

Remarks of

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INTRODUCTION

Good afternoon. Thank you, Judge Rader. It's a pleasure -- and a distinct honor -- to speak before such a distinguished assembly. In fact, I understand this conference represents one of the largest gatherings of judges with experience in patent cases. As a former practitioner, I am a little intimidated be in front of one judge, let alone 75 or so.

I want to congratulate Chief Judge Mayer, Judge Rader, Judge Newman, Judge Gajarsa, Judge Lourie, and Program chair Mike Meller for all their work in putting this conference together. I was able to sit in on some of yesterday's sessions and, not surprisingly, found them very worthwhile. I'm also pleased that the PTO has been a sponsor of this conference.

With only 73 days before the start of the next millennium, this conference provides us with an excellent opportunity to critically examine developments that are changing intellectual property protection systems around the world. Therefore, I'd like to focus my remarks today on two admittedly broad topics: the current status and future prospects of global intellectual property system.

OVERVIEW

To attempt to understand where we are today, it may be instructive to first retrace the path we've already taken. Clearly, we've come a long way.

In the United States, our patent system is founded in our Constitution. It is, like the rest of our legal structure, fundamentally premised upon the "rule of law." However, it's also a system that has continued to evolve since the first patent statute was enacted back in 1790.

The changes that have taken place over the years have, in some instances, been prompted by specific needs. Other changes have been warranted as the law has attempted to accommodate and embrace new technologies. Fortunately, our Founding Fathers had the foresight to create a system that was extremely flexible, with principles that have proven applicable to new technologies. As a result, millions of new inventions have been developed and commercialized, enhancing our quality of life and fueling robust economic growth.

Perhaps the most significant event affecting the evolution of our system in this century was the 1982 establishment of the Court of Appeals for the Federal Circuit, our host today. The CAFC was created to foster uniformity and predictability in the application of the patent law. Almost immediately, it resulted in enhanced respect for patents throughout our nation.

Throughout the last two centuries, the United States Patent and Trademark Office has also played a role in the evolution of our patent system. In many respects, we also play a judicial or quasi-judicial role within the system. For example, we regard our examiners as quasi-judicial officials, responsible for "judging" the patentability of applications that

come before them. Similarly, the Administrative Patent Judges on our Board of Patent Appeals and Interferences are responsible for handling appeals from the final determinations of examiners and determining priority of invention in interference procedures. Our Board is also the PTO's link to the Federal Circuit, as appeals from our Board are taken to the Federal Circuit, as you saw this morning.

In addition to facilitating the specific issue at hand, this integration of administrative procedure through to formal judicial consideration also allows for a system in which policy development may evolve.

In the hundreds of thousands of patent applications that the PTO handles each year, it is inevitable that we will confront new issues, especially those in emerging technologies. Those new issues have their origin in ex parte examination process, but are often not finally resolved until appeals are taken to the Federal Circuit or even to the Supreme Court.

Quite often, the new issues are purposefully and carefully framed by the applicant, the examiner, or the Board to provide appropriate test cases on further appeal. In this way, policies evolve and mature and decisional law facilitates the application and interpretation of statutory law. This policy development does not inject discretion into the application of our patent laws, as this would be contrary to the "rule of law." Rather, it is the inevitable result of the application of those laws to new issues that arise as technology progresses.

Of course, with hundreds of blossoming new technologies, come complex legal issues. This volatile mix of technology and law has created a flurry of judicial activity, legislative reforms, and world-wide initiatives.

The PTO has actively concerned itself with formulating and shaping intellectual property policy in response to the demands of technology and the economy. In doing so, we are committed to ensuring that our practices and policies promote the innovation and dissemination of these new technologies.

While the subject matter that is eligible for protection is for our courts and Congress to decide, the PTO has been very receptive to a continued expansion of subject matter eligibility, where appropriate, and in keeping with the basic principles of our patent system. History has always shown that the availability of patent protection, especially in cutting-edge technologies, is vital to the birth, and growth, of entire industries.

