman*-like" hearings to determine, "under the particular facts of a case, if prosecution history estoppel would apply or if a theory of equivalence would entirely vitiate a particular claim element . . . ."[75] Then — as so often happens following "*Markman* hearings" — partial or total summary judgment could be rendered by the trial judge "as there would be no further *material* issue for the jury to resolve."[76] A cynic might read into the Supreme Court's charge to the Federal Circuit to "implement procedural improvements"[77] a none-too-subtle subtext: "You figured out how to avoid the Seventh Amendment with literal

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[72] *Id.*, 41 U.S.P.Q.2d (BNA) at 1875.

[73] *Id.*, 41 U.S.P.Q.2d (BNA) at 1875 (citing Markman v. Westview Instruments, Inc., 116 S. Ct. 1384, 1392-93, 38 U.S.P.Q.2d (BNA) 1461, 1467-68 (1996)).

[74] *Hilton Davis*, 117 S. Ct. at 1053 n.8, 41 U.S.P.Q.2d (BNA) at 1875 n.8 (citations omitted).

[75] *Id.*

[76] *Id.* The decision then could be reviewed *de novo* by the Federal Circuit.

[77] *Id.*

infringement, you should be smart enough to figure out how to do the same with the doctrine of equivalents."

V. ONE FINAL QUESTION: NOW THAT WE HAVE SEEN WHAT THE SUPREME COURT HAS DONE ABOUT THE DOE, WHAT *SHOULD* BE DONE ABOUT THE DOE?

As is Judge Newman,[78] I am convinced that the DOE is *not* the best way to achieve the purpose for which it arose, but I am far less optimistic than she is that the "technology-user" community is even interested in developing new procedures to better serve the "national interest"[79] or that the legislative process will be any more effective than the Court has been at resolving the problems associated with the doctrine of equivalents. However, as we are left with no other choice, I will make two modest proposals for legislative solutions.

The first proposal — a "Band-Aid" — would protect "innocent infringers" like Warner-Jenkinson with a statute similar to 35 U.S.C. § 307(b). Such a statute might provide that "when one or more claims of a patent have been found to have been infringed under the doctrine of equivalents, that determination shall have the same effect as that specified in § 252 of this title for reissued patents on the right of any person who made, purchased, or used within the United States, or imported into the United States, anything found to have been infringed under the doctrine of equivalents or who made substantial preparation for the same, prior to a final judgment finding infringement under the doctrine of equivalents."

The second proposal — major surgery — would remove the doctrine of equivalents from judicial scrutiny and place it where it belongs — in the Patent and Trademark Office.[80] This could be accomplished in two, or possibly three, steps. First, 35 U.S.C. § 271(a) would be amended to include a provision that states that "infringement may be found only where every limitation of the claim is found in the accused device literally." This would prevent courts — and juries — from finding infringement under the doctrine of equivalents.

Judge Newman may be correct in believing that the DOE alleviates the "strong pressure on filing the patent application early in

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[78] *See* Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1529, 35 U.S.P.Q.2d (BNA) 1641, 1654 (Fed. Cir. 1995) (Newman, J. concurring).

[79] *Id.*

[80] Fear not, Federal Circuit! Such a change would not dilute your ultimate control over all patent matters. You could still review the PTO's decisions *de novo*!

the development of the technology, often before the commercial embodiment is developed or all of the boundaries fully explored."[81] In her view, the current reissue provision does not provide an adequate alternative to the judicial DOE because the two-year limit on the enlarging of claims through reissue is too short:

> Since the patentee is barred from enlarging the claims after two years from the date of issuance, later developments are excluded from the patent system unless they independently meet the criteria of patentability. From the originator's viewpoint, the inability to protect such developments may be a factor in recourse to the doctrine of equivalents. And from the viewpoint of the potential competitor, there is no opportunity to test possible encumbrances on later developments.[82]

This problem is easily rectified. The two-year window for enlarging the scope of patent claims[83] could be eliminated, allowing claims to be broadened during the entire life of a patent,[84] thereby protecting the rights of the "originator." Section 252 would protect the rights of the "potential competitor."

But even that would not be enough for Judge Newman, as she seems to favor allowing the inventor to submit disclosures in addition to those already submitted. This could be accomplished merely by dropping the prohibition against the introduction of new matter into applications for reissue[85] while retaining the requirement that the reissued patent is restricted to "the invention disclosed in the original patent . . . ."

These simple changes would allow patentees to seek protection for "later developments [which do not] independently meet the criteria of patentability,"[86] while allowing competitors to rely on the language of the original claim *unless and until* it is reissued.

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81 *Id.* at 1536, 35 U.S.P.Q.2d (BNA) at 1660.

82 *Id.*

83 "No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent." 35 U.S.C. § 251 (1994).

84 While there would be no absolute time-bar to seeking reissue, courts might well consider the patentee's delay in seeking reissue when deciding whether to grant competitors "equitable intervening rights" and the scope and duration of such rights.

85 "No new matter shall be introduced into the application for reissue." 35 U.S.C. § 251.

86 *Hilton Davis*, 62 F.3d at 1536, 35 U.S.P.Q.2d (BNA) at 1660.

VI. CONCLUSION

Hilton Davis was the first substantive patent case the Supreme Court has taken since the Federal Circuit was established.[87] One must recognize that this opinion, like the Court's opinion in *Markman*, was written by a judge without any patent litigation experience who is also, significantly, one of the more conservative members of the Court. Justice Thomas' position could be summarized as: I don't know enough about patent law to know whether the system is "broken." But if it is, it's up to Congress — not this Court — to fix it.[88]

While *Hilton Davis* is a disappointment, we should not be too surprised by the opinion. It is the product of a Court that has not been concerned with patent law for nearly 15 years. Judging by the depth of analysis in *Markman* and *Hilton Davis*, today's Court is content to remain unconcerned with patent law. Equally important, this is a conservative Court that is reluctant to make new law in areas within the legislative sphere. Perhaps we should be pleased it did anything, even if it wasn't much. Or would the "technology-user community" have been better off if the U.S. Supreme Court had simply denied certiorari in both *Hilton Davis* and *Markman*? Regrettably, I think it would have.

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[87] The other patent cases the Court has reviewed have either involved procedure, *see, e.g.*, Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 26 U.S.P.Q.2d (BNA) 1721 (1993) (holding that the Federal Circuit erred in holding that questions concerning the invalidity of the claims became moot when the court concluded that those claims had not been infringed) or the relationship between federal and state law, *see, e.g.*, Bonito Boats, Inc., v. Thunder Craft Boats, Inc. 489 U.S. 141, 9 U.S.P.Q.2d (BNA) 1847 (1989).

[88] As Justice Thomas stated the Court's position, "Congress can legislate the doctrine of equivalents out of existence any time it chooses. The various policy arguments now made by both sides are thus best addressed to Congress, not this Court." *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1871.