PATENTS: IMPROVING QUALITY AND CURING DEFECTS

HEARING

BEFORE THE

SUBCOMMITTEE ON COURTS, THE INTERNET, AND INTELLECTUAL PROPERTY

OF THE

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THURSDAY, MAY 10, 2001

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COURTS, INTELLECTUAL
PROPERTY AND INFORMATION TECHNOLOGY,
COMMITTEE ON THE JUDICIARY,
Washington, DC.

The Subcommittee met, pursuant to notice, at 1:30 p.m., in Room 2141, Rayburn House Office Building, Hon. Howard Coble [Chairman of the Subcommittee] presiding.

Mr. COBLE. Good afternoon, ladies and gentlemen. The Subcommittee will come to order. Now, we will have three votes imminently. I am told there will be one 15-minute vote, followed by two successive 5-minute votes. Mr. Kirk, I am advised that you are on a short leash. You have a plane to catch? What time is that?

Mr. KIRK. Five o'clock, sir.

Mr. COBLE. Pardon?

Mr. KIRK. Five o'clock.

Mr. COBLE. Okay. We will get you out of here in plenty of time for that. I think, in the interest of time, I am going to go and give my opening statement now and we will wait for Mr. Berman to get here, and then we will just sort of play it by ear, depending upon when the bell rings.

I will try to avoid resorting to exaggeration about how valuable the patent system is for the American inventor, and its numerous benefits to the public.

The history of our patent system dates back to the founding of the Republic and is truly extraordinary. It includes some of the great American icons of history, Thomas Jefferson, the Wright brothers, Thomas Edison, George Washington Carver and the list goes on. I did not know this, Mr. Kirk. I suspect you did—that President Lincoln earned a patent. Did you know that? I figured you would know that. I did not know it.

The truth is that the strength of our patent system may only be appreciated by acknowledging all that we take for granted in the different aspects of our lives.

The United States Patent and Trademark Office has awarded more than 6 million patents at last count. The most everyday items of our lives, including appliances, automobiles, airplanes, aspirin—the list goes on and on, but I will stop at the A's—were possible because of patent protection. Our system is rooted in the constitutional balance providing inventors the incentives to take chances

and to make investments in order to make discoveries for the public's enjoyment.

Today, we will continue our work and dutifully scrutinize the patent system, in an effort to make it more effective for the 21st century inventor. Today, inventors create in new and exciting areas like energy conservation, the Internet and biotechnology. Last month, the Subcommittee reviewed issues relating to business method patents and the Internet. Rest assured that today is not the final patent hearing we will conduct.

As you all know, if you have heard me open my mouth this session, one of our highest priorities this session is going to be in improving the patent quality during the initial examination stage, by allowing the PTO to retain its user fees so that the agency will be able to hire and train and retain dedicated professionals. In addition, I hope that we can learn ways to improve the current system, which affords the public the opportunities to take a second look and raise new evidence to cure defective patents when they arise.

Today, we are fortunate to hear from an expert panel whose Members understand patents and technology. Their insights may instruct us as to which reforms, if any, must be brought to the attention of the Subcommittee as we continue to balance the right of inventors with those of the public for the 21st century.

I am now pleased to recognize my good friend, the distinguished gentlemen from California and Ranking Member, Mr. Berman. Howard, I just told these folks there will be a 15-minute vote and two successive 5-minute votes. But I thought we could go ahead and get started before the bell rings. So you are recognized.

[The prepared statement of Mr. Coble follows:]

PREPARED STATEMENT OF THE HONORABLE HOWARD COBLE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Good afternoon. The Subcommittee will come to order.

As I make my opening remarks—which I assure you will be brief—I will try to avoid resorting to exaggeration about how valuable the patent system is for the American inventor and its numerous benefits to the public. The history of our patent system dates back to the founding of the Republic and is truly extraordinary. It includes some of the great American icons of history—Thomas Jefferson, the Wright Brothers, Thomas Edison, George Washington Carver, and the list goes on. Many of you know that even President Abraham Lincoln earned a patent.

The truth is that the strength of our patent system may only be appreciated by acknowledging all that we take for granted in the different aspects of our lives. The U.S. Patent and Trademark Office has awarded more than six million patents at last count. The most everyday items of our life, including appliances, automobiles, airplanes, aspirin—folks, the list goes on and on, but I will stop in the A's—where possible because of patent protection. Our system is rooted in the Constitutional balance providing inventors the incentives to take chances and to make investments in order to make discoveries for the public's enjoyment.

Today we will continue our work and dutifully scrutinize the patent system, in an effort to make it more effective for the twenty-first century inventor. Today inventors create in new and exciting areas like energy conservation, the Internet and biotechnology.

Last month, the Subcommittee reviewed issues relating to business method patents and the Internet. Rest assured that today is not the final patent hearing we will hold.

As you all know, my highest priority as Chair of the Subcommittee is improving patent quality during the initial examination stage by allowing the PTO to keep its user fees, so that the agency can hire and train dedicated professionals. In addition, I hope that we can learn ways to improve the current system which affords the public the opportunities to take a second look and raise new evidence to cure defective patents when they arise.

Today, we are fortunate to hear from an expert panel whose members understand patents and technology. Their insights may instruct us as to which reforms, if any, must be brought to the attention of the Subcommittee as we continue to balance the rights of inventors with those of the public for the twenty-first century.

I now turn to the Ranking Member, Mr. Berman, for his opening statement.

Mr. BERMAN. Yes, I will finish my opening statement.

Mr. COBLE. Let's go ahead and have the opening statement now.

Mr. BERMAN. If everybody wants to leave, I will just give it and then we can go vote. Thank you, Mr. Chairman, I do have a statement that will take most of the allotted time. I thank you for calling this hearing to discuss ways to improve patent quality. I think it's vitally important to the health of our information economy that patents of only the highest quality are issued. We should seriously discuss and explore any suggestions for improving patent quality.

You have invited witnesses today who will present a number of suggestions for doing so, and I'm open to being persuaded as to the merits of their patent quality improvement ideas. I would like to just sketch out a number of quality improvement ideas that, at least at this time, I'm inclined to favor. I think a consensus of support has begun to emerge for the creation of a more robust post grant challenge procedure. Creation of such a challenge is one of the key features of two bills that Mr. Boucher and I introduced last month. I know, however, that widespread support for creation of a more robust post grant challenge is not matched by a consensus about the form such a procedure should take. Support appears split between creation of a full-blown opposition procedure and expansion of the current inter partes re-examination procedure, and creation of a totally new re-examination procedure.

Significant debate also continues regarding the exact features that any of these new post grant challenges should have. While the creation of a more robust post grant challenge will prove patent quality, I don't think that's enough. A patented invention must be sufficiently differentiated from prior inventions to meet the patentability requirements of novelty and nonobviousness. For the patent examiner to be able to effectively make such a determination, the examiner must be aware, to the extent possible, of all relevant prior art.

Significant questions have been raised about the quality of prior art currently available to patent examiners. These questions have been at least partially validated by numerous examples, particularly in the business method area, of patents appearing to have issued despite extensive prior art. I believe we should explore every avenue for improving the prior art available to examiners. H.R. 1332, which only applies to business method inventions, contains one mechanism for getting more prior art the attention of examiners.

It would allow any party to submit to the PTO prior art, including evidence of public use relevant to a pending application. 1332 would allow the director also to conduct a proceeding to determine whether the invention was known or used or was in public use. Though these provisions, which conceptually could be extended to any published patent applications through these provisions, the public is able to make a patent examiner aware of prior art that is relevant to a pending application.

Another mechanism not included in the Berman-Boucher bills for improving prior art would give examiners the ability to access and search all pending applications, whether published or unpublished, particularly in areas like business methods where there are now more pending applications and business method patents already granted. Access to pending applications may prove to be the most extensive source of prior art. There is no good reason to issue bad patents and rely on litigation to find prior art if that art is readily available prior to the grant.

Improvement of the electronic filing and searching abilities of the PTO may also increase the availability of prior art. One improvement that appears obvious to me would be fully electronic examination of patent applications. As I understand it, the PTO currently has the ability to accept electronic filings, but immediately converts applications to paper and examines them in the paper format. Only when the application has finally been approved is it converted back to electronic form. This seems wasteful and would also appear to forestall the ability of one examiner to easily search pending applications being considered by other examiners for prior art. Shouldn't all pending applications be electronically accessible to PTO examiners?

Another way to improve the available prior art may be to require the patent application—applicants—to disclose their prior art searches, as contemplated in the bills Mr. Boucher and I have introduced. Disclosure of such searches will give examiners a roadmap to follow in searching for prior art. Mr. Chairman, I have some other suggestions in here, but if I may get your permission, I will stop reading my statement and ask that it be included in the record, and thank you again for having what I think is a hearing on a very useful subject matter.

[The prepared statement of Mr. Berman follows:]

PREPARED STATEMENT OF THE HONORABLE HOWARD L. BERMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Chairman,

I thank you for calling this hearing to discuss ways to improve patent quality. As I indicated at our hearing on business method patents last month, I think it is vitally important to the health of our new information economy that patents of only the highest quality are issued. Because serious questions have arisen about the quality of many patents, particularly in the business method area, we should seriously discuss and explore any suggestions—legislative, regulatory, or otherwise—for improving patent quality.

I am glad that you have invited witnesses who will present a number of suggestions for improving patent quality. I look forward to their testimony, and am open to being persuaded by them about the merits of various patent quality improvement ideas. I want to use my time to briefly sketch out a number of quality improvement ideas that, at least at this time, I am inclined to favor.

POST-GRANT CHALLENGES

It seems that consensus has begun to emerge around at least one suggestion for improving patent quality. Namely, there appears to be widespread support for the creation of a more robust post-grant challenge procedure. At our business method patent hearing, both the Intellectual Property Owners Association and the American Intellectual Property Law Association expressed support for more robust post-grant challenges. The ABA, the PTO itself, and a wide variety of individual companies in the software, hardware, internet, financial services, and pharmaceutical industries have also indicated their support for more robust post-grant challenges.

I am pleased that such a consensus has begun to emerge. Creation of a more robust post-grant challenge was one of the key features of two bills, H.R. 1332 and

H.R. 1333, that Mr. Boucher and I introduced last month. It therefore appears that we were onto something.

However, I note that the consensus about the creation of a more robust post-grant challenge is not matched by consensus about the form such a procedure should take. Some have expressed support for creation of a European-style opposition procedure; some support an expansion of the current inter partes reexamination procedure; and still others would create a totally new breed of reexamination. Furthermore, significant and reasonable debate continues about the exact features that any of these new, post-grant challenges should have.

I wanted to briefly inform my colleagues about the choices that Mr. Boucher and I made in crafting the post-grant opposition procedure included in H.R. 1332 and 1333, and the reasons we made those choices. I hope my colleagues find this information useful in developing their own opinions about the appropriate form and structure of a post-grant challenge.

Breadth of Issues Addressed in Opposition

The Berman-Boucher bills allow a challenger to request an opposition to a patent on the basis of Section 101, 102, 103, or 112. In other words, a challenger would be able to raise essentially any issue as to the patentability of the claimed invention, including subject matter, utility, novelty, obviousness, or specificity of claims. The allowance of oppositions on any issue of patentability maximizes their usefulness. Because oppositions can only be filed within a certain timeframe, as I will describe below, the breadth of issues that can be raised will not contribute to abusive or serial filings of oppositions.

Time Limits for Initiating an Opposition

The Berman-Boucher bill require that an opposition be initiated within 9 months of the issues of the challenged patent. The opposition must be completed within 18 months of the request for an opposition, which results in a maximum of 27 months passing from the grant of the patent before all oppositions are completed.

The purpose of such a time limit is two-fold. First of all, the survival of a challenged patent and the passage of the deadline for filing further oppositions provides increased assurance about the validity of the patent, and thus creates a more stable marketplace for investors, competitors, and the inventor alike. Secondly, the establishment of a deadline prevents sequential filing of oppositions, and thus prevents abuse of the opposition process to harass patent holders.

Estoppel

The time limit for filing of an opposition is tied closely to the estoppel effect of oppositions. Within time limits, it may be very difficult to gather the evidence and resources to effectively advocate all possible bases for initiating an opposition. Thus, an opposition should have no estoppel effect with regards to issues not actually raised.

A further reason to minimalize the estoppel effect of an opposition is that broad estoppel will lead challengers to rely on litigation, rather than use oppositions. If a challenger only has one shot, they will invariably take that shot in a jury trial.

Mr. Boucher and I did believe, however, that initiators of oppositions should be estopped from raising the same issues in a subsequent civil action or reexamination. Conversely, we believed that no one should be able to initiate an opposition regarding an issue that was resolved in a prior civil action or reexamination to which they were a party. Estoppel should exist in these specific circumstances to prevent harassment of patentees. It also ensures that oppositions create efficiencies rather than a new opportunity to waste resources on reconsideration of adjudicated issues.

Appeal

Estoppel is, in turn, closely tied to the rights of appeal from opposition determinations. Some patent attorneys have stated that "it would be legal malpractice" to suggest a client utilize a post-grant challenge that both estops them from raising issues in a future proceeding and prohibits them from appealing an adverse decision. In fact, because only the patent owner can appeal an adverse ruling in an *inter partes* reexamination, it appears that *inter partes* reexamination will almost never be requested by a third party.

The Berman-Boucher bills allow any party to appeal an adverse determination in an opposition proceeding. The bills also allow the patent owner and third-party requestor of an opposition to be parties in appeals taken by one another. Such broad appeal rights are necessary to ensure that a post-grant challenge is actually utilized.

Administrative Opposition Judges

To preside over oppositions, the Berman-Boucher bills direct the PTO Director to establish an Administrative Opposition Panel "comprised of not less than 18 administrative opposition judges (AOJ), each of whom shall be an individual of competent legal knowledge and scientific ability." We believe there is a need to establish such a panel because the PTO is not currently structured to conduct quasi-judicial proceedings such as the full-blown oppositions contemplated by our bills. The Administrative Opposition Panel would fill this need by creating a corps of full-time professionals properly trained to conduct oppositions. If 18 AOJs prove insufficient to handle the number of oppositions, the PTO Director has the authority to create more AOJs.

Evidentiary Rules, Creation of Record, Format for Proceedings

The Berman-Boucher bills are designed to ensure that both parties to an opposition have every opportunity to make their case, and that the AOJ can gather any evidence she deems relevant. The bills require the challenger to file a detailed document outlining the basis for the challenge, allows the patentee to file a response to the initial filing, and then allows the challenger to file a response to the patentee's response.

The bills allow the AOJ to ask for "oral testimony (including exhibits and expert testimony) in direct or cross examination, or in any deposition, affidavit, or other documentary form." Thus, the bills give the AOJ the *discretion* to gather evidence beyond the paper filings of the challenger and patentee if the AOJ believes such evidence is relevant.

We believe that these procedures strike the right balance between allowing the parties to effectively make their cases, and not creating an unduly onerous or burdensome proceeding. Both parties are guaranteed an opportunity to make their case on paper. If they can convince the AOJ that further evidence is relevant, the AOJ has the discretion to order the gathering of such evidence. However, if the AOJ believes that such evidence is not relevant, for instance if it merely constituted a fishing exhibition by either party, then the AOJ could refuse to allow the gathering of such evidence.

PRE-GRANT IMPROVEMENTS TO PROCESS

While I believe the creation of a more robust post-grant challenge will improve patent quality, I believe patent quality can be further improved through other changes to the patent system.

Improvements in Prior Art Available to Examiners

A key issue in assuring patent quality is ensuring that a patented invention is sufficiently differentiated from prior inventions to be novel and non-obvious. For the patent examiner to be able to effectively make such a determination, the examiner must be aware, to the extent possible, of all relevant prior art.

Significant questions have arisen about the quality of prior art currently available to patent examiners. These questions have been at least partly validated by numerous examples, particularly in the business method area, of patents that appear to have been issued despite extensive and compelling prior art.

To quell such questions, I believe we should explore every avenue for improving the prior art available to examiners. I believe it is particularly important to improve the availability of non-patent prior art. There is no reason to rely on the issuance of a significant body of bad patents for the creation of prior art if prior art can be gleaned before the issuance of bad patents.

H.R. 1332, which only applies to business method inventions, contained one mechanism for getting more prior art to the attention of examiners of business method applications. H.R. 1332 would allow any party to submit to the PTO for the record prior art, including evidence of knowledge or use, or public use or sale, relevant to a pending application. H.R. 1332 would also allow any party to file a protest against a patent application. Lastly, H.R. 1332 would allow any party to petition the Director to conduct a proceeding to determine whether the invention was known or used, or was in public use, or on sale, under section 102 or is obvious under section 103.

Through these provisions, which conceptually could be extended to any published patent application, the public is able to make a patent examiner aware of prior art that is relevant to a pending application. Such prior art may also, of course, prove relevant to patent applications other than those for which it is submitted, and thus may have significant additional utility.