Many of the legal issues surrounding emerging technologies, particularly in the biotech and computer or software industries, focus on the types of inventions that qualify as patentable subject matter. For example, in the computer-related arts, the focus has been on what aspects of software-related inventions should be eligible for patent protection.

As we all know, laws of nature, abstract ideas, and mathematical principles are not, as a general rule, patentable subject matter. Until recently, methods of doing business also

were thought by most to be non-patentable subject matter. These exclusions are not specifically recited in our Patent Act; they are judicially created exceptions to patentability. For example, the Supreme Court of the United States has maintained that inventions involving mere algorithms could not be patentable.

Responding to concerns as to which aspects of software-related inventions should be eligible for patent protection, the PTO issued guidelines, first in 1989 and again in 1996, regarding its position on the proper analysis for computer-related inventions. The first set of guidelines recognized that although algorithms per se are not patentable, practical applications of mathematical algorithms may be. Building on the earlier version, the 1996 rules provide a uniform methodology for examining computer-related inventions and include a recognition that business method processes implemented through a software-based system may be patentable subject matter if they have a useful, concrete, and tangible application.

We are very pleased that the Federal Circuit in last year's decision, *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, validated our analysis in those guidelines. The Court also rejected the so-called "business method" exception, stating that inventions of this nature may be invalid for other grounds, such as lack of novelty -- and not simply because they were improper subject matter under section 101.

The decision in *State Street* has paved the way for a variety of other software and business applications and has already had a dramatic impact on the number of applications filed with the PTO -- our core work. In fact, the number of applications containing "business process" claims has jumped 70% in just the last year. As a result, we've processed scores of applications directed to electronic commerce, business-related Internet applications, and other Internet-related technologies, as well. A sampling of recent electronic commerce patents includes such inventions as a method for securing payment over the Internet and a system for managing personal privacy in a computer network.

The PTO is not the only Patent Office affording increased protection for computer-related inventions. According to the European Patent Office, software-related inventions may be patentable if the application of the software has potential technical effect. Moreover, the Japanese Patent Office has established guidelines recognizing that innovative aspects of software-related inventions may be patentable.

The PTO and our Japanese colleagues are currently considering whether to perform a comparative study on software related business methods. Under such a program, our offices would perform a comparison of search methodologies and strategies employed by our examiners in examination of the subject matter. We plan to elaborate on proposals for this study at next month's Trilateral meeting. We feel this study would be of benefit in analyzing the proper protection for these applications at a global level.

Of course, the computer industry is not alone in its struggle with legal issues. Advances in biotechnology have sparked vigorous and emotional debate regarding the patenting of

certain types of biotech inventions, despite strong evidence of the overwhelming value to society of these inventions. At the heart of the controversy is the issue of patenting inventions concerning life forms.

Since the seminal decision of the United States Supreme Court in *Diamond v. Chakrabarty* in 1980, it is clear that patentable subject matter includes, and I quote, "anything under the sun that is made by the hand of man." As a result, concentrated, isolated, or purified products of nature may be patentable, including such products as gene sequences or antibodies.

In the wake of that decision, the PTO issued a notice stating that patent applications on higher life form would be accepted. Subsequently, we issued the first transgenic animal patent to the now-famous Harvard "onco mouse," a mouse genetically engineered to be more susceptible to human cancer. Patents have since issued on other animals such as rats, pigs, sheep, and cows.

Indeed, the PTO supports and promotes the protection of a wide array of biotech inventions that are made by the hand of man. We've processed thousands of applications directed to plants, animals, microorganisms, cell lines, proteins, viruses, DNA constructs, and plasmids. Moreover, subcellular units or parts of cells, such as genes and DNA constructs developed by genetic engineering, are patentable either as a composition of matter or an article of manufacture, so long as they are isolated or purified and have a specific substantial and credible utility. Also, novel processes for achieving a particular result, such as genetically engineering a cell, can be the basis for patent protection.