Examiner Access to Pending Applications

Another mechanism, not included in the Berman-Boucher bills, for improving prior art would be to give examiners the ability to access and search all pending patent applications, whether published or unpublished, and the prior art references contained within. Particularly in areas like business methods, where there are now more pending applications than business method patents ever granted, access to pending applications may prove to be the most extensive source of prior art. There is no good reason to issue bad patents and rely on litigation to find the prior art if it is readily available prior to grant.

Improvements in Electronic Examination and Searching

Access to pending applications and the ability to search them is tied closely to another issue—improvement of the electronic filing and searching abilities of the PTO. I understand that M•CAM, one of the witnesses here today, has some pointed things to say about the efficacy of the current PTO system for electronic prior art searches. I am interested to hear what they have to say, and what suggestions they have for improving the electronic searching capabilities of the PTO.

One improvement that appears obvious to me would be the fully electronic consideration of patent applications. As I understand it, the PTO currently has the ability to accept electronic filings, but immediately converts applications to paper and examines them in the paper format. Only when the application has finally been approved is it converted back to electronic form.

Such a procedure seems wasteful and unduly expensive, and also would appear to forestall the ability of one examiner to access or search for prior art pending applications being considered by other examiners. It would appear that the most effective way of facilitating such cross-referencing of pending applications by examiners would be for all pending applications to be electronically accessible in their most recent format.

Duty of Applicants to Disclose Searches

Another improvement to the available prior art is to require patent applicants to disclose their prior art searches, as contemplated by both Berman-Boucher bills. Disclosure of such searches will give examiners a roadmap to follow in searching for prior art, and may give them a variety of sources or prior art references that they otherwise would not have discovered.

FUNDING

Of course, any discussion about ways to improve the quality of patents is not complete if it doesn't also address funding concerns. To implement many of the suggestions I have listed, such as creation of opposition panels, fully electronic examination, and expanded electronic searching tools, the PTO will need money. Unfortunately, the current diversion of funds from the PTO, which totals over $206 million in the recent Bush budget for FY 2002, inhibits the PTO's ability to handle its current workload, much less initiate new programs and cope with new mandates. Thus, any initiative to improve patent quality must include adequate funding to support the initiative.

CONCLUSION

I look forward to hearing our witnesses' thoughts on patent quality, and am sure they will provide many interesting suggestions. As I have immersed myself more deeply in this issue, I have learned there are no end of suggestions for improving patent quality. However, there is, as yet, no consensus on exactly which approaches are achievable. Thus, I think it is very productive to have a hearing like this, where we ask experts to throw ideas up on the wall and we study them to see which will stick. In the spirit of this exercise, I have shared my thoughts on some meritorious ideas for improving patent quality, and I look forward to the reactions of both the witnesses and my colleagues.

Mr. COBLE. I thank you for your opening statement, Mr. Berman; and, folks, we will adjourn to the floor and we will return imminently. You all rest easy while we're gone.

[Recess.].

Mr. COBLE. Thank you all for bearing with us. It looks like our voting work for the day is over, so we will be able to proceed. The Subcommittee is pleased indeed to have as our first witness today Mr. Mike Kirk, no stranger to our Subcommittee. Mr. Kirk serves

as the Executive Director of the American Intellectual Property Law Association. Prior to AIPLA, he served as the Deputy Assistant Secretary of Commerce and Deputy Commissioner of Patents and Trademarks from May, 1994 through March, 1995.

In 1993, Mr. Kirk also served as the Acting Assistant Secretary of Commerce and Acting Commissioner of Patents and Trademarks. Mr. Kirk earned his bachelor of science degree in electrical engineering at the Citadel in Charleston in 1959, and his juris doctorate in 1965 from Georgetown University Law Center, and his masters of public administration in 1969 from Indiana University.

Our second witness is Mr. Jeffrey P. Kushan, a partner in the law firm of Powell, Goldstein, Frazer and Murphy. His clients include a variety of cutting-edge companies, including those in the biotechnology and computer fields. Prior to entering private practice, Mr. Kushan spent more than 10 years with the United States Patent and Trademark Office, first as an examiner specializing in biotechnology, and then proceeded on to a 2-year assignment with the Office of the United States Trade Representative. AT USTR, he represented the United States on intellectual property matters before the World Trade Organization and the World Intellectual Property Organization, known as WIPO to us.

He is a frequent speaker and lecturer on domestic and international intellectual property issues. Mr. Kushan earned his bachelor of science in chemistry at the College of William and Mary, a masters degree in chemistry from the University of North Carolina at Chapel Hill, and was graduated with honors from the George Washington University Law Center.

Mr. Goodlatte, our friend from the valley in Virginia, has requested to introduce our third panelist.

Mr. GOODLATTE. Thank you, Mr. Chairman. It's a real pleasure for me to introduce my friend, David Martin, who is not my constituent, but is close. He is in Charlottesville, and since my daughter will, in the fall, be attending his alma mater, the University of Virginia, I feel an even closer tie to Charlottesville, and some of my money is going to be heading over there soon.

He is an expert in domestic and international technology transfer. I have had the opportunity to visit his company, M•CAM, where he serves as the CEO—he was also the founder—in Charlottesville; it developed and commercialized the world's first intellectual property characterization and financial technology—I don't think that's phrased exactly right—all right; first intellectual property characterization and monetization technology.

Dr. Martin earned his bachelor of arts from Goshen College, his master of science from Ball State University, and his Ph.D. from the University of Virginia. He also serves as an assistant professor at the University of Virginia School of Medicine, where he founded and was executive director of the school's first for-profit R&D Corporation. He also serves on numerous corporate and civic boards in the U.S. and Asia, and is a frequent speaker and the author of numerous publications, ranging from intellectual property to international finance to history. He is our renaissance man today, Mr. Chairman, I thank you for the opportunity.

Mr. COBLE. I thank you, Mr. Goodlatte.

Mr. Kushan, are you a native Carolinian?

Mr. KUSHAN. Only for a few years. I'm actually much more of a mongrel, from all over the U.S. I have had too many places I have lived in my life. My 2 years in North Carolina were quite enjoyable.

Mr. COBLE. We have a very obvious Carolina flavor; Mr. Kirk, from the land of the palmetto, and his colleague here. It is good to have you, Mr. Kushan.

Our final witness is Mr. James F. Cottone, Immediate Past President of the National Intellectual Property Researchers Association, which is a group representing the independent research specialist and patent agents. Mr. Cottone was graduated from the Penn State University with the bachelor's degree in electrical engineering. His 25-year career in electrical engineering has included diverse positions, such as first serving as a United States Naval submarine electronics technician, to research and engineering at institutions such as John Hopkins and then in the patent field. He was formerly with the law firm of Bacon and Thomas.

Mr. Cottone is a registered patent agent and has lectured and instructed on the field of electrical engineering.

You know, Mr. Berman and I have said this several times. We have been richly blessed with the caliber and quality of panelists that appear before our Subcommittee, and we are appreciative to you for that.

Mr. Kirk, I will start with you. We've got to get you on that plane before the wheels go up. Gentlemen, as you all perhaps know, we do try to abide by the 5-minute rule. When you see the red light illuminate in your eye, that is your ominous warning to try to wind her down.

Mr. Kirk?

STATEMENT OF MICHAEL K. KIRK, EXECUTIVE DIRECTOR, AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION

Mr. KIRK. Thank you, Mr. Chairman. I appreciate the opportunity to appear here today before you and the other Members of the Subcommittee to offer AIPLA's suggestions for improving patent quality through post-grant procedures. We commend you for taking a fresh look at how patent procedures can be improved to strengthen the quality of U.S. patents.

The provisions for inter partes re-examination included in the American Inventors Protection Act took a couple of devastating hits on the way to enactment. First, an estoppel was added that prevented any party from contesting any fact determined by the USPTO during a re-examination. Compounding this limitation, the right of a third party requester to appeal or participate in an appeal to the CAFC was eliminated.

Mr. COBLE. Mr. Kirk, if you would suspend just a minute. In view of the fact that we only have four witnesses and Howard and I will not be interrupted again, we will not severely enforce the 5-minute rule. So, when you see the red light, nobody will buggy whip you.

Mr. KIRK. To date, there have been no inter partes re-examinations. It is our belief few will dare use this procedure on an important patent. We strongly urge that the inter partes re-examination procedures be revised to correct these two deficiencies. Their con-

tinued presence dampens the enthusiasm of the public to come forward and present information that the procedure was designed to attract.

Although re-examination procedures limit the evidence for challenge to patents and printed publications, examiners routinely consider other grounds when they have the information to do so. They consider tangible evidence of knowledge or use by others, prior public use and sale, as well as whether the applicant filed an enabling disclosure. The time has come to allow patents to be tested on these broader grounds in a post grant proceeding in the office. H.R. 1333 would do this.

Any person within 9-months of patent grant could request an opposition on the basis of sections 101, 102, 103 or 112 of title 35. The opposition would be held before an administrative opposition judge who would consider any evidence considered relevant, including oral testimony by experts. Claims could not be enlarged, and either the patent owner or the third party could appeal to the CAFC or the U.S. District Court for the District of Columbia. Final decisions would create estoppels as to issues which were raised.

AIPLA supports the provisions of H.R. 1333 that permit a third party, within a 9-month period from patent grant, to request an opposition on the basis of sections 102, 103, and paragraphs one and two of section 112. We do not, however, believe that the patent eligibility or usefulness requirements set out in section 101 of title 35 form an appropriate ground for opposition. Other provisions in H.R. 1333 that we find troubling are outlined in my written statement.

We would also strongly urge that the In re Portollo Packaging case be overturned. When it is clear that a proper rejection can be based on some reference, it makes no sense to force the issue into expensive Federal court litigation to resolve the issue simply because it was already allegedly considered by the USPTO.

As important and needed as strengthening the post grant procedures is, improving them has little benefit for inventors whose patents do not issue until after the commercial life of their inventions. The President's budget proposes to withhold $207 million from the office in 2002. Let us consider the impact. According to the USPTO's corporate plan, quote, "The processing time frames for granting patents and registering trademarks, called pendency, will increase . . . and pending application backlogs will continue to grow at this requested funding level," endquote.

A chart following this quoted language reveals that patent pendency will climb to 38.6 months by the year 2006, but there's an important footnote that states, quote, ". . . the processing timeframes for fiscal year 2006 assume that the USPTO will have full access to its fees beginning in fiscal year 2003 in order to . . . achieve these time frames." Bad assumption.

The President's budget projects that, on average, in excess of $183 million in fee revenue will be diverted in each of the years 2003 through 2006. If the USPTO forecasts a patent pendency of 38.6 months if it receives all of its fee revenue during this period, what will the pendency really be after an additional $733 million is diverted? This will essentially remove the patent system from those fields where new products have a commercial life of less than

some number that's much bigger than 38.6 months, perhaps 60 months or more.

But there is more bad news. Two days ago, I had a conversation with a senior official at the European Patent Office. He stated that because the workload there at the EPO has reached a critical stage, the EPO is planning to take steps to reduce its workload under the Patent Cooperation Treaty. The principal impact of such a reduction will be to increase the workload on the USPTO.

For several years, the EPO has had an agreement with WIPO to conduct international searches and international preliminary examinations for the nationals of any member country of the PCT. Approximately 20,000 U.S. applicants take advantage of this annually by asking the EPO to conduct such searches, and 80 percent of this number further ask the EPO to conduct preliminary examinations. The decision by the EPO to stop performing such searches and preliminary examinations means that these 20,000 applicants will be forced to come to the USPTO.

The situation is further compounded because, under the PCT, the USPTO is obligated to perform the international search in 16 months. Already applicants in some art areas, Tech Centers 2100 and 2600, are beginning to use the PCT simply to take advantage of a more timely search. What will happen when 20,000 new PCT applications are dumped on the office? We could well have a two-tier patent system, where American inventors interested only in a U.S. patent are moved to the back of the line.

Lest anyone get the impression that this is directed only at the current President's budget or the current leadership of Congress, rest assured it is not. This chronic underfunding of the USPTO has been the modus operandi of the executive branch and the Congress for the last 10 years, as we know. The crisis has been building for years, notwithstanding the pleas of the Nation's inventors and businesses. Unless the funding crisis of the USPTO is dealt with, the subject of this hearing will become an irrelevant sideshow.

Thank you.

[The prepared statement of Mr. Kirk follows:]

PREPARED STATEMENT OF MICHAEL K. KIRK, EXECUTIVE DIRECTOR, AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION

Mr. Chairman:

I appreciate the opportunity to appear before the Subcommittee today on behalf of the American Intellectual Property Law Association (AIPLA) to offer our suggestions for improving patent quality through post-grant procedures in the United States Patent and Trademark Office. We understand that the purpose of this oversight hearing is to specifically examine the current reexamination system, assess its effectiveness, and determine whether legislation is needed to strengthen the system. Our comments will focus on steps that we believe should be taken to strengthen the existing reexamination system and, drawing from H.R. 1333, to suggest the adoption of a post-grant opposition procedure.

The AIPLA is a national bar association whose more than 12,000 members are primarily lawyers in private and corporate practice, in government service, and in the academic community. The AIPLA represents a wide and diverse spectrum of individuals, companies and institutions involved directly or indirectly in the practice of patent, trademark, copyright, and unfair competition law, as well as other fields of law affecting intellectual property. Our members represent both owners and users of intellectual property. They share the common desire to see the procedures of the USPTO strengthened to ensure that only valid patents are promptly issued and to have administrative mechanisms available in the USPTO to allow the public to ensure that only such patents are permitted to stand.

INTRODUCTION

The AIPLA commends you Mr. Chairman for taking a fresh look at how patent procedures can be improved to strengthen the quality of U.S. patents and enhance the confidence of inventors, businesses, and the investment community in the patent system. We also commend the Ranking Member of the Subcommittee, Mr. Berman, for his continuing interest as well, and in particular for the introduction of H.R. 1333.

Before turning to the specific comments that AIPLA wishes to make regarding the needed improvements to the existing reexamination procedures and/or possibly augmenting these systems with an opposition system, we feel compelled to comment on what we perceive to be a much more urgent and compelling problem: the fiscal crisis confronting the USPTO. As important and needed as strengthening the post-grant procedures of the Office is, the improvement of these procedures in this time of crisis is, to use a hackneyed cliche, truly like rearranging the deck chairs on the Titantic. The imperative of improving the procedures for strengthening U.S. patents recedes drastically when we are facing a situation where inventions in an increasing number of areas may well not issue until after their commercial life has expired.

The budget sent by the President to the Congress last month proposes to give the USPTO $1.139 billion in FY 2002. The President's budget contains an estimate that the Office will receive $1.346 billion in fee revenues in FY 2002. This means that if the President's budget estimates were accurate, the USPTO would have some $207 million in fee revenues withheld—diverted—pick your verb—in FY 2002. As outrageous as this is, it does not begin to tell the entire story.

We need to face what is happening to the USPTO—the rapidly deteriorating engine of high tech products and services for this nation. According to the Fiscal Year 2002 Corporate Plan of the Department of Commerce for the United States Patent and Trademark Office, published in April, 2001, "The processing timeframes for granting patents and registering trademarks, called pendency, will increase—and pending application backlogs will continue to grow at this [the President's] requested funding level." Following this statement, the Corporate Plan presents a chart that reveals that patent pendency to issue/abandonment will climb to 38.6 months by FY 2006. A note beneath this chart qualifies this projected pendency increase: "It is important to note that the processing timeframes for fiscal year 2006 *assume that the USPTO will have full access to its fees beginning in fiscal year 2003* in order to make critical investments in personnel and automation needed to achieve these timeframes." (emphasis added).

This gloomy picture becomes much worse when we contrast the out-year funding plans for the USPTO with the pollyannaish assumption in the USPTO's Corporate Plan noted above. Contrary to the assumption in the Corporate Plan, the President's budget projects that an average in excess of $183 million in fee revenue will be withheld from the Office in *each* of the years FY 2003 through FY 2006. If the USPTO forecasts a patent pendency of three years and two and one-half months if it receives *all* of its fee revenue, what can we imagine might be the pendency if an additional $733 million is diverted in fiscal years 2003 through 2006? This essentially abolishes the patent system in any field where new products have a cycle life of less five years, and perhaps even longer. It would certainly be a proud moment for the United States if it were the first nation to be hauled before the WTO for failing to live up to its TRIPs' obligation in Article 62.2:

> "Where the acquisition of an intellectual property right is subject to the right being granted or registered, Members shall ensure that the procedures for grant or registration, subject to compliance with the substantive conditions for acquisition of the right, permit the granting or registration of the right within a reasonable period of time so as to avoid unwarranted curtailment of the period of protection."

Would granting patents for inventions in several important fields such as biotechnology and computers years after their useful commercial life has ended be an "unwarranted curtailment of the period of protection"?

Lest anyone get the impression that this is directed only at the current President's budget, or the current leadership of the Congress, rest assured it is not. This chronic under-funding of the USPTO has been the modus operandi of the Executive Branch and the Congress for the last ten years. This crisis has been building for years notwithstanding the pleas of the nation's inventors and businesses. In fact, the situation is worse because of the failure of those putting together the budgets, whether in the Executive or Legislative Branches, to base their budgets on realistic estimates. It is already known, for example, that the fee collections for both this fiscal year and next will fall short of stated projections by more than $130 million,

only exacerbating the pressures to further reduce the appropriation to the USPTO. Unless the funding crisis facing the USPTO is dealt with, the subject of this hearing will become an irrelevant sideshow. I turn now to the topic of this hearing.

REEXAMINATION

The ex parte reexamination system contained in sections 301–307 of title 35 was developed in the late 1970's and was enacted into law in December of 1980, becoming effective on July 1, 1981. Its purpose was to provide an avenue for patent owners and third parties to bring to the attention of the USPTO pertinent patents and printed materials which an examiner might not have uncovered during the course of patent examination. It was believed that reexamination would provide an efficient, effective, and relatively inexpensive technique for the Office to consider whether an issued patent was valid, whether its claims should be narrowed, or whether it should not have been issued at all. It was perceived that the reexamination process would thus benefit patent owners, the public, and lessen the burdens on the federal court system.

During the debate on the establishment of the patent reexamination system in the United States, attention was focused on achieving the right balance between permitting third parties to come forward with evidence and participate in proceedings and providing patent owners with a means to evaluate the validity of issued patents quickly and inexpensively without undue harassment. With the benefit of nearly 15 years experience with reexamination, the AIPLA concluded that the procedure was not performing as effectively as was envisioned and that a better balance needed to be struck between third-party participation in the reexamination process and the interests of patentees in ensuring that the reexamination process remained reasonably prompt and inexpensive with no undue harassment.

As early as 1991, the AIPLA adopted a resolution favoring the right of a third-party requester to participate in a reexamination proceeding. We supported the opportunity for a third party to file comments on a patentee's response to an examiner's first action on the merits in a reexamination proceeding and to comment on an examiner's decision confirming the patentability of any claims. This resolution also favored the right of a third party requestor to appeal a final decision of an examiner confirming the patentability of any claims to the Board of Patent Appeals and Interferences and to the U.S. Court of Appeals for the Federal Circuit (CAFC) and to participate in any appeal of rejected claims by the patentee to those two tribunals. To guard against harassment, we recommended that a third party's decision to appeal or participate in such an appeal should create an estoppel that would prevent the third party from asserting the invalidity of any claim in the patent in any forum on grounds which were raised or could have been raised.

AIPLA supported a succession of bills providing for such an inter partes reexamination system, beginning in 1994 with S. 2341 in the 103rd Congress (which actually passed the Senate on October 4, 1994). We subsequently testified in support of a similar bill, H.R. 1732, in the 104th Congress in 1995, which became TITLE V of H.R. 3460, the Moorhead-Schroeder Patent Reform Act. Early in the 105th Congress, Mr. Chairman, you introduced the successor legislation, H.R. 400, the 21st Century Patent System Improvement Act, TITLE V of which continued the inter partes reexamination amendment to the existing reexamination procedures. We all remember the unprecedented—for a patent bill—two days of debate on the House floor on April 17 and 23, 1997, that finally moved the measure to the Senate, but, unfortunately, not before a last minute amendment by Ms. Kaptur—a "submarine" amendment—deleted TITLE V.

Undeterred, you again introduced an amendment to the patent law to provide for inter partes reexamination as TITLE V of H.R. 1907, the American Inventors Protection Act of 1999 in the 106th Congress. As introduced, TITLE V was generally consistent with the resolution that AIPLA had adopted back in 1991. While TITLE V was not knocked completely from H.R. 1907 on its journey through the House, it took a couple devastating hits. First, an estoppel was added that prevented any person requesting an inter partes reexamination from contesting any fact determined by the USPTO during the reexamination (unless that finding of fact was later proved erroneous on the basis of previously unavailable information). Compounding this limitation, the right of a third-party requestor to appeal an adverse decision or to participate in an appeal by the patentee to the CAFC was eliminated. This also made the other estoppels contained in the TITLE somewhat unfair because they kicked-in even though the third-party requestor could not appeal to or participate in an appeal to the CAFC.

Since the effective date provisions of the inter partes reexamination procedure provide that it only applies to patents issued on original applications filed on or

after the date of enactment of the AIPA on November 29, 1999, there has been little if any opportunity for anyone to use the inter partes reexamination procedure. It is our strong belief, however, that no one would dare use the procedure on an important patent because of the restrictions added to the TITLE mentioned above. Consequently, the public remains without an effective means to efficiently, inexpensively, and fairly challenge a patent.

OPPOSITION

While the legislation discussed above was wending its way through Congress, AIPLA continued to study the needs of the patent system, and particularly whether an even better solution could be devised to allow the public to challenge overly broad patent claims. When the original reexamination provisions were being crafted back in the late seventies, the concern most frequently expressed was that grounds for refusing patents other than patents and printed publications were not readily available to examiners, and that therefore reexamination should be limited to what examiners do the vast majority of the time—consider patentability only on the basis of patents and printed publications.

However, although both ex parte and inter partes reexamination limit the basis on which a third party can challenge a patent to either patents or printed publications, examiners routinely consider other grounds when they have the information to do so. Thus, examiners do consider tangible evidence of knowledge or use by others before the invention by the applicant as set forth in 35 U.S.C. 102(a). They also consider prior public use and sale as set forth in 35 U.S.C. 102(b) when information documenting such acts comes to their attention. Similarly, examiners routinely consider whether an application contains an enabling disclosure—a description in such full, clear, concise and exact terms as to enable a person skilled in that technology to make and use the invention—as required by the first paragraph of 35 U.S.C. 112.

In light of the growing complexity of new technologies and also looking at what other nations were doing, AIPLA established a Special Committee on Oppositions in 1994 to study the question of whether, on the basis of existing systems, it was time for the United States to adopt an opposition system. The Special Committee concluded, and the AIPLA Board agreed, that the time had come for the United States to take such a step. Under the approach recommended by the Special Committee and approved by the AIPLA Board in 1995, third parties would be permitted to challenge patents for the first 12 months after grant on the basis of any matters under section 102 and 103, as well as paragraphs 1 and 2 of section 112 of title 35. Any public use issues would be resolved based upon affidavit testimony subject to cross examination by means of deposition. Broadening amendments would be permitted during the opposition and it would be completely inter partes in nature, but subject to the control of an individual specially trained to tightly control legal proceedings and rule on the admissibility of evidence.

A comment is in order regarding the difference between an "opposition" system and an inter partes reexamination system. Most observers would say that an opposition system tends to be a more robust, adversarial proceeding for a limited period of time following patent grant. On the other hand, reexaminations, at least as they have existed in the United States, tend to be somewhat limited as to the basis on which they can be initiated and somewhat less adversarial, but they can be initiated at any time during the life of a patent. There is no bright line between the two procedures and they can rationally co-exist in the same patent granting system.

Although AIPLA had approved the creation of such an opposition system in the United States, we did not advocate its incorporation into our law during the consideration of the bills that resulted in the AIPA. It was our belief that the time had not come for the adoption of an opposition system in this country. We believe that the time has now arrived.

H.R. 1333

H.R. 1333 would establish a robust inter partes opposition procedure. It would permit any person, within nine months of the date of the grant of a patent, to file a request for an opposition to the patent on the basis of sections 101, 102, 103, or 112 of title 35. The Director would order an opposition proceeding within 60 days of receiving a valid request, giving the patent owner at least 60 days to file a response to the request. If the patent owner files a response, a copy must be served on the third party requester who may in turn file a reply to the response of the patent owner not later than two months after service of the copy.

Each opposition would be held before one of at least 18 administrative opposition judges serving on an Administrative Opposition Panel which the Director must establish. The administrative opposition judge could consider any evidence the judge

considered relevant, including oral testimony by experts, in direct or cross examination, exhibits, affidavits, and depositions whether voluntary or compelled. The proceeding would be governed by the Federal Rules of Evidence.

No proposed new or amended claim could enlarge the scope of the patent during an opposition proceeding. Either the patent owner or the third party could appeal the administrative opposition judge's decision (which is to be rendered not later than 18 months from the request) to the Board of Patent Appeals and Interferences and either could seek court review by the CAFC or U.S. District Court for the District of Columbia. Either the patent owner or the third party could participate in an appeal taken by the other. Final decisions in civil actions, inter partes reexamination proceedings, and oppositions would create estoppels as to issues which were raised.

There are a number of aspects to H.R. 1333 which we favor. We support the bill's provisions allowing a third party, within nine months of patent grant, to request an opposition on the basis of sections 102, 103, and paragraphs 1 & 2 of 112 of title 35. We believe that examiners can properly evaluate such grounds of patentability and that it would permit the public to come forward with an appropriately broader range of prior art than is currently possible in the reexamination procedure.

On the other hand, however, we do not believe that either the "patent-eligibility" or the "usefulness" requirements set out in section 101 of title 35 form an appropriate ground for opposition. There are very practical reasons for this. First, the requirement in section 101 that an invention be "useful" is fully captured by the "enablement" requirement of section 112, first paragraph. Thus, where "utility" for an invention is an issue, it should be addressed in the more clear and comprehensive basis provided though section 112. Second, the requirement for "patent eligibility" in section 101 has been construed by the courts—including the U.S. Supreme Court—to encompass "everything under the sun made by man." Thus, it would appear undesirable, if not superfluous, to subject patent owners to opposition proceedings to decide this issue. Where this issue might be manifest, it would presumably be well suited for district court litigation where the parties have access to the full panoply of discovery under the guidance of a federal district court judge.

There are a number of other provisions in H.R. 1333 that we find troubling. We do not favor the special presumption of obviousness in section 3 of H.R. 1333 because we believe it unnecessary, confusing, and likely to lead to unnecessary litigation. For example, what is a "significant difference" between the teachings of the prior art and the claimed invention? When is a claimed invention "appropriate" for use with computer technology?

Similarly, we believe that the requirement to "disclose in the application the extent to which the applicant searched for prior art" would unnecessarily lengthen applications without serving a useful purpose and would add a new issue to litigate. Rule 56 already imposes a duty on all inventors named in the application, all attorneys or agents who prepared or prosecuted the application, and every other person associated with the inventor or assignee who is substantively involved in the preparation of the application to disclose all information known to be material to patentability. Failure to comply with this duty renders any resulting patent unenforceable. A new requirement to disclose the extent to which the applicant searched for prior art will do nothing to make more prior art available to the USPTO.

There are a few other details such as the statutory requirement to have 18 administrative opposition judges, the absence of any standard for ordering an opposition to be held, the level of the fees for different types of oppositions, etc. for which we have some suggestions that we would be pleased to share with the Subcommittee. Our comments should not, however, be construed to indicate opposition to the general concept of the opposition procedure set forth in H.R. 1333. Quite to the contrary, we view the bill as a very constructive step toward achieving our mutual goal of strengthening the patent system by providing a means to fairly and inexpensively weed out improvidently granted patents.

A few areas that are not addressed in H.R. 1333 deserve mention. I noted that in the late maneuvering on the inter partes reexamination provisions in the AIPA, the right of a third party requestor to appeal an adverse decision or to participate in an appeal by the patentee to the CAFC was stricken. In order to make the inter partes reexamination sufficiently attractive to the public to use to test questionable patents, the third party requester must have the right to appeal to the CAFC. I also noted that a "fact estoppel" provision was added to the inter partes reexamination procedure in the late maneuvering on the AIPA. Given that a third party requester has no means to obtain discovery to demonstrate that an alleged "fact" is not truly a fact, we would strongly urge that it be deleted from the inter partes reexamination provisions. Its continued presence will cast a dampening effect over the enthusiasm of members of the public to come forward and present the desired evidence that the

claims of a patent are too broad or otherwise improvidently allowed. The addition of an opposition procedure available for nine months following the grant of a patent will have very salutary effects, but it must be kept in mind that in many situations a third party will not know it has a commercial interest that might conflict with a patent until several years after the patent is granted. The elimination of this unduly harsh limitation will restore an element of balance and fairness to the inter partes reexamination proceedings and promote its use in appropriate cases.

Finally, we would strongly urge that language be added to overrule In re Portola Packaging, Inc. 110 F.3d 786 (Fed. Cir. 1997). This case held that a rejection made during reexamination does not raise a substantial new question of patentability if it is only supported by prior art previously considered by the Office. When it is clear that a proper rejection can be made on some portion of a patent or publication, it makes no sense to force the issue into expensive federal court litigation to resolve the issue.

That concludes my prepared testimony, Mr. Chairman. I would be happy to answer any questions which you or other members of the Subcommittee might have and, of course, we pledge to work with you and the Subcommittee and with other users of the patent system to see that the opportunity for the public to fully and fairly participate in the post grant scrutiny of patents is realized.

Mr. COBLE. Mr. Kirk, we will not shoot the messenger today, but the message is distressing and indicates the significance of what I said at the outset, and we will talk about that and more subsequently.

Mr. Kushan, as I say, the 5-minute rule will not be rigidly enforced, but if you can, wrap it up within or about five, we would appreciate it.

STATEMENT OF JEFFREY P. KUSHAN, ESQ., POWELL, GOLDSTEIN, FRAZER AND MURPHY, LLP

Mr. KUSHAN. Thank you, Mr. Chairman, and thank you for providing me with the opportunity to give you some thoughts on my perspectives.

Mr. COBLE. Mr. Kushan, you need to pull that mike a little closer to you. Thank you, sir.

Mr. KUSHAN. Thank you, Mr. Chairman. I am testifying today in my personal capacity and offering my views from the perspective of a former official of the Patent and Trademark Office and an active patent practitioner. I have shared my testimony with a number of my clients, including Genentech and IBM, and have received support from them for many of the points I am going to be making today. I would emphasize, however, that the views I express are my own.

Before entering private practice, I served in the PTO as a biotech patent examiner and later as an attorney adviser in the PTO Office of Legislative and International Affairs; my neighbor here, Mr. Kirk, was my former supervisor. I was able to work with something called the Advisory Commission on Patent Law Reform, which was chartered during the first Bush administration in 1991.

I also worked on a variety of patent and trade legislative initiatives during the 1990's, and led efforts to revise examination standards and practices in the biotechnology and software-related arts during the mid-1990's. Having lived through a number of these exercises, I have accumulated some perspectives that may have value to the Committee in their deliberations on what the PTO can do, and some practical limits on what the PTO can do, to improve patent quality.

The two issues that you presented for discussion today are patent quality and re-examination reform. On the first issue, I believe the PTO has the sufficient authority to do the things that need to be done under the law. The latter issue, however, I believe warrants legislation. Patent quality is a topic that is often framed in the general, rather than specific terms. However, in most instances, it is an individual patent that has been improperly granted that creates an impression that unfairly prejudices a larger class of patents.

I have found that if a properly trained patent examiner has all the relevant prior art in front of him or her, and is aware of all the issues that would affect patentability, that examiner is going to make the right decision in most instances. Clearly, having properly trained examiners that can quickly identify and evaluate prior art is relevant to the invention, is crucial, and this is why some of the concerns Mr. Kirk has expressed and you have taken the lead on in expressing, over funding, are so important.

In addition to this, the PTO examination process must produce a complete and accurate record of why the Patent Office granted the patent. This is essential, especially in light of recent decisions like Festo, where the courts are looking very carefully as to the reasons why the PTO granted the patent. In the area of business patents, in particular, which have been the focus of a lot of concern of many people, the PTO could explore some additional procedural changes to its examination practices that might produce a patent that has a better record and better-tuned claims.

For example, examiners could be encouraged to note in the record and in their communications to the applicant their understanding of the utility of the invention and the attributes of the invention that deliver that utility. This is an issue which is evolving under section 112, under the written description requirement in our courts, in a number of decisions, and capturing a better comprehension of the invention through a communication like that would help people understand precisely what examiner was aware of when they examined the application.

In addition, there are some presumptions and procedures that can be used by the examiners in making rejections under 103, that would help better frame the invention in terms of its key issues that would affect patentability. There are number of additional thoughts I have incorporated into my written testimony, and I will move away from those and encourage you to look at those for further ideas.

The second major step—and this is something which I think is critical for the Congress to take—is to look at and reform the inter partes re-examination procedure that was just enacted as part of the American Inventors Protection Act. The original ex parte re-examination procedure, created by Congress in 1980, was efficient, but fairly one-sided, and not very attractive to third parties who wanted to vigorously contest patent validity. In 1992, the advisory commission made an extensive study of the re-examination and came up with a number of recommendations to enhance the system to achieve this goal of greater third-party ability to challenge patents through it.

A number these recommendations were actually incorporated into the inter partes procedure, and we were grateful to see that happen; but, unfortunately, as Mr. Kirk has just noted, there were a number of significant impediments placed in the re-examination procedures that make it, as a practical matter, unusable and unworkable. There are Draconian sanctions placed on third parties that will want to use the third-party procedure to challenge invalid patents. Third parties are not allowed to appeal their decisions, which are adverse to their interest, to the courts, and the law did not expand the grounds that could be raised in a re-examination procedure.