We have acknowledged concerns, especially from some academic and government research organizations, about patentability generally and the availability of research tools. We have recently revised our interim written description guidelines, our utility guidelines, and our teaching materials to reflect those concerns -- and they will be made public shortly.

The U.S. is pleased to see that our international counterparts are also beginning to follow our lead in liberalizing policies regarding the patenting of biotech inventions. Most notably, the European Union recently adopted a Directive on the legal protection of these inventions. It embraces a broad spectrum of biotech inventions. In addition, a recent survey of WTO Members has revealed that in nearly every TRIPs Member, the prevailing trend is in favor of allowing patents on a variety of life forms, including plants and animals.

As we move forward, we must continue to embrace new technologies and offer patent protection to a wide variety of inventions. The reality is that strong and effective protection will encourage research and development in the computer and biotech industries, just as they have always served other areas of technological development.

Let me also note that the impact of these issues on our workload also affects the judicial system. Percentage patterns of appeals have remained fairly constant over the years, so it would be reasonable to expect that, as our workload increases, so will yours.

We have adopted some strategies internally to manage this inventory, such as mandatory appeals conferences which have significantly reduced appeals to our Board of Appeals in areas such as biotechnology. We would be remiss, however, if we didn't alert you to the overall trends so that planning can begin accordingly. As the Boy Scouts say: "Be Prepared."

GLOBAL I.P. SYSTEM NOW

WIPO Copyright Treaties

The impact of technological development today on I.P. law is not only seen in the patent system. It's also having a very real impact in our copyright and trademark systems.

To digress for a moment, I can't help but notice how far the U.S. has come on copyright protection since the dawn of the last century. In 1900, the United States wasn't a party to the Berne Convention and was, quite honestly, as former Registrar of Copyrights Ralph Oman says, something of a rogue state in honoring the rights of copyright holders. In fact, the situation was so bad that Charles Dickens actually had to do book tours here in the U.S. in order to counteract the widespread piracy of his works. Today, the U.S. is a leader in copyright protection, and I think we've learned our lesson. As important as our copyright industries were in 1900, they are far more significant -- and far stronger -- today.

As we enter the 21st century, nothing is more important to protecting copyrighted works in the digital environment than the two WIPO Copyright Treaties negotiated in 1996. These are the WIPO Copyright Treaty (WCT) and the WIPO Performers and Phonograms Treaty (WPPT).

The two treaties make several small changes in the international copyright standards established by the Berne Convention (and TRIPs), including clarifying copyright protection of computer software and databases. They add three basic -- but very important norms -- to the international regime for copyright and related rights.

Time doesn't allow me to enumerate these three areas, but last month, I joined Commerce Secretary William Daley in depositing the U.S. instruments of ratification for these treaties with the Director General of WIPO. In addition to the U.S., six other states have ratified the WCT and the WPPT. Two others have ratified or acceded to the WCT.

The Treaties will only enter into force three months after 30 instruments of ratification have been deposited with WIPO. While I understand that the E.U. is drafting a Copyright Directive to direct its Member States as to how to revise their domestic laws to permit implementation of the Treaties, it is imperative that our European counterparts continue to move quickly to ratify the treaties themselves.

WIPO Domain Name Dispute Resolution

We're also hammering out new international legal standards to govern the intersection of the Internet and trademarks. Given the explosion of global electronic commerce, it's not surprising that the proper relationship between Internet domain names and trademarks has taken on such importance. Stockpiling domain names has become something of a lucrative business. I understand that "athens2004.com" is currently available over the Internet for \$50,000 -- a price that will certainly increase if Athens wins its bid to host the 2004 Olympics. And even the USPTO has been subjected to cybersquatting: a private company has registered the domain name "www.uspto.com" for trademark registration services.