All those issues were counter to the recommendations of the advisory commission, and, in our view, have substantially reduced the value, if not eliminated the value, of this new procedure. There are a number of other issues that could explored and should be incorporated into a viable third-party re-examination procedure. I'm going to highlight a few of those.

First, a couple of cautionary points. The challenges that might be possible under the procedure should be limited to those that are going to occur only after the patent has been granted. We do not think it is viable to have a pre-grant opposition procedure because of the hazards that that poses for the interests of patent applicants. You cannot limit this procedure to a specific technological area, whether driven by concerns under the obligations of the TRIPS agreement, or because of the value that a better system would have for all patent applicants.

The procedure should allow challenges to be based under all forms of prior art. In other words, not just patents in printed publications, but public use and sale, issues of on sale, prior sale of the invention. I think it's important in this respect, that many of the issues that have caused concern in the business method area could be resolved by allowing challenges to be granted on the full scope of prior art, and we hope that would exhaustively address some concerns about whether that information was able to be considered by the PTO.

We also believe that challenges under 112, under written description and enablement, are also appropriate, but not under best mode. The procedure—I think this is a very crucial point—must continue to require the PTO to make an independent finding that there is a substantially issue of patentability. If you drop that requirement as part of the opposition procedure, you are going to create a flood of re-examination requests that the PTO will not be able to handle, especially in the restricted financial straits that it is in.

We believe that the new system must be available to challenge any patent that's has been issued, regardless of when it was issued. If it is inforce, it should be challengeable.

Finally, I would like to direct your attention again to some of the comments I made in my written testimony. It is, in our view, essential that the PTO be able to make this a rigorous proceeding; and one issue that has not been addressed in substance is the ability of the PTO to hold a hearing in a re-examination procedure.

We would not support full-blown discovery or other types of measures, but they should have the authority to take a fact issue up to the board and have that resolved. I thank you for giving me

the chance to express my views today, and I will look forward to an interesting discussion.

[The prepared statement of Mr. Kushan follows:]

PREPARED STATEMENT OF JEFFREY P. KUSHAN, JEFFREY P. KUSHAN, ESQ., POWELL, GOLDSTEIN, FRAZER AND MURPHY, LLP

Good morning.

My name is Jeff Kushan. I am a partner in the Washington office of the law firm of Powell, Goldstein, Frazer and Murphy, LLP. I am also a registered patent attorney, with specializations in the areas of biotechnology, pharmaceuticals and software-related inventions. I represent clients in the biotechnology, pharmaceutical and information technology industries, including on patent policy. I am testifying today in my personal capacity, and the views I express are my own.

Between 1987 and 1998, I had the privilege of serving in the Patent and Trademark Office, first as an examiner in the biotechnology group, and later as an attorney advisor in the Office of Legislative and International Affairs. During my time in the PTO, I was involved in a number of initiatives focused on improving patent quality and our patent system.

—In 1991 and 1992, I was a staff member to the Advisory Commission on Patent Law Reform, established by the Secretary of Commerce to conduct a comprehensive review of the U.S. patent system. The Advisory Commission studied patent quality in a number of distinct contexts, including the quality of software-related inventions and the reform of the then-existing ex parte reexamination system. Certain concepts found in the Commission's final report were reflected in the inter partes reexamination system established in 1999 by the American Inventors Protection Act (AIPA) (Pub. L. 106–113).

—Between 1993 and 1996, I led projects in the PTO to develop examination guidelines concerning the application of the utility standard in relation to pharmaceutical and biotechnological inventions, and concerning examination of software-related inventions. Both projects were designed to provide more workable examination procedures that could be used efficiently and effectively by examiners to produce higher-quality patent grants. Both initiatives were also designed to remove uncertainty in how PTO examiners were to evaluate and apply the law.

—In 1996 and 1997, I was detailed to the Office of the U.S. Trade Representative in Geneva, Switzerland. Among other things, I worked extensively on projects aimed at improving coordination among the major patent offices in their examination practices, particularly through the use of information technology solutions.

I believe my experiences in the PTO and in the international environment have given me certain unique insights and provided me with an understanding of the practical limits of Patent Office-administered procedures, particularly those focused on improving patent quality. In my testimony today, I will provide some observations on two areas where I believe the PTO can take steps to improve patent quality, namely, changes in examination practices and reexamination reform.

INTRODUCTION

Before turning to the issues of examination practices and reexamination reform, I would like to add my voice to those who are gravely concerned over the practice of not appropriating to the PTO all of the fees it collects. I congratulate you, Chairman Coble, for your leadership in the effort to preserve PTO funding, and congratulate your colleagues, particularly the Ranking Member, Mr. Berman, and Representative Lofgren, for their efforts in this cause.

As you know, over the past decade, more than $650 million in fees have been withheld from the PTO. Unlike other fee-based agencies, the PTO's revenue is, by statute, designed to recover 100% of costs of the PTO doing its job. Stated simply, there are no "surpluses" that exist at the PTO. Taking money away means simply that Congress is making the PTO do its job with an amount of funding that Congress itself has determined to be inadequate. And since the PTO must conduct a comprehensive examination of each patent, the options available to the PTO to deal with this artificially created financial crisis each year are very limited.

After five years of significant diversions, we can now appreciate the impact of this extremely shortsighted practice. Patent application pendency has grown steadily over the past three years, and is projected to increase significantly next year. The PTO cannot pay overtime to examiners to help reduce the growing backlogs in high-

growth areas, and has to cut examiner training and educational opportunities. Automation projects in the PTO have been delayed repeatedly, and when delivered, usually fall short of needs of the patent community. More dramatic, long-term reforms that the PTO should be developing to deal with its increased workload cannot be undertaken due to the costs of implementing currently mandated reforms and the uncertainty of the availability of funds to pay for those programs. For example, the PTO has had to implement the AIPA with no supplemental funding from Congress. The capacity of the PTO to implement additional procedures or changes to its examination practices are is thus significantly constrained by the funding problem.

The financial crisis created by the annual appropriations process, which should not exist in the first place, is preventing the PTO from living other than on a year-to-year basis. Indeed, the only reason we do not have a full-blown crisis at the PTO now is that patent and trademark application filings—and the corresponding fee revenue from those filings—keep increasing at a significant rate, making funds available in the current fiscal years beyond initial projections. This practice of keeping the PTO afloat today using fee revenue that is supposed to pay for work to be performed in the future cannot last. As soon as filings level off, the PTO will find itself in a crisis that has no option but to drastically increase patent pendency. I accordingly urge you to keep up the good fight, and support your efforts to ensure that the PTO is appropriated all the funds it collects.

Turning to the subject of this hearing, I would like to address two general issues that are pertinent to the issue of patent quality, and the more significant issue of public confidence in patent quality. These two issues are:

—reforms that the PTO can undertake using its existing authority over examination that will improve the quality of patents in certain sectors, particularly reforms that will yield a clearer record of the basis of the patent grant; and

—changes to the patent law to make reexamination a viable alternative to litigation in the Federal courts where questions of patent validity are discovered.

Improvements in both areas would help build greater public confidence in the validity of patents, particularly those in the area of computer-implemented business methods and other web-related transaction processes.

SETTING REASONABLE AND DEFENSIBLE OBJECTIVES FOR THE PATENT EXAMINATION PROCESS

The PTO currently employs more than 3,000 patent examiners who must review more than 270,000 applications filed each year. The output of the Office is presently in the range of 145,000 patent grants each year. Recent trends showing annual increases in filings suggest that this workload is not going to change dramatically in the near future. First and foremost, workload defines what the PTO must do to carry out its statutory mandate.

In addition, there are a number of public policy determinations that the Congress has made that define the limits of what PTO must do to perform its statutory function.

—*First*, Congress has established that all patents issued by the PTO are presumed to be valid and are entitled to rely on that presumption when being enforced in a judicial proceeding. *See*, 35 U.S.C. 282. The presumption of validity is based on solid public policy and is of fundamental importance in protecting the value of patents in the United States. This presumption forces those who would try to avoid the effect of the patent by invalidating the patent to carry the burden of establishing, by clear and convincing evidence, that the patent is invalid. The statutory presumption removes uncertainty as to the patent in the marketplace, making patent validity an issue only when the patent is being enforced.

—*Second*, Congress has mandated that all United States applications be subjected to an examination. This standard of mandatory examination for each application filed differs from most other systems where a specific demand or request for examination must be presented before the Office will commence the examination process. In each such system, the patent applicant must present the request for examination by a certain cut-off date, with the consequence that the patent application will be considered "withdrawn" if no request for examination is made. In certain systems, the cut-off date is quite extended—several years after filing—which have earned such systems the label "deferred examination" systems.

The concept of "deferred examination" was debated by the 1992 Advisory Commission. The Commission concluded that the costs of deferred examina-

tion—in the form of potential delays in pendency (i.e., the period of time it takes for the PTO to examine the application, measured from filing date to issue date) and the uncertainty associated with a lack of resolution of the question of patentability—outweighed the resource-savings that would accrue if the PTO were to be authorized to operate under a deferred examination system.

—*Third*, the Congress has established a procedure whereby patents can be "reexamined" if a substantial new question of patentability is discovered after the patent has been granted. Conceptually, reexamination serves as the "safety valve" that is based on a presumption that some mistakes—primarily the failure to discover and consider relevant prior art—will be made by the PTO during the original examination, regardless of the thoroughness or efficiency of the Office. Patent reexamination was designed to apply to a relatively small percentage of patents, particularly when measured against the total number of applications that are filed.

—*Fourth*, Congress defines how much money the PTO will have to operate, which defines, among other things, the number of examiners it can hire. In this regard, I note that Congress actually defines the amount of money that the PTO collects—by setting the fees for patent applications—and the amount that the PTO can spend. As I will note below, there has been a substantial gap between these two figures that has operated to the significant detriment of the PTO, and, consequently, to the detriment of both individual patent applicants and the public.

The variables discussed above require the PTO to balance competing priorities in establishing workable and cost-effective patent examination practices. The most significant variable—the statutory presumption of validity—requires the PTO to conduct a sufficiently rigorous and thorough examination of each application to ensure that the presumption of validity is deserved. When the PTO is not given sufficient resources, the primary effect is not a decrease in quality, but an increase in pendency. This is a consequence of how the examination process is structured today, where a finite number of examiners are responsible for processing the total number of cases filed, but with no flexibility to make "partially correct" conclusions on patentability. Consequently, when financial shortfalls occur, the PTO prioritizes its spending to ensure compliance with the core mission of issuing valid patents at the expense of development of new examination procedures that might make examination more efficient or increasing its staff to cope with the increased workload.

The fact that there are limits to what the PTO can do during examination of applications does not suggest that the PTO is incapable of reaching the correct result on patentability in a vast majority of patents. Instead, it has been my experience that patent examiners are ordinarily correct in their patentability determinations when they have considered all the relevant information that is pertinent to questions of patentability. This is one reason why many patent applicants provide the Office with copies of all relevant prior art prior to the examination of the patent application. The fully informed opinions of an Examiner are worth far more than an opinion on an incomplete record. Similarly, in arts which are well-established—particularly those technological fields having a sufficient body of patent and nonpatent literature—there should be no general concern over the ability of the PTO to issue valid patents. Even in rapidly evolving technologies, as long as all relevant information was before the Office, there should be no concern that patents issued by the Office are valid.

The challenge, then, is to ensure that all relevant prior art and patentability issues are considered by the Office prior to issuing the patent. In addition, it is critically important that the public be able to determine from the record of examination—the so-called "file wrapper"—what issues were actually considered by the examiner. In this respect, there are some options that the PTO can explore as to how it does its job.

PATENT EXAMINATION REFORMS

Patent quality is dependent first and foremost on patent examiners who have sufficient training, experience and support. In general, the PTO has done a commendable job recruiting examiners and designing training programs that enable examiners to properly and correctly examine applications in an efficient manner. The PTO has also been successful in developing examination resources, such as prior art collections, which examiners use in performing their work. Unfortunately, funding problems limit the ability of the Office to hire new examiners, pay competitive salaries and enhance examiner resources. Thus, there is a limit to what the PTO can do, particularly in the face of significant increases in the number of application fil-

ings. This means that in order to ensure patent quality, the time for processing applications must necessarily increase—which has been happening at a steady pace over the past decade.

The PTO's experiences in handling surges in patent filings in biotechnology in the late 1980s, software-related inventions in the mid-1990s, and most recently "business method" inventions in the past two years illustrate that the PTO also can adapt and refine its examination procedures to deal with new challenges. For example, in the field of biotechnology, the PTO developed examination practices, followed by special rules to require deposits of samples of living organisms where the invention could not be practiced without public availability of a sample of the living organism. In the field of software, the PTO has adopted practices related to the handling of computer source code, as well as guidelines to enable examiners to review and understand inventions in this sector. The recent steps taken by the Office in relation to "business method" patents represents another example of adaptation.

As noted above, when a properly trained PTO examiner has all relevant information, he or she can make an accurate conclusion on patentability of an invention. In this respect, the PTO faces its most significant challenge in the field of "business method" inventions—to the extent that such a category can be accurately defined. The challenge for a PTO examiner handling one of these applications is to quickly identify all issues pertinent to patentability, to find all relevant prior art and to make accurate *prima facie* findings as to compliance with patentability.

The PTO has already commenced a fairly aggressive approach to handling "business method" patent applications. I believe some additional steps can be taken by the PTO to facilitate the task of getting to these initial determinations for "business method" and other computer-based process inventions. One common theme among these suggestions is the goal of creating a more complete public record of the issues that were actually considered in the examination of the application and stimulating claim amendments that better define the invention. The importance of creating a complete and accurate prosecution history has grown significantly in the wake of decisions like *Festo Corp.* v. *Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558, 56 U.S.P.Q.2d 1865 (Fed. Cir. 2000), and are likely to be an integral element of ongoing efforts to improve patent quality.

In addition, I believe a number of specific efforts can be made by the PTO.

First, the PTO should train and encourage examiners to conduct their initial review of application to incorporate an identification of utility of the invention and an identification of the features or attributes of the invention that are needed to deliver that utility. A record of this assessment should be included in the first office action sent to the patent applicant to ensure that the applicant is aware of the examiner's understanding of the invention. Thus, if the invention is a new way of managing mutual funds that allows for the immediate updating of a variety of holdings, the examiner should look to the specification to identify those aspects of the invention that must be present to deliver that "practical" utility. An absence of correspondence between the invention as described and as claimed should become part of the record for the patent applicant to either accept or refute.

At a minimum, this type of initial characterization step will help the Office focus its search and examination of the application. Having this occur prior to the performance of the search and initial formulation of rejections will help the examiner conduct a complete and accurate search of the prior art and bring the most relevant issues to the attention of the applicant for resolution. At best, this practice will induce applicants to be more precise in drafting claims and setting forth descriptions of their inventions.

Second, the PTO should review the applicability of certain patent law theories to business process inventions to create a more rigorous examination environment.

—Under 35 U.S.C. 112, first paragraph, a number of cases have explored the issue of "essential elements" as an element of the "written description" requirement. See, e.g., *Gentry Gallery, Inc.* v. *Berkline Corp.*, 143 F.3d 1473, 45 U.S.P.Q.2d 1498 (Fed. Cir. 1998). The issue that could be explored by the PTO is whether the "essential elements" doctrine has any role to play in the application of 112, first paragraph, for inventions that fail to claim elements that are essential to delivering the asserted utility of the invention.

—Under 35 U.S.C. 103, the examiner must present a prima facie finding of non-compliance with the requirement of non-obviousness. How the PTO applies this *prima facie* finding can create a better examination record and more focused claims. For example, if an invention involves implementation of a "well-known" business process in a computer environment, but the claim does not incorporate any attributes of the computer environment that are unique to the implementation, a strong case can be made that the invention is *prima*

facie obvious. The task for the applicant is to either prove that implementation in any computer environment is non-obvious, or to incorporate claim limitations that reflect an invention that would be non-obvious. Examiners can help applicants by pointing out the types of claim limitations that would capture these specific attributes of the invention to render the invention non-obvious.

Third, the PTO can explore use of additional procedures to encourage applicants to provide more specific responses and claim amendments when responding to a rejection. For example, under existing practice, an examiner may take "official notice" of certain facts. This is roughly analogous to judicial notice that a court may take when attempting to refine an issue for adjudication. PTO examiners rarely invoke this authority because under current rules and practice, the patent applicant can negate the substance of their notice by simply challenging the examiner to provide evidence that supports the examiner's belief. Doing so wastes the examiner's time, and does not further any progress toward resolution of the issues of patentability. The PTO could revise this practice to require an applicant to specifically contest the basis of the examiner's assertion, such as by way of affidavit or by relying on a presumption that the examiner's view as expressed will control conclusions made by that examiner if not specifically contested. All of these steps would improve the quality of the PTO's work product by creating a record reflecting the clear position of the applicant on whether the examiner's understanding was correct or inaccurate.

Fourth, the PTO can and should continue to develop new approaches to examination that will enable it to more efficiently examine applications directed to business method inventions while at the same time creating a complete public record of the patent examination. In this respect, I note that the PTO has recently revised Rule 105 (37 CFR 1.105) to enable the examiner to request from the applicant the provision of certain information independent from the context of a rejection. We believe measures such as these, which authorize the examiner to direct well-focused inquiries at the applicant, can yield a better examination record and more precisely defined patent claims.

In sum, the PTO should continue to explore ways of creating a fuller record in the file wrapper on key issues of patentability, and to provide examiners with the authority to extract more information about the invention, on the record, from patent applicants. Doing so should yield patents that are more focused and limited, and ultimately, instill a higher confidence in the public as to their validity.

PATENT REEXAMINATION REFORM

Patent reexamination is a crucially important element of our patent system that helps to ensure high public confidence in patent quality. Reexamination was not designed to be a substitute for litigation in the Federal courts, nor was it supposed to provide the possibility of challenging any issue affecting the validity or enforceability of a patent. Instead, it was created to provide a limited, expedited alternative to the courts for reviewing patent validity in instances where there is a well-formed basis for the proceeding and where the PTO is competent to review the issue affecting patentability.

Congress thus established the patent reexamination system in 1980 as an *ex parte* proceeding that could be initiated only on the basis of patents and printed publications. See, P.L. 96–517. Once the PTO initiated the proceeding, only the patent owner and the PTO would participate. This structure made reexamination efficient and fast, but fundamentally unattractive to third parties that wished to vigorously review patent validity. *Ex parte* reexamination, now found in sections 302 to 307 of title 35, United States Code, thus became usable only in the clearest situations where an obvious patentability defect exists' in essence, where the prior art cited in the proceeding could not be interpreted in a way other than to find the patent invalid.

Noting these concerns, the Advisory Commission on Patent Law Reform recommended restructuring reexamination to make it more attractive to third parties. This took the form of two general recommendations:

1. The Commission recommends that the basis for and scope of reexamination be expanded to include compliance with all aspects of 35 U.S.C. § 112, except best mode. This will ensure that all significant issues related to patent validity that are commonly raised and considered during the original prosecution may be addressed in a subsequent reexamination of the patent.
2. The Commission also recommends providing third parties with more opportunities for substantive participation during the reexamination proceeding. The objective of the Commission in this regard is to build confidence in the

reexamination process so that third parties will be inclined to raise patent challenges in this forum rather than through litigation. The primary benefits of this will be reduced costs of resolution of patent validity issues, and a more rapid determination of rights. However, the Commission recommends that the increased third party participation be implemented through a balanced approach to ensure that the reexamination process fulfills its intended role.

There was an extensive amount of debate in the Commission as to the "best" type of third party reexamination system to establish, with some parties advocating full-blown *inter partes* proceedings while others advocated a much more restricted proceeding having very limited participation by third parties (i.e., parties other than the patent owner). In the end, the Commission favored a relatively restricted model, noting the limited ability of the PTO to effectively control parties in an unrestricted proceeding.

The balance in the Commission's findings was also reflected in part in the *inter partes* reexamination implemented by Congress in 1999 through the American Inventors Protection Act (P.L. 106–113). The AIPA's version of *inter partes* reexamination, however, differed in several material ways from the model envisioned by the Advisory Commission.

—First, the AIPA forecloses the ability of a third party to appeal a determination in favor of the patent owner to a court. Thus, for third parties, the proceeding starts and ends in the PTO. See, 35 U.S.C. 315(b).

—Second, the AIPA imposes a far more draconian legal estoppel than was recommended by the Advisory Commission. Under the AIPA, a party is barred from raising issues that not only were raised but could have been raised during the proceeding, and this bar applies as soon as the PTO finds a basis for initiating the proceeding. In addition, third parties are estopped from taking the positions in relation to facts considered during the proceeding that are inconsistent with those taken in the context of the reexamination proceeding. Both forms of estoppel were designed to place onerous restrictions on the ability of third parties to defend themselves from patents that proceed through an *inter partes* reexamination. The Advisory Commission, by contrast, recommended imposing an estoppel only to issues actually addressed in the proceeding, and did not envision severe sanctions against parties that use the proceeding.

—Third, the AIPA did not extend the scope of the reexamination authority beyond patents and printed publications. This stands in contrast to the recommendations of the Advisory Commission to permit reviews based on those issues in which the PTO has a demonstrated expertise, including issues under 112, other than best mode.

The *inter partes* proceeding thus established by the AIPA was a far more restrictive (and restricting) mechanism for reviewing patent validity than was envisioned by the Advisory Commission or most other parties favoring reexamination reform. As a consequence, many of us hoping for creation of a fairer and more effective procedure were disappointed by the results of the AIPA. Simply stated, to be a usable system, the estoppel provisions must be scaled back to what would ordinarily attach as res judicata in a legal proceeding, and the third party must be given the right to appeal findings from the PTO to the Federal Circuit.

In this respect, I would like to offer a number of observations on what could be done to improve the *inter partes* reexamination system. I believe it is possible to amend the existing authority to make it workable, and would favor legislation that starts from this basis, rather than a new authority that would exist alongside the *ex parte* and *inter parties* reexamination authorities. In addition to removal of the restrictions noted above, I believe the amended reexamination authority should incorporate or retain the following general attributes.

—*The procedure should permit challenges only after the issuance of the patent.* The experiences of American companies in Japan reveal that a proceeding that allows third parties to tie up patent applications in challenges seriously undermines the value of patents, is unfair to the patent applicant and is unmanageable by patent offices.

—*The procedure should be available for any patent, rather than being limited to patents in specific technological fields.* Restricting the procedure to certain types of patents would likely raise concerns under the non-discrimination provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO) Agreement. More-

over, any procedure that is balanced, fair and effective should be available for any patent issued by the PTO.

—*The procedure should permit challenges based on the existing grounds, as well as other issues implicated by public use or sale, provided that such challenge are grounded on objective factual evidence that can evaluated by the PTO.* In this respect, I note that many hold the belief that a substantial amount of "prior art" in the business method field is not captured in traditionally printed publications or patents. Allowing challenges based on evidence that clearly demonstrates that the invention was in public use or was sold before the patent was sought would help answer this issue definitively. I would note that to be viable as a procedure administered by the PTO, the third party would have to supply evidence that could be objectively evaluated as to its scope and content. Once supplied, the PTO could evaluate whether the evidence demonstrates that the invention does not meet the novelty requirements under section 102, or the requirement for nonobviousness under section 103.

—*The procedure should also permit challenges to be based on non-compliance of a claim with the requirements of 35 U.S.C. 112, other than best mode.* A patent claim that is invalid because it is not enabled or has no written description should be challengeable through a reexamination proceeding. Since opinions on or evidence related to compliance of a patent with 112 are likely to become more complicated with the passage of time, it would be appropriate to put a time limit on when challenges under these additional grounds could be made (e.g., 9 to 24 months after the patent is granted). In addition, like the case with non-patent, non-printed publication reexaminations, I believe it will be crucial for third parties to provide evidence to support their claims, where such evidence meets certain objectively measurable criteria. For example, the PTO might require 112-based reexaminations to be presented in a form demonstrating that prima facie case of invalidity exists for the challenged patent claim, and to require evidence supporting the prima facie assertion to be included in the request for reexamination.

—*The procedure must continue to require the PTO to find that a substantial new question of patentability exists in relation to one or more patent claims.* It is crucial, in my view, to retain this "initial finding" by the PTO before starting a proceeding to ensure that third parties cannot harass patent owners with groundless or weak challenges. A "no holds barred" standard for any period of time would be objectionable to many patent owners, and would unfairly prejudice the enjoyment of patent rights.

—*The procedure should be available to review any patent that remains in force on the date the law takes effect.* Essentially, any patent that can be challenged through litigation should be reviewable through the new procedure.*The PTO should be given a limited authority to review and resolve conflicts over facts that are material to the issue of patentability.* The PTO Board of Patent Appeals and Interferences currently can conduct hearings where both sides can question a witness on a factual issue. I believe the *inter partes* reexamination procedure would be significantly enhanced by reserving to the PTO the right to conduct a limited form of this type of hearing. Such an authority could only be invoked by the PTO, and would be limited to having the Board issue a finding that resolves a contested fact upon which the reexamination is based. Under no circumstances should this type of authority enable the patent owner or the third party to conduct any type of discovery in the PTO, as such an authority would undercut the basic structure of the proceeding.

—*The procedure should permit reconsideration of information originally considered by the PTO where the information clearly shows that a significant question of patentability exists.* Such a provision would have the effect of overruling the decision of *In re Portola Packaging*, 110 F.3d 786 (Fed. Cir. 1997), which held that the PTO was not permitted to initiate a reexamination on the basis of information considered during the original examination. The *Portola* ruling has been widely criticized for placing an unrealistic and undesirable prohibition on the use of reexamination to consider information not fully considered in the original examination. The law should be amended to permit the PTO to have this authority to conduct a reexamination where a convincing case is made that the information was not fully considered in the original examination.

—The PTO should be required to conduct reexaminations within a finite amount of time (e.g., not more than 18 to 24 months), with exceptions only in the most complicated proceedings. Imposing a time limit on the duration

of the proceeding, along with strict enforcement of time limits for third party responses in the proceeding, will help prevent reexamination from becoming a way of entangling patent owners. Additional fees for expedited processing might be another way of handling the need for expedited conclusion of the procedure.

In addition to these points, I believe it is important to avoid any restructuring to our reexamination system that would result in importation of the negative aspects of the opposition systems administered by the European Patent Office and other patent offices. Most importantly, Congress should avoid any restructuring that makes challenging a patent a facile and routine event. We have found that oppositions in Europe, for example, are almost a cottage industry, where almost any patent issuing from a specific party will find itself entangled in an opposition proceeding, whether justified or not. Further, the challenging party should identify itself, not allow its identity to be shielded under cover of a straw man as in European oppositions. The requirement for a substantial new question of patentability to be found by the PTO in a *non-reviewable* decision should ensure that a restructured U.S. system does not become such a procedure.

I also believe that the restructured reexamination system must be designed to be a complement to an effective original examination system. Stated another way, the percentage of patents undergoing reexamination should not be so high as to overwhelm the capacity of the Office to perform reexaminations, especially in view of the limitations in funding that the PTO faces each year. I believe it would be inappropriate to design the reexamination procedure from a perspective of being a routinely invoked mechanism for "correcting the errors" of the PTO.

CONCLUSIONS

Patents are crucially important to so many U.S. industries and inventors. Inherent in this statement is the recognition that these patents must be valid and enforceable to have value to their owners and to respect the right of third parties. This is why patent quality and mechanisms for ensuring patent quality are so important.

In my remarks above, I discussed a range of ideas that can contribute to improved patent quality. I believe that reexamination reform, in particular, holds great promise for improving not only patent quality, but also increasing public confidence in patent quality. Achieving a higher degree of public confidence in certain areas, such as "business method" inventions, is the most direct and effective way of responding to concerns expressed over these types of patents. Attempting a more drastic change to our patent system, such as exclusion of business methods from eligibility, would unfairly punish those inventors that actually have developed a useful, valuable and innovative new business process. Moreover, exclusions invariably do not achieve the end sought—patent lawyers and inventors will certainly recast their inventions to fall within the redefined scope of eligibility.

In view of these points, I believe Congress can most effectively increase public confidence in our patent system by making legislative changes to our reexamination system. I believe this legislative effort should be complemented by changes to the patent examination process to yield a higher quality patent examination. The latter effort is possible under existing authority conferred on the PTO, and should not be pursued through amendments to the patent code.

Thank you for providing me the opportunity of sharing my views on the important issues of patent quality and reexamination.

Mr. COBLE. Thank you, Mr. Kushan.

Dr. Martin?

STATEMENT OF DAVID E. MARTIN, CHIEF EXECUTIVE OFFICER, M•CAM

Mr. MARTIN. Mr. Coble, thank you for the opportunity to not only talk to you, but also your distinguished colleagues of the Judiciary Committee, to address this important topic. Known when I was on the faculty at the university for my brevity in every class I ever taught, I will adhere to your 5-minute recommendation.

In January, 2001, on a single trading day, one U.S. company and its investors lost $330 million as a result of misappropriated reliance on U.S. patents. Today, thankfully, the Washington Post, an article of which I have asked be added into the record, actually

highlights a case where, in two trading days, $526 million were lost from the U.S. investing public, based on misreliance on patents that had overlooked and uncited prior art.

The whole of the United States Patent and Trademark Office operating budget is dwarfed by only a few catastrophic days like the ones we have recently seen, and we have yet to see the worst. Prominent intellectual property law firms and businesses in the investors they advise have relied on a needle-in-the-haystack defense with respect to the adequacy of research prior to patent prosecution.

In written testimony at a USPTO public hearing,

Gerald Mosinov of Oblum Spivak stated, and I quote, "Whether or not a search is conducted is determined by, A, the available budget for filing an application, and B, the degree to which the applicant is aware of the current state of the art. In many cases, there is little or no economic value in conducting a search, and applications may be filed without any formal search."

Technically, he's right. There is Federal case law that suggests that that is correct and it needs to be changed. While the economics at the time of prosecution are deemed by many practitioners as superfluous, the cost to our economy is titanic. As a performance-based organization, the USPTO must be held accountable under their own guidelines and their manual examination procedures to resist the temptation to default to issuance without appropriately determining novelty and non-obviousness. Using commercially-available software, an examiner can make this determination in less than 1 hour.

Using advanced linguistic analysis, M-CAM has conducted over 1,000 studies indicating a possibility of over 30 percent of the patents issued in the United States share one or more claims of other patents. If one considers that the patent standard should include nonobviousness, this percentage worsens remarkably. What we are saying is approximately one-third of U.S. patents not only have no value, but as in the recent cases that have been decided in this last fiscal quarter, they may, in fact, contribute to the inadvertent negligent business practices that are shown in Amgen v. TKT, Ramis, and several other cases.

During pendency, many patents covering identical content are issued. leaving companies, investors, and courts at a total loss as to who to truly owns the limited monopoly supposedly afforded by a patent. While often unwilling to conduct prior art searches, attorneys could be required by the Securities and Exchange Commission to draft opinion letters prior to the equity offerings that thoroughly disclose the threats to claims of proprietary nature and accompanies public offering.

If accountability cannot exist on the prosecution side or on the examination side, it should be at least deployed to protect the investing public. In the fall of 2000, the United States Patent and Trademark Office requested the use of M•CAM Door's patent analysis system to evaluate its use, to detect uncited prior art. In the interest of improving patent quality, which, by the way, the People's Republic of China found so compelling that they actually paid for it, we actually provided the access to the USPTO at no charge.

The USPTO has evaluated over 900 patents using the M•CAM Door system during a period extending from November, 2000 until April of 2001. In these 900 patents, over 150,000 cases of uncited prior art occur, and I will refer to my written record to determine how we actually improve the definition of prior art. To put this into perspective, if the Patent Office expert in charge of the evaluation truly evaluated the relevance of prior art found using our system, it would have taken six trained examiners 24 years to simply read the documents. Now, you make the call. Did the system really work or did we so dramatically highlight the profound ineptitude of the current systems currently paralyzing the examiners that a search and retrieval group decided to bury the evidence?

The problem with that is our system also produces a log, which is also added into the record. Oddly enough, at the same time the PTO employee defended the status quo, the POPA published a report stating, and I quote, "Examiners often lack the time and resources to find all the relevant prior art relevant to a patent application." The report goes on, and I quote, "The hurdles for examiners to find prior art are often impossible to surmount."

The world is not coming to an end. Our simple call is for accountability and responsibility, echoing voices of ages past, and I quote from William Jennings Bryan, who, in this very city, on July 9, 1896, said, and I quote, "The humblest citizen in all the land, when clad in the armor of a righteous cause, is stronger than all the host of error." Add to this Committee's righteous cause the data provided herein, and I'm confident that the hosts of error and omission will be vanquished.

We can effect immediate change in the following ways. While the duty to search cannot be enforced without a modification to the law, which we would suggest, 37 CFR Subsection 1.104(A) obligates the examiners to conduct, and I quote, "A thorough investigation of all available prior art relating to the subject matter of the claimed invention."

This Committee and Congress could simply call the USPTO to enforce that, and a capricious time limit on how much time is spent on prior art is unacceptable. Second, given the legitimate claim by patent examiners of the inaccessibility of prior art, that should be made available; and, finally, realizing the importance of patents for domestic and international protection of U.S. and investor interest, this Committee should authorize an audit of issued U.S. patents and foreign patents registered in the U.S. to identify those that are redundant and will clog the courts in years to come.

Thank you.