As many of you know, a public corporation approved by the U.S. government, ICANN, is in the process of accrediting companies from around the world to register new domain names. This may mean that the current list of generic top level domains -- such as .com, .org, and .edu -- will expand. This issue remains very controversial, and it is of great concern to trademark owners. Trademark owners are already dealing with cybersquatters in the existing top level domains, so the prospect of a proliferation of new areas to patrol has them understandably concerned.

Earlier this year, WIPO released a report, entitled the "Management of Internet Names and Addresses," which makes recommendations to ICANN on how to handle trademark-based disputes such as cybersquatting. The PTO believes most of WIPO's proposals are reasonable and sensible. Accordingly, we're examining ICANN's recently issued response to the WIPO recommendations, the "Uniform Domain Name Dispute Resolution Policy."

Overall, the PTO will play an active role in monitoring and working with ICANN to ensure that changes in the Internet aren't to the detriment of trademark holders or consumers. The United States government is committed to self-governance of the Internet, but it has to be effective self-governance that protects consumers and promotes e-commerce.

TRIPs compliance

Of course, at the center of today's international I.P. system, and what ties all of them together, is the WTO's Agreement on Trade-Related Aspects of Intellectual Property (TRIPs). Adopted in 1994 at the Uruguay Round's multilateral trade negotiations, TRIPs weaves patent, trademark, and copyright norms -- and those of other forms of intellectual property -- into the international trading system.

The adoption of TRIPs came from the need to update existing provisions of international law, particularly the Paris Convention and the Berne Convention. The TRIPs Agreement established new international rules and standards in these areas in order to narrow the gaps in the way I.P. was protected.

Specifically in the area of patents, as Mike Kirk addressed yesterday, the TRIPs Agreement requires Members to provide patent protection for inventions in all fields of

technology. However, Members of the WTO have invoked a limited number of allowed exclusions for some categories of inventions. Specifically, TRIPs allows Members to exclude man-made plants and animals from patentable subject matter. These exclusions can be very detrimental and only increase the cost of worldwide protection. It is our hope that consultations with other national intellectual property offices will limit these exclusions.

Even with these exclusions, it is imperative that all WTO members implement TRIPs in a timely manner. The U.S. and other developed countries have had TRIPs obligations since 1996, but dozens of developing economies have until this coming January 1st to bring their domestic laws into compliance with TRIPs. Least developed countries have until 2006 to implement their TRIPs obligations.

There is some talk of opening up the TRIPs Agreement at the upcoming WTO Ministerial Meeting next month in Seattle. Let me be clear: We would not favor such a move. Given the fact that we have not yet passed the first deadline of January 1st, it would be premature at this point to re-open TRIPs. Let us get through the first phase before we tinker with the system.

International Enforcement

Since the judicial system often also concerns themselves with enforcement issues, let me also speak briefly about that topic, which is so critical to the health of I.P. systems. Without strong enforcement, the system would not work, and administering the reforms I've just discussed would be for naught.

Intellectual property is, as we know, exceptionally vulnerable to piracy. And while the PTO and other Federal agencies regularly consult on I.P.-related enforcement activities, a formal inter-agency coordination effort has recently been established by Congress. At the heart of this is a new National Intellectual Property Law Enforcement Coordination Council, which will coordinate domestic and international intellectual property law enforcement among Federal and foreign entities.

The Council, co-chaired by myself and the Assistant Attorney General - Criminal Division, also includes the State Department, USTR, Customs, and the Department of Commerce. The Council is also directed to consult with the Register of Copyrights. Its creation signals a strong commitment on behalf of the U.S. to improve the coordination of domestic and international I.P. law enforcement among Federal and foreign entities.