[The prepared statement of Mr. Martin follows:]

PREPARED STATEMENT OF DR. DAVID E. MARTIN, CHIEF EXECUTIVE OFFICER, M•CAM

Patents: Improving Quality and Curing Defects

May 10, 2001

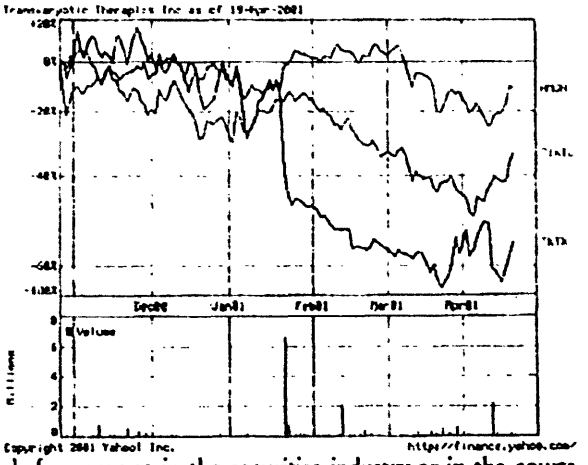
Rayburn House Office Building

Testimony of Dr. David Martin, CEO - M•CAM Inc.

Mr. Chairman,

I would like to thank you and your distinguished colleagues on the Judiciary Committee for giving me an opportunity to address the topic of patent quality in the United States. While once deemed badges of intellectual honor, patents have become the currency of the U.S. and global economies. Echoing the debates over a currency standard 100 years ago, the United States Congress now faces an issue much more challenging than a decision on gold or silver. The basis of our economy, no longer tangible metals, is now the national product of the human mind - innovation. The protection of this precious asset is the basis for the intellectual property laws of the United States and the developed world. However, in the past decade we have seen the erosion of confidence in patents. While many conveniently dismiss this as inevitable because that which is intangible cannot be measured, I will provide evidence that confidence is evaporating because the assets are indefensible due to egregious inadequacies in patent prosecution and examination.

In January 2001, ***on a single trading day***, one U.S. company and its investors lost over $330,000,000 as a result of misappropriated reliance on U.S. Patents.[1] The patents that Trans.aryotic Therapies, Inc. (TKT) owned had significant deficiencies in uncited prior art that were overlooked in prosecution and examination. Relying on uninformed patent advice and confidence afforded by questionable patents, TKT challenged the validity of patents held by Amgen and lost. Our company, using our web-based patent examination system (M•CAM DOORS™), published a projected outcome of this case in November 2000, before anyone in the securities industry or in the courts would commit to the probable direction of the decision. Careful examination of the protected intellectual property in this case shows that the TKT deficiency was avoidable had the U.S. Patent Office thoroughly examined prior art.



The whole of the USPTO's operating budget is dwarfed by only four catastrophic days like this. In FY2000, U.S. investors and companies lost billions of dollars as they watched companies

[1] http://finance.yahoo.com

representing "proprietary rights" see those rights erode or disappear under scrutiny. This figure does not include actual damage awards, which continue to skyrocket. The losses caused by these avoidable oversights are not offset by gains on the prevailing side. In fact, the inflection for the losers was over twice the magnitude of the gain for the winners – yielding a total loss to the market of several billion dollars. We have yet to see the worst.

Prominent intellectual property law firms and the businesses and investors they advise have relied on a "needle in the haystack" defense with respect to the adequacy of research prior to patent prosecution. Purposely avoiding citing prior and concurrent innovation (including U.S. and international patents) to maximize the likelihood of patent issuance, IP lawyers and patent examiners routinely ignore relevant art that would limit or prevent successful patent issuance. The Federal Courts have held that a patent applicant has no duty to disclose prior art.[2] However, the courts have cautioned that individuals substantially involved in the prosecution of patents[3] may not, "cultivate ignorance" by "disregard[ing] numerous warnings that material information or prior art may exist, merely to avoid actual knowledge of that information or prior art."[4] During recent conversations with lawyers from America's most respected law firms, partners specifically stated to us that they have no interest in knowing all relevant prior art because if that knowledge were available, they would lose the plausible deniability of "not knowing" that the patent they've prosecuted had obvious prior or concurrent art weakness. In written testimony at a USPTO Public Hearing, Gerald Mossinghoff of Oblon, Spivak, McClelland, Maier & Neustadt stated:

> Whether or not a search is conducted in any given case is determined by (a) the available budget for filing an application, and (b) the degree to which the applicant is aware of the current state of the art. In many cases, corporations are very active in selective fields. Thus, they are well aware of the state of the prior art in their field, much of which may be their own material. In these situations, there is little or no economic value in conducting a search and applications may be filed without any formal search.[5]

So there we have it. Rather than taking the time to do it right the first time, prosecutors and examiners are deciding that saving $10,000 is worth the risk of the market losing billions. This Committee and America cannot afford that gamble. While the economics at the time of prosecution are deemed by many practitioners as superfluous, the cost to our economy is titanic. As a performance-based organization, the USPTO must be held accountable to resist the temptation to default to issuance without appropriately determining novelty and non-obviousness. Using commercially available software, an examiner could make this determination in less than 1 hour.

Using advanced linguistic analysis, M•CAM has conducted over 1000 studies indicating that possibly over 30% of the patents issued in the United States share one or more claims with other patents. If one considers the patent standard of non-obviousness, the percentage worsens remarkably. What we're saying is that approximately 1/3 of U.S. patents not only have no value but may contribute to inadvertent negligent business practices.

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[2] *Nordberg, Inc. v Telsmith, Inc*, 82 F.3d 394, 1996 U.S. App. LEXIS 9472.

[3] Chisum, D. S.) *Best mode of concealment and inequitable conduct in patent procurement: a nutshell, a review of recent Federal Circuit cases and a plea for modest reform.* 13 COMPUTER & HIGH TECH. L.J. 277 (1997).

[4] *FMC Corp. v Hennessy Industries*, 836 F.2d 521, 1987.

[5] http://www.oblon.com/Ip/seeker.php3?mossinghoffstatement7-99.html#anchor128921

More subtle and destructive is the impact that multiple patents issued on the same or similar content at or about the same time. During pendency (the time it takes for the USPTO to actually make an allowance decision), many patents covering identical content are issued – leaving companies, investors, and courts at a total loss as to who truly owns the limited monopoly supposedly afforded by a patent. While often unwilling to conduct prior art searches, attorneys could be required by the Securities and Exchange Commission to draft opinion letters prior to equity offerings that thoroughly disclose the threats to claims of a proprietary nature in a company's offering. If accountability can't exist on the prosecution side, it should at least be deployed to protect the investing public.

In the fall of 2000, the United States Patent and Trademark Office requested use of the M•CAM DOORS™ patent analysis system to evaluate its use to detect uncited prior art. In the interest of improving patent quality, we provided access at no charge for a trial period. We have drawn from that log to show the Committee precisely the quality of the patents that the USPTO evaluated using our system. It is helpful to note that, according to one of the senior members of USPTO's Information Search and Retrieval Division charged with evaluating our technology, the system could not detect prior art that the USPTO examiners missed. The USPTO has evaluated over 900 patents using the M•CAM DOORS™ system during a period extending from November 2000 until April 2001. In these 900 patents, over 150,000 cases of uncited prior art occur. To put this into perspective, if the patent office expert in charge of the evaluation truly evaluated the relevance of the prior art found using our system, it would have taken 6 trained examiners 24 years simply to read the documents. So, did the system really not work or did we so dramatically highlight the profound ineptitude of the current systems currently paralyzing the hard-working examiners that the Search and Retrieval group decided to bury the evidence? Their use log is reproduced as an Appendix if you'd like to answer that question yourself.

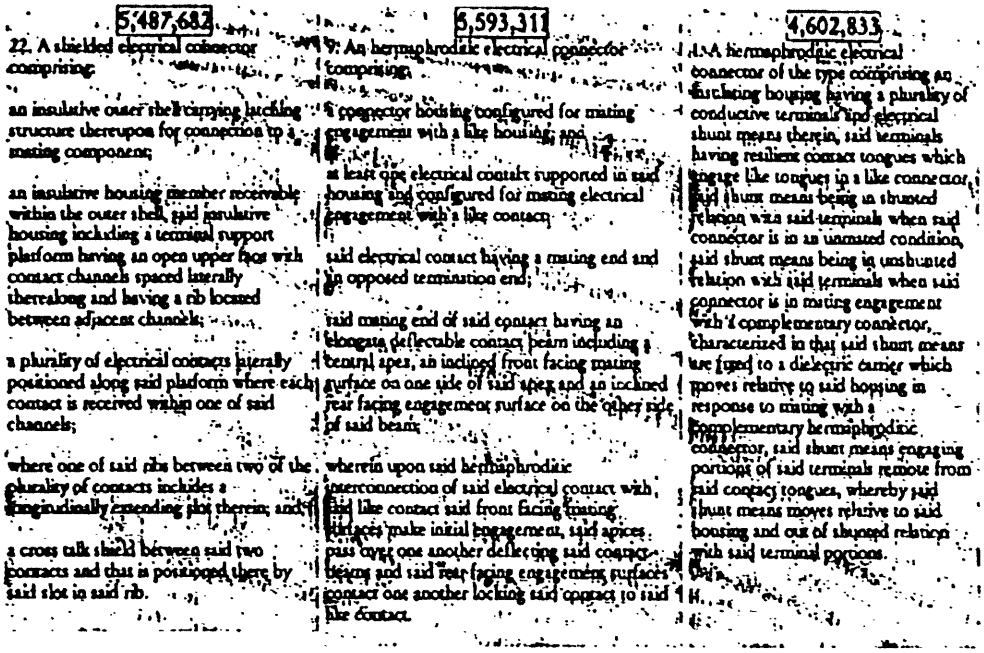
Oddly enough, at about the same time that this PTO employee was defending the status quo, the Patent Office Professional Association (POPA) published a report stating: "examiners often lack the time and resources to find all the relevant prior art relevant to a patent application."[6] The report goes on,: "The hurdles for examiners to find prior art are often impossible to surmount."

The following example is taken directly from the USPTO M•CAM DOORS™ utilization log – an audit function that we built into our system to ensure accountability.

> United States Patent 5,487,682 (hereinafter '682) is a patent for a "Shielded Data Connector." When prosecuted and examined, this patent referred to nine patents as prior art and cited no other trade references that could threaten a claim to novelty. Filed two years prior to '682 was U.S. Patent 5,593,311 (hereinafter '311), which asserts significantly equivalent claims. While subsequent innovations have found '311 relevant, no examination of the uniqueness between '311 and '682 was done at USPTO. More problematic is the uncited prior art embodied in U.S. Patent 4,602,833 (hereinafter '833), which was never cited by '682 but was cited by '311. In fact, over 300 patents exist as uncited prior art to '682 that <u>have been deemed relevant</u> by USPTO examiners in the prosecution of concurrent and subsequent innovations. Our analysts took less than 90 seconds to find three overlapping patents (excerpted below) that threaten the enforcement of '682 – less time than it

[6] www.popa.org/newsletters/mar01.shtml

takes the USPTO to make a classification decision on a patent application. On average, most U.S. patents cite less than 10% of the relevant prior art. The term "relevant prior art" in M•CAM nomenclature is simply defined as identical or near identical claims that have already been examined on one or more occasions by USPTO examiners and been found to be relevant. Our standard involves an integration of semantic and examination associations – a standard consistent with the letter of the patent law.



5,487,682

22. A shielded electrical connector comprising:

an insulative outer shell carrying latching structure thereupon for connection to a mating component;

an insulative housing member receivable within the outer shell, said insulative housing including a terminal support platform having an open upper face with contact channels spaced laterally therealong and having a rib located between adjacent channels;

a plurality of electrical contacts laterally positioned along said platform where each contact is received within one of said channels;

where one of said ribs between two of the plurality of contacts includes a longitudinally extending slot therein; and

a cross talk shield between said two contacts and that is positioned there by said slot in said rib.

5,593,311

9. An hermaphroditic electrical connector comprising:

a connector housing configured for mating engagement with a like housing; and

at least one electrical contact supported in said housing and configured for mating electrical engagement with a like contact;

said electrical contact having a mating end and an opposed termination end;

said mating end of said contact having an elongate deflecable contact beam including a central apex, an inclined front facing mating surface on one side of said apex and an inclined rear facing engagement surface on the other side of said beam;

wherein upon said hermaphroditic interconnection of said electrical contact with said like contact said front facing mating surfaces make initial engagement, said apices pass over one another deflecting said contact beams and said rear facing engagement surfaces contact one another locking said contact to said like contact.

4,602,833

1. A hermaphroditic electrical connector of the type comprising an insulating housing having a plurality of conductive terminals and electrical shunt means therein, said terminals having resilient contact tongues which engage like tongues in a like connector, said shunt means being in shunted relation with said terminals when said connector is in an unmated condition, said shunt means being in unshunted relation with said terminals when said connector is in mating engagement with a complementary connector, characterized in that said shunt means are fixed to a dielectric carrier which moves relative to said housing in response to mating with a complementary hermaphroditic connector, said shunt means engaging portions of said terminals remote from said contact tongues, whereby said shunt means moves relative to said housing and out of shunted relation with said terminal portions.

It is troubling to continue hearing USPTO's insistence that it doesn't have the resources to deploy tools for examiners to do a better job. It is equally troubling to hear that, if fully funded, the USPTO would add more bodies rather than overhauling a broken infrastructure. Please understand, I fully support the allocation of sufficient funding for USPTO. However, I strongly object to pouring more resources into leaking buckets. Funding must be linked to quality control. Using a web browser, M•CAM DOORS™ can clearly rule out patentability for most inventions in fewer than 2 minutes. The average pendency at USPTO currently is almost 2 years. Using information technology tools to triage examination decisions would immediately address the infrastructure demands on the USPTO and would improve the quality of examinations done by them.

Finally, former Commissioner Q. Todd Dickinson, before this very Committee, made the statement last year that the quality of examination couldn't be that major a problem as the number of petitions for re-examination were not significant. What he failed to articulate is that there are significant procedural and financial impediments to filing such petitions – making it prohibitive for companies of individuals to provide this critical check-and-balance function on a runaway quality deficiency at

PTO. This Committee's members can immediately act to make re-examination a democratic process so that quality can be assured.

Conclusions and Specific Recommendations

The world isn't coming to an end. Our simple call is for accountability and responsibility echoing voices of ages past.

> *"The humblest citizen in all the land, when clad in the armor of a righteous cause, is stronger than all the hosts of error." William Jennings Bryan - July 9, 1896*

Add to the Committee's righteous cause the data provided herein and I am confident that the hosts of error and omission will be vanquished. We can effect immediate change in the following ways.

1. While a duty to search cannot be imposed without modification of the law (which we would recommend), 37 CFR §1.104(a) obligates examiners to conduct "a thorough investigation of the available prior art relating to the subject matter of the claimed invention." This Committee and Congress should enforce the standard and advise the USPTO that examination time must not be restricted by capricious time limits if an examiner has not satisfactorily searched not only the "field in which the invention is classified, but also analogous arts."[7] This can be done with commercially-available software systems and should be immediately deployed.

2. Given the legitimate claim by patent examiners of the inaccessibility of significant prior art repositories, the public should be allowed to provide examiners with information prior to the final publication of letters of patent. Once issued, the patent could then be afforded greater limitation to challenge as the public comment period would likely improve the quality of issued patents.

3. Realizing the importance of patents for domestic and international protection of United States business interests, this Committee should authorize an audit of issued U.S. patents and foreign patents registered in the U.S. and identify those patents that are redundant. In so doing, this Committee could significantly curtail the frivolous legal proceedings debating the merits of unenforceable claims allowing the courts to focus on meaningful challenges and infringement issues.

Appendices:
USPTO Utilization Log
Patently Obvious™ Reports

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[7] Manual of Patent Examining Procedure §904.01(c).

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Intellectual Property Analysis of Rambus, Inc. Patents

Litigation Report

Micron Technology, Inc. v. Rambus, Inc.

February 23, 2001

Background

Founded in 1990 by Dr. Mike Farmwald and Dr. Mark Horowitz, Rambus, Inc. (Nasdaq: RMBS) is a company built largely on the strength of its intellectual property portfolio and its ability to defend it. The Los Altos, CA-based company designs, develops, licenses and markets high-speed memory technology for use in computers, consumer electronics, and communications systems. Currently, Rambus is engaged in a series of important legal proceedings concerning their patent portfolio of high-speed DRAM technology. The outcome(s) of the legal proceeding(s) may decide the future of the company, and the face of the high-speed memory market for years to come.

Most computer users are familiar with the two common distinctions for semiconductor memory, namely RAM (Random Access Memory) and ROM (Read Only Memory). While both are important memory components, running RAM at high speeds is essential to operating sophisticated applications on modern electronic devices such as desktop/laptop PCs, workstations, PDAs, video games, and communications devices.

Generally, RAM is categorized as dynamic (DRAM) or static (SRAM). The first commercially available DRAM chip was the Intel 1103, introduced in 1970. Since then, engineers have worked steadily to improve the speed and reliability of DRAM chips. Rambus patents and technology are focused on improving and innovating DRAM design and operation. In particular, the company has made important innovations and obtained patents in the area of synchronous DRAM (SDRAM). Intellectual property rights to SDRAM and its related technology are the subject of Rambus' legal proceedings.

Background continued on Page 2

Patent Information

Background *(continued)*

Large players dominate the SDRAM industry and Rambus is engaged in litigation at various stages with three of them: Micron Technology, Inc., Hyundai Electronics Industries Co., Ltd., and Infineon Technologies AG. In the past, Rambus has successfully settled litigation by negotiating licensing agreements with important manufacturers (e.g. Hitachi).

In fact, since Rambus does not manufacture or distribute memory chips, its business relies heavily on its ability to obtain royalties from licensing its patent technology. In the first quarter of 2001, royalties were $26.8 million (77.3% of total revenues). Rambus is truly an intellectual property company, with 29 RDRAM-compatible licensees and seven SDRAM-compatible licensees as of December 31, 2000 (*Rambus 10-Q; 12/31/00*).

On April 18, 1990, Rambus filed U.S. patent application Ser. No. 07/510,898, entitled "Integrated circuit I/O using high performance bus interface". Since obtaining its first patent on Sep. 7, 1993, Rambus has built an intellectual property portfolio including over 100 U.S. patents and several foreign patents. Many of these patents were divisional applications of the original '898 patent application. According to the company, their patents form a body of innovation essential to producing Rambus DRAM (RDRAM), SDRAM, DDR SDRAM and logic products that directly control these memories (*Rambus 10-Q; 12/31/00*). The company vigorously defends their patents and expects to receive licensing and royalty payments for their use.

Because of the nature of semiconductor design, the industry often works together to formulate open design standards that are intended to promote innovation and competition. In 1991, the Joint Electron Device Engineering Council (JEDEC) began developing industry-wide technical standards to ensure different SDRAMs from different suppliers would be compatible with each other. Rambus joined JEDEC in 1992 and allegedly (*Micron v. Rambus*) used the JEDEC forum to incorporate information regarding SDRAM interface standards into their pending patents. In addition, Rambus is accused of failing to disclose their patent applications, a condition of membership and participation in JEDEC.

On August 28, 2000, Micron Technology, Inc. filed a complaint with the United States District Court, District of Delaware against Rambus, Inc. (hereafter referred to as *Micron v. Rambus*). The complaint asserts that Rambus' JEDEC misconduct entitles Micron to royalty-free license to eight Rambus patents and pending or future applications claiming priority through these patents. Many in the industry believe the future of Rambus and the SDRAM industry hinges on the outcome of *Micron v. Rambus*.

This report provides an analysis of the eight Rambus patents in *Micron v. Rambus* and explores the strength of these patents from an intellectual property perspective. Rambus' JEDEC conduct is not analyzed in this report.

Continued on Page 3

Rambus, Inc. Litigation Information

Litigant	Rambus, Inc. U.S. Patents Cited or Under Dispute		Litigation Status (Country, Phase)	
Micron Technology, Inc.	5,915,105	6,032,214	US:	Discovery
	5,966,543	6,032,215	DE:	Trial Delayed
	5,954,804	6,034,918	FR:	Early Phase
	6,185,644	6,038,195	UK:	Temp. Stay
			IT:	Decision Reserved (May 2001)
Infineon Technologies AG	5,915,105		US:	Trial Set (2003)
	5,954,804		DE:	Trial Set (2002)
Hyundai Electronics Industries Co., Ltd.	5,915,105	6,034,918	US:	Discovery
	5,953,263	6,035,345	DE:	Trial Delayed
	5,954,804	6,038,195	FR:	Early Phase
	6,185,644	6,067,262	UK:	Temp. Stay
	6,032,214	6,101,152	IT:	Decision Reserved (May 2001)
	6,032,215			
Hitachi, Ltd. & Hitachi Semiconductor (America) Inc.	5,915,105	5,995,459	US:	Settled
	5,953,263	6,032,214		
	5,954,804	6,032,215		

(Sources: Rambus, Inc. 10-Q 12/31/00; US District Court, District of Delaware, Eastern District of Virginia and Northern District of California)

Technical Background

To illuminate the intellectual property issues surrounding the eight Rambus patents in *Micron v. Rambus*, it is necessary to have some understanding of the SDRAM, DDR SDRAM and RDRAM memory technology involved in the subject patents.

In contrast to non-volatile memory such as in a CD-ROM, DRAM is volatile and requires a source of power that can periodically refresh the charge in the memory chip. Reading from or writing to a DRAM cell refreshes the charge and so commonly, the refresh is accomplished by periodically reading from the DRAM. A DRAM controller schedules the read/write/refresh operations over a common data bus with the help of special clock pulses. In modern memory devices, these read/write/refresh operations are clocked in *nanoseconds* and must be scheduled with a high degree of accuracy and efficiency. Rambus' DRAM innovations are concerned primarily with improving the control and speed of the fundamental memory operations sometimes referred to as the "system interface". Of particular importance in *Micron v. Rambus* are the patents on dual clock edge operation and DRAM clock synchronization.

Synchronized DRAM is "in synch" with the system clock that controls the central processing unit, or CPU. And, because the clock that controls the CPU also controls the memory, wait steps between the two devices can be eliminated and data retrieval times are greatly reduced. Double Date Rate SDRAM is an enhanced, faster version of SDRAM. DDR SDRAM allows data to be read on the rising and falling edge of the clock signal. As a result DDR SDRAM can deliver twice the memory bandwidth of standard SDRAM.

Rambus DRAM or RDRAM is the company's proprietary synchronous DRAM design. RDRAM changes the system interface of DRAM in a unique way. The RDRAM chip operates synchronously, with a very high bus clock frequency that also employs both edges of the clock pulse. While typical SDRAM chips may operate at 125 MHz, an RDRAM chip operates at 600 MHz. The RDRAM chips do not fall explicitly within the JEDEC design guidelines.

Continued on Page 4

Financial Information of Major SDRAM Manufacturers

	Rambus, Inc.	Micron Technology, Inc.	Hyundai Electronics Industries Co., Ltd.	Samsung Electronics Co., Ltd.
	(NASDAQ: RMBS)	(NYSE: MU)	(KSE: HyundaiElec)	(KSE: SamsungElec)
	www.rambus.com	www.micron.com	www.hyundai.com	www.samsungelectronics.com
Sales (in millions)	$28.0 (royalties) $5.9 (contracts) $34.7	$7,336.3	$5,248.8	$29,814.1
Net Income	$13.0	$1,504.2	$195.8	$2,755
EPS	$0.18	$2.79	$0.36	$37

(Sources: Rambus 10-Q, 12/31/00; Micron FY 2000 10-K; Hyundai Income Statement 12/31/99; Samsung 1999 Annual Report)

Intellectual Property Analysis

Since 1990, Rambus has been applying for patents in synchronous memory and developing the technology for SDRAM. Although not specifically part of the *Micron v. Rambus* complaint, Rambus' first issued U.S. patent lays the groundwork for much of the company's synchronous DRAM technology. Patent No. 5,243,703 entitled "Apparatus for synchronously generating clock signals in a data processing system" was filed on March 5, 1992 and issued September 7, 1993. The patent cites the original '898 patent application.

The '703 patent provides a long, detailed description of the many important attributes of the Rambus synchronization design, including their bus architecture, clocking scheme, and I/O interface. However, the patent *claims* are limited to the invention for the apparatus for synchronously generating the system clock. The '703 patent is important because it establishes the synchronization clock used in subsequent Rambus patents. To those skilled in the art, the invention reveals an elegant clocking scheme that allows high-speed clock signals to be sent along a bus with minimal clock skew. However, are the patent claims non-obvious to those skilled in the art?

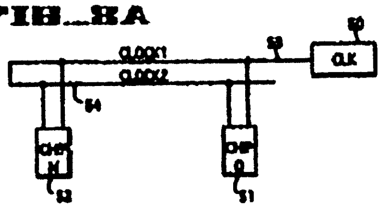
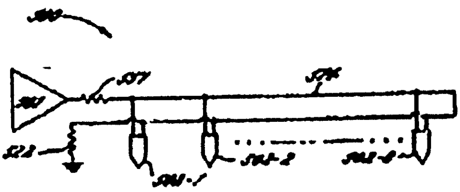
A prior and concurrent art analysis of this patent was conducted using M•CAM's DOORS™ patent analysis software. This analysis identified at least one un-cited prior art patent and at least one concurrent art patent with claims that are very similar to the '703 patent. Neither of the un-cited patents presented in this report were included in the original U.S. Patent Office *Field of Search* for the '703 patent. The current U.S. Patent Classification for the '703 patent is *Electrical Computers and Digital Processing Systems: Support* (Class 713).

The un-cited prior art patent identified, U.S. Patent No. 4,998,262 entitled, "Generation of topology independent reference signals" was filed October 10, 1989 and issued March 5, 1991 to Hans A.M. Wiggers. The assignee is the Hewlett-Packard Company (HP) of Palo Alto, CA. Hewlett Packard's '262 patent was filed five months before the original Rambus '898 patent application and three years before the '703 patent.

Intellectual Property Analysis continued on Page 6

A side-by-side comparison of the '703 and '262 patents will help identify some of their claim similarities:

Patent '703 claims... *...an apparatus for generating clock signals that can be synchronized through propagation delay and equivalent circuit line length.*	*Patent '262 claims...* *...an electronic system that generates multiple phase coherent signals that correspond to [illegible]*
What is claimed is: 1. An apparatus for synchronously generating a first clock signal for a first semiconductor circuitry of a data processing system and a second clock signal for a second semiconductor circuitry of the data processing system, wherein the apparatus comprises: (A) clock generating means for generating a global clock signal; (B) transmission line means for transferring the global clock signal from a first end to a second end, wherein the transmission line means includes (1) the first end coupled to the clock generating means to receive the global clock signal and (2) the second end, and wherein the transmission line means includes a midpoint between the first end and the second end; (C) first clock signal generation means in the first semiconductor circuitry for generating the first clock signal for the first semiconductor circuitry, wherein the first clock signal generation means is coupled at (1) a first point of the transmission line means [illegible]	What is claimed is: 1. An electronic system comprising: a signal source for providing an initial signal; a plurality of receivers requiring the use of an associated one of a plurality of locally generated signals, each of said plurality of locally generated signals corresponding to said initial signal and delayed from said initial signal by a predefined time; a forward path having an end for receiving said initial signal, each of said plurality of receivers being located at an associated one of a plurality of locations along said forward path [illegible]

Patent '703 claims...	*Patent '262 claims...*
means from the first end to the second point, wherein the first clock signal generation means generates the first clock signal at a first timing that is halfway between the global clock signal with the first propagation delay and the global clock signal with the second propagation delay, wherein the first timing of the first clock signal coincides with the global clock signal with a midpoint propagation delay of the transmission line means from the first end to the midpoint; (D) second clock signal generation means in the second semiconductor circuitry for generating the second clock signal for the second semiconductor circuitry, wherein the second clock signal generation means is coupled at (1) a third point of the transmission line means for receiving the global clock signal and (2) a fourth point of the transmission line means for receiving the global clock signal, ...wherein the second clock signal generation means generates the second clock signal at a second timing that is halfway between the global clock signal with the third propagation delay and the global clock signal with the fourth propagation delay, wherein the second timing of the second clock signal coincides with the global clock signal with the midpoint propagation delay of the transmission line means from the first end to the midpoint, wherein the first timing is the same as the second timing such that the first clock signal is synchronized with the second clock signal. 2. An apparatus of claim 1, wherein the transmission line means comprises a U-shaped transmission line, wherein the midpoint is at a turnaround of the U-shaped transmission line. 3. An apparatus of claim 1, wherein the line length from the midpoint to the first end is equal to the line length from the midpoint to the second end. 4. An apparatus of claim 1, wherein the second end of the transmission line means is a terminated end. ... 5. The apparatus of claim 1, wherein the first semiconductor circuitry is a central processing unit and the second semiconductor circuitry is a controller. 6. An apparatus for synchronously generating a first clock signal and a second clock signal for a second semiconductor circuitry of the data processing system, wherein the apparatus comprises: (A) clock generating means for generating a global clock signal; (B) a transmission line means for transferring the global clock signal from a first end to a second end, ... wherein the first clock signal is reflected back at the second end towards the first end to become the reflected global signal.	with said receiver. 2. A system as in claim 1 wherein the sum of the distances along the forward and backward paths between said source and each of said receivers is substantially equal. ... 4. Apparatus for providing a signal comprising: a first input lead for receiving a first signal corresponding to an initial signal and delayed from said initial signal by a first propagation delay; a second input lead for receiving a second input signal corresponding to said initial signal and delayed from initial signal by a second propagation delay; an output lead for providing a locally generated signal corresponding to said initial signal and delayed from said initial signal by a third propagation delay which is a function of said first and second propagation delays; a voltage controlled oscillator for providing said locally generated signal in response to said [illegible] signal. 5. An electronic system comprising: a signal source for providing an initial signal; a plurality of receivers, each having a first and second input lead, each of said receivers requiring the use of an associated one of a plurality of locally generated signals, each of said plurality of locally generated signals corresponding to said initial signal and delayed from said initial signal by a predefined time; a signal path having [illegible] for receiving said initial signal, each of said first input leads of said plurality of receivers being connected to said signal path at an associated one of a first plurality of locations along said signal path, such that each of said receivers has an associated first propagation delay between said source and said location, such that said first propagation delays [illegible] each of said second input leads of said plurality of receivers being connected to said signal path at an associated one of a second plurality of locations along said signal path, such that each of said receivers has an associated second propagation delay between said source and said location, such that said second propagation delays are not equal; and a plurality of [illegible] each associated with one of said receivers, for [illegible] said [illegible] said first and second input leads [illegible] to generate a locally generated signal corresponding to said initial signal and having a propagation delay from said initial signal which is equal to the average of said first propagation delay and said second propagation delay associated with [illegible]
Figure 8A - Reprinted from the '703 Patent	*Figure 5 - Reprinted from the '262 Patent*
FIG. 8A  	 FIG. 5

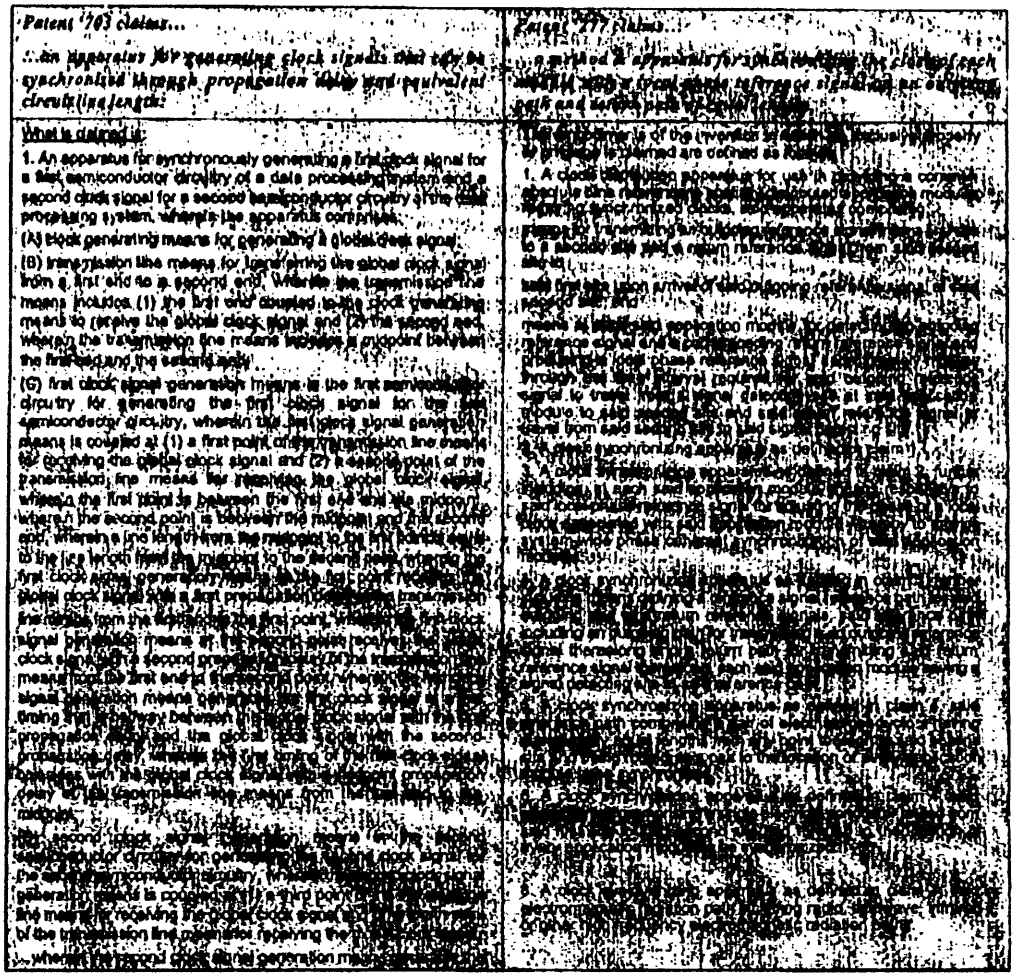
The un-cited concurrent art patent identified by MeCAM DOORS™, U.S. Patent No. 5,361,277 entitled, "Method and apparatus for clock distribution and for distributed clock synchronization" was filed on March 30, 1989 and issued four years later on November 1, 1994 to Wayne D. Grover. The assignee is Alberta Telecommunications Research Centre of Canada. This patent was filed one year *prior* to the original Rambus '898 patent application and remained *undisclosed* through the filing and issuance of '703. The Alberta Telecommunications patent '277 cited the HP patent '262.