In addition to our new role on the Council, the PTO continues to engage in substantive discussions and training efforts on enforcement with intellectual property officials throughout the world. For example, two weeks ago, the PTO and WIPO's Asia Bureau co-sponsored a study program on the enforcement of intellectual property rights for customs officers from 12 Asian countries, including China, India, Indonesia and Thailand. Another enforcement program, again in cooperation with WIPO, will be held during the first two weeks of November and will include intellectual property officials from over 15 countries. Later this week, we also will be hosting the 14th annual Visiting

Scholars Program, which provides two weeks of intensive study to I.P. officials from more than a dozen countries.

FUTURE GLOBAL I.P. SYSTEM

Global Patent

As you can see, important progress is being made in closing the gaps and harmonizing the requirements of individual I.P. systems. However, despite these advances, we still have antiquated nationally and regionally based patent systems that are expensive to use and maintain.

Increasingly, the international patent system – or lack thereof – is too cumbersome and expensive. As one American commentator has observed, it takes more than a village to win an international patent today. It takes thousands and thousands of dollars and man hours.

Needless to say, our current structures don't meet the needs of today's inventors or businesses, regardless of their size. They are not the paradigms for tomorrow's patent system.

Despite these realities, we still have not evolved a consensus on what the global patent system should look like in its broadest terms. A variety of alternatives have been suggested. For example, Mr. Francois Churchod of WIPO has suggested the expansion of the Patent Cooperation Treaty. Former PTO Commissioners Mossinghoff and Lehman have outlined particulars of a World Patent System. And Ulrich Schatz of the European Patent Office has proposed that all countries adopt the European Patent Convention.

At the same time, the European Commission's White Paper entitled "Promoting Innovation through Patents," recommends the adoption of a new form of Community patent that would be cheaper than the current European patent and provide uniform protection throughout the E.U.

Let me say parenthetically that, in principle, I think this proposal is a laudable goal. However, the proposed Community patent would coexist, at least theoretically, with a modified European patent and with national patents -- three essentially "local" patent systems in what is touted as a single market.

I find this proposal very curious, especially because our Japanese colleagues and many here in the U.S. are calling for a global patent that would probably co-exist with a single national patent system. Some have suggested it might be more productive for our European colleagues to first fix the most serious problems with the European patent – primarily high costs – and prepare for a more global system.

Given the diversity of existing systems and these proposals, it's clear that achieving a consensus on the nature of a global patent will be challenging. This will be true not only from a technical standpoint, but also from a political one.

Each of these proposals raise tough questions ranging from sovereignty issues to the comparative confidence of different patent offices to the need to harmonize standards of patentability. Other difficulties include the historic and traditional first-to-invent system in the U.S., the lack of a meaningful "grace" period in much of the developed world, and some of the approaches in the European Biotechnology Directive.

With that said, I still believe a global patent system is attainable. The adoption and implementation of TRIPs provides us with a common starting point in the 134 countries that are now WTO members and the 30 economies seeking WTO membership. And I believe there are a number of market forces propelling us toward a global patent, albeit an undefined one.

The increasing pressure on industrial property offices to decrease costs is one such significant force spurring the convergence of patent systems. Our users want us to reduce the amounts we charge for our services. They also want us to reduce the costs they incur by having to use patent systems with differing requirements. As a result, we will be forced to adopt cost-saving measures, such as taking advantage of the search and examination results of other industrial property offices.

And on that point, let me note that the PTO reduced patent-related fees last year by approximately eight percent – the first major reduction of patent fees in living memory. This represented savings of approximately \$50,000,000 per year for inventors. Legislation is now pending which would reduce them yet again this year.

Another market force at work is the advances in information and communication technology. Our users want electronic systems for accessing patent information and filing patent applications. They also want systems that are compatible among industrial property offices. Thus, there is pressure on us to make our electronic systems converge.

To that end, the PTO is working with our Trilateral Partners to exploit the advances in information technology. For example, the three parties have signed a memorandum of understanding that focuses on mechanisms for the future electronic exchange of data and the extension of a trilateral network to WIPO. It also provides for a cooperative effort to implement a new concurrent search pilot and to revise the information dissemination policy. This would allow each office to make available to the public, on an Internet service, the data received from the other two offices.