Although the primary U.S. Patent Classification for the '277 patent is *Pulse or Digital Communications*, (Class 375), Claim 8 of the patent clearly states an expectation that the invention would have other applications, including high frequency circuits. Claim 8 states:

> "A clock synchronizing apparatus as defined in claim 7, said electromagnetic radiation path including radio, lightwave, infrared or other high frequency electromagnetic radiation paths."

Intellectual Property Analysis continued on Page 8

A side-by-side comparison between patents '703 and '277 will help identify some of their claim similarities:



<table>
<tr><th>Patent '703 claims...</th><th>Patent '277 claims...</th></tr>
<tr><td>second clock signal at a second timing that is halfway between the global clock signal with the third propagation delay and the global clock signal with the fourth propagation delay, wherein the second timing of the second clock signal coincides with the global clock signal with the midpoint propagation delay of the transmission line means from the first end to the midpoint, wherein the first timing is the same as the second timing such that the first clock signal is synchronized with the second clock signal.

2. An apparatus of claim 1, wherein the transmission line means comprises a U-shaped transmission line, wherein the midpoint is at a turnaround of the U-shaped transmission line.

3. An apparatus of claim 1, wherein the line length from the midpoint to the first end is equal to the line length from the midpoint to the second end.

4. An apparatus of claim 1, wherein the second end of the transmission line means is a terminated end.

8. The apparatus of claim 1, wherein the first semiconductor circuitry is a central processing unit and the second semiconductor circuitry is a controller.

9. An apparatus for synchronously generating a first clock signal for a first semiconductor circuitry of a data processing system and a second clock signal for a second semiconductor circuitry of the data processing system, wherein the apparatus comprises:
(A) clock generating means for generating a global clock signal;
(B) a transmission line means for transferring the global clock signal from a first end to a second end, wherein the transmission line means includes: (1) the first end coupled to the clock generating means to receive the global clock signal and (2) the second end, wherein the second end of the transmission line means is an unterminated end, wherein the first clock signal is reflected back at the second end towards the first end to become the reflected global signal...</td><td>11. A clock synchronizing apparatus as defined in claim 5, further including means at said second site for emitting said return reference signal upon receipt of said outgoing reference signal.

...

13. A clock synchronizing apparatus as defined in claim 3, said detecting means including interval-halving circuit means.

14. A clock synchronizing apparatus as defined in claim 13, said interval-halving circuit including:
first detector means for producing a output signal upon detecting an outgoing reference signal;
second detector means for producing a second output signal upon detecting a return reference signal;
means responsive to said first and second output signals for determining and storing the time interval between said first and second output signals; and
means responsive to said first output signal for comparing the current time interval with an immediately preceding time interval and producing a reference phase output signal when said current time interval is one half said preceding time interval.

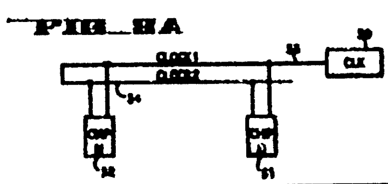
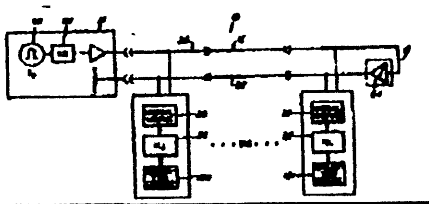
16. A clock synchronizing apparatus as defined in claim 15, said means for producing said reference phase output signal including a rising edge short pulse generator means.

17. A clock synchronizing apparatus as defined in claim [illegible], said outgoing and return reference signals being [illegible] pulses.

18. A clock [illegible] apparatus as defined in [illegible] said [illegible] means is for producing [illegible] greater than the round trip propagation [illegible] signals.

19. A clock synchronizing apparatus as defined in [illegible] responsive means being a local clock [illegible] means for locking onto said local phase reference [illegible].

36. A clock synchronizing apparatus as defined in claim [illegible] detecting means and said responsive means [illegible]:
a fixed frequency oscillator for producing clock [illegible] predetermined frequency;
a programmable divider circuit means for [illegible] signals and having an output and divider [illegible] inputs;

37. A method of phase synchronizing [illegible] distributed application [illegible] requiring synchronization, said method [illegible]:
transmitting an outgoing reference signal [illegible] second site and a return reference signal from [illegible] said first site upon arrival of said outgoing reference [illegible] second site;
detecting an outgoing reference signal and [illegible] reference signal and producing a local phase reference [illegible] approximately midway through the time interval [illegible] outgoing reference signal to travel from a [illegible] said application site to said second [illegible] reference signal to travel from said second site to said detecting site.</td></tr>
<tr><td>Figure 8A - Reprinted from the '703 Patent
 
</td><td>Figure 1 - Reprinted from the '277 Patent
  </td></tr>
</table>

Intellectual Property Analysis *(continued)*

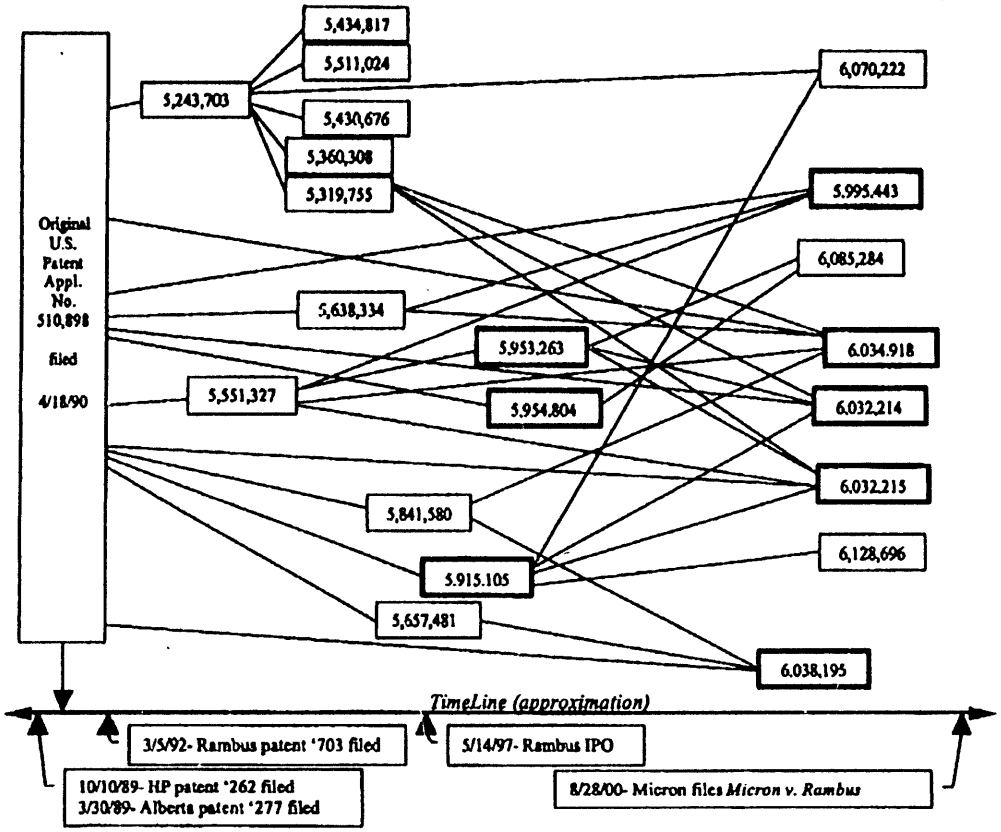
Turning our attention to the eight patents in *Micron v. Rambus*, we find that all referred to the original '898 application in some way. Through continuations and divisional applications, Rambus gained considerable control of post- April 1990 innovation in synchronous DRAM. In fact, all of the patents *in Micron v. Rambus* are cited by, reference, or are related through continuation by, one or more of the 100+ Rambus patents.

There are two primary reasons the patents in *Micron v. Rambus* are part of such a defensible intellectual property portfolio. First, much of the industry's relevant innovation in synchronous DRAM occurred during and after the JEDEC standards-setting efforts in the early 1990s. This of course, is the basis for some of the complaints in *Micron v. Rambus*. Second, as shown in the Figure 1, Rambus has built a web of patent interconnectedness that helps solidify their sphere of influence in the synchronous DRAM space. Moreover, Rambus patents and innovation are focused almost exclusively on SDRAM, DDR SDRAM, and RDRAM technology.

Intellectual Property Analysis continued on Page 9

Figure 1- Citation & Continuation Web for Rambus Patents in *Micron v. Rambus*

(Note: All patents held by Rambus; Timeline is an approximation; Not all citation & reference links shown; Micron v. Rambus in bold)



Intellectual Property Analysis *(continued)*

The patents in *Micron v. Rambus* were likely chosen by Micron because they incrementally contribute to the overall synchronous DRAM technology. The patents often share very similar claims language with one another, and they often utilize identical *Figures* and *Detailed Descriptions* from previous Rambus patents, especially the '703 patent. Regardless, the eight patents each provide a different, but integral component for making synchronous memory chips. It should be noted that the clocking scheme is an integral part of most of these patents' claims.

For example, Rambus patent no. 5,915,105 claims various attributes for a synchronous memory device such as the use of 1st and 2nd clock signals and 1st and 2nd multiplexors. Patent no. 5,953,263 claims a programmable register that is initialized at system startup and works with the system clock. Patent no. 5,954,804 claims the interface and comparison circuitry for the synchronous memory device. Patent no. 5,995,443 adds memory subarrays and claims the necessary I/O multiplexor circuitry to help manage them. Patent no. 6,032,214 claims a method of using blocks of information and request packets to manage code of variable output length within the memory device.

Patent no. 6,032,215, with 38 separate claims, combines previous innovations from the original application '898 and patents '105, '263, '327 and '755, (as shown graphically in Figure 1). This patent claims a synchronous memory device with such things as subarrays and multiplexor circuitry, and adds the necessary sense amplifiers. Patent no. 6,034,918 claims a method of controlling the synchronous memory device's ability to read and write blocks of information. Finally, patent no. 6,038,195, claims a memory device with a delay time register and a method for operating it.

Clearly, Rambus' patent portfolio is strengthened because of the early filing of the original '898 application. However, as illustrated by the '703 example, early patent filings must be thoroughly examined for weaknesses in the patent claims. Three of the patents in *Micron v. Rambus*, namely '214, '215, and '918, directly cite and incorporate claims from '703 patent. And, while any problems found in '703 may not directly impact its patent offspring '214, '215, and '918, Rambus' memory products that incorporate the '703 clocking scheme may be susceptible to licensing fees or other measures. This would include Rambus' own RDRAM products.

The analysis identified numerous other synchronous memory patents that were filed in the mid-1990s by Rambus' competitors. In some cases, these patents are innovating from Rambus' patents, and in other cases, the patents have claims that are very similar to Rambus'. Not surprisingly, the industry is working to innovate beyond the current SDRAM technology. Some within the industry have attempted to create alternative synchronous memory devices (*i.e.* SyncLink™ DRAM or SLDRAM). And there is an ongoing effort to produce the next generation of SDRAM, such as magnetic DRAM or MDRAM.

Key Acronyms/Terminology

JEDEC	Joint Electron Device Engineering Council
ROM	Read Only Memory
SRAM	Static Random Access Memory
DRAM	Dynamic Random Access Memory
EDO DRAM	Extended Data Out DRAM
FPM DRAM	Fast Page Mode DRAM
SDRAM	Synchronous DRAM
DDR SDRAM	Double Data Rate DRAM
RDRAM	Rambus DRAM
SLDRAM™	SyncLink DRAM
MRAM	Magnetic RAM

Conclusion on Page 10

Conclusion

Rambus has developed a strong patent portfolio that is based, in large part, on a patent filing on April 18, 1990. This patent application and its subsequent continuations provide some of the essential components for synchronous DRAM, including but not limited to: the memory interface/clock scheme and the dual clock edge feature. The analysis of the eight patents involved in *Micron v. Rambus* did not identify any significant prior or concurrent art claim problems for these specific patents.

However, the analysis has identified at least two prior/concurrent art patents, namely Hewlett-Packard's 4,998,262 and Alberta Telecommunication's 5,361,277, that were not cited by Rambus' early divisional patent no. 5,243,703. In addition, the un-cited patents were filed before the original Rambus 510,898 patent application from 1990. The HP and Alberta patents involve apparatus and methods that are very similar to the synchronous clock technology that is used in the operation of SDRAM, DDR SDRAM and Rambus' RDRAM. As these and other prior and/or concurrent art patents are identified, Rambus may encounter challenges in the future with respect to the enforcement of some or all of the claims found in the '703 patent and/or those included in the original '898 application.

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Morphogenetic Sets

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ted.parr@uspto.gov	14/Nov/2000:15:42:09	d430001		ted.parr@uspto.gov	11/Jan/2001:08:58:09	5387947
ted.parr@uspto.gov	15/Nov/2000:08:16:30		4567890	ted.parr@uspto.gov	11/Jan/2001:08:58:58	5379076
ted.parr@uspto.gov	15/Nov/2000:08:23:32	ted.parr@uspto.gov		ted.parr@uspto.gov	11/Jan/2001:08:59:31	5376971
ted.parr@uspto.gov	15/Nov/2000:08:24:01	d430001		ted.parr@uspto.gov	11/Jan/2001:09:01:12	5369449
ted.parr@uspto.gov	15/Nov/2000:08:29:14		5000000	holly.baynham@uspto.gov	11/Jan/2001:09:03:54	5436784
ted.parr@uspto.gov	15/Nov/2000:08:29:24		5000000	holly.baynham@uspto.gov	11/Jan/2001:09:04:31	5600575
ted.parr@uspto.gov	15/Nov/2000:08:30:57		4567890	holly.baynham@uspto.gov	11/Jan/2001:09:05:05	5604687
ted.parr@uspto.gov	15/Nov/2000:08:31:15		5010611	holly.baynham@uspto.gov	11/Jan/2001:09:05:35	561453
ted.parr@uspto.gov	15/Nov/2000:08:40:33	d282439		holly.baynham@uspto.gov	11/Jan/2001:09:05:50	5610453
ted.parr@uspto.gov	15/Nov/2000:08:40:55		5666666	holly.baynham@uspto.gov	11/Jan/2001:09:06:17	5612604
ted.parr@uspto.gov	15/Nov/2000:09:10:39		5010011	holly.baynham@uspto.gov	11/Jan/2001:09:06:51	5644510
ted.parr@uspto.gov	15/Nov/2000:09:11:51		4567890	holly.baynham@uspto.gov	11/Jan/2001:09:07:34	5745375
ted.parr@uspto.gov	15/Nov/2000:12:50:47		4567890	holly.baynham@uspto.gov	11/Jan/2001:09:08:01	5805403
ted.parr@uspto.gov	15/Nov/2000:13:16:14		5371989	holly.baynham@uspto.gov	11/Jan/2001:09 08:31	5825399
ted.parr@uspto.gov	15/Nov/2000:13:17:17		4647496	holly.baynham@uspto.gov	11/Jan/2001:09:09:04	5835885
ted.parr@uspto.gov	15/Nov/2000:13:22:22		4810569	holly.baynham@uspto.gov	11/Jan/2001:09:09:58	5838590
ted.parr@uspto.gov	15/Nov/2000:13:30:33		3921358	holly.baynham@uspto.gov	11/Jan/2001:09:10:23	5848282
ted.parr@uspto.gov	15/Nov/2000:13:31:35		2036329	holly.baynham@uspto.gov	11/Jan/2001:09:13:59	5390350
ted.parr@uspto.gov	15/Nov/2000:13:31:53		4765190	ted.parr@uspto.gov	11/Jan/2001:09:26:59	5583388
ted.parr@uspto.gov	15/Nov/2000:13:34:17		4914522	holly.baynham@uspto.gov	11/Jan/2001:09:29:17	5460317
ted.parr@uspto.gov	15/Nov/2000:13:34:37		5376957	holly.baynham@uspto.gov	11/Jan/2001:09:48:48	5833127
ted.parr@uspto.gov	15/Nov/2000:13:36:17		5282389	holly.baynham@uspto.gov	11/Jan/2001:09:49:06	5378951

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ted.parr@uspto.gov	15/Nov/2000:13:43:07	5376957 holly.baynham@uspto.gov	11/Jan/2001:09:50:06	5893507	
ted.parr@uspto.gov	15/Nov/2000:14:28:18	4208072 holly.baynham@uspto.gov	11/Jan/2001:09:50:38	5862975	
ted.parr@uspto.gov	15/Nov/2000:14:43:04	5666666 holly.baynham@uspto.gov	11/Jan/2001:09.52:10	5829664	
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ted.parr@uspto.gov	21/Nov/2000:11:34:14	6144848 sam.gilbert@uspto.gov	11/Jan/2001:10:32:27	5703222	
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ted.parr@uspto.gov	21/Nov