Yet another market force that is promoting the evolution of a global patent is competition for technological advantages in the marketplace and for investment. As competition increases, many national governments will feel compelled to adopt the positive features of the domestic laws of others -- so-called "harmonization."

For example, the Japanese Patent Office has proposed a series of revisions to their patent regime because they need, in their words, "to build a system where the economic value of IP is raised to international standards." Specifically, the JPO proposal shortens the period

during which the examination of the application may be deferred, expands remedies for infringement, and expands the application of patent term restoration. At the same time, and for similar reasons, the Clinton-Gore Administration is working with Congress to enact legislation to provide for early publication of patent applications and expanded reexamination procedures. I'm pleased to report that these reforms were adopted overwhelmingly in August by the House of Representatives and are now awaiting action in our Senate.

Fundamentally, we must ensure that a global patent accurately reflects current marketplace realities and technological possibilities. To that end, we at the USPTO are currently developing our own proposal for a global patent.

PLT

Another significant advance will be the Patent Law Treaty, and we are pleased that the Diplomatic Conference on the PLT will be held in Geneva next May. The PLT's principal goal is to provide standardization of filing requirements and formal procedures among the member countries. This standardization would reduce the high costs of complying with various -- and sometimes inconsistent -- national and regional formal requirements. It would also reduce the risks of loss of potentially valuable intellectual property rights due to filing errors.

Essentially, the PLT would take the requirement standards from the Patent Cooperation Treaty and transport them into national patent systems. These would then be the maximum formal obligations a PLT country could impose on foreign patent applicants.

Overall, the PLT will allow applicants to develop worldwide protection with greater confidence and at reduced costs by providing more consistent treatment of applications and prosecution procedures throughout the various member national and regional offices.

PCT Simplification-Trilateral Meeting

In addition to the PLT, the United States has been an active proponent of efforts to revise Patent Cooperation Treaty regulations in order to streamline processing of international applications.

Specifically, the PTO and our Trilateral Partners have agreed to make PCT simplification a major priority, and we are working to that end in preparation for our Trilateral Meeting in Berlin the second week of November. In fact, the United States has developed a proposal to substantially modify the PCT, which we will present at next month's diplomatic conference. The changes would take place in two stages.

The first stage includes important PLT-based changes that would be targeted for implementation in the near term, hopefully soon after the implementation of the PLT. These include simplification of filing date requirements, residence and nationality requirements, and demand requirements. They also include elimination of signature requirements and acceptance of fees for postponing national processing.

The second stage of PCT reform includes a more comprehensive overhaul of the entire PCT system. It would incorporate the regionalization of current search and examination authorities; elimination of distinctions between national and international applications; and electronic publication of applications and transmission of search and examination results. It would also include relaxation of timing for designated country processing, as well as adoption of positive examination results in originating countries or certain authorities that have agreed to be bound by these results.

CONCLUSION

More than thirty years ago, economist John Kenneth Galbraith observed that "the imperatives of technology and organization, not the images of ideology, are what determine the shape of economic society." In all corners of the globe today, we are seeing just how true this statement was.

The explosion of Internet and digital technologies is transforming economies around the world. And patent systems are under increasing pressure to enhance efficiency, reduce costs, and simplify procedures.

In this dynamic environment, intellectual property is finally getting the visibility and respect it deserves. So, as we prepare to close out the 20th century, the pressure is on all of us to ensure that our I.P. systems are up to the challenges of the future. Will they be able to adapt quickly to the needs of emerging technologies? Will they be able to respond more effectively to the needs of current users? Will we be successful in encouraging the adoption of effective I.P. systems in countries currently lacking them? I believe the answer to all of these questions is yes.

Chief Justice Rehnquist said yesterday that it's dangerous to make predictions. I will briefly ignore his wise advice and say that we at the USPTO are bullish on the future.

Thank you very much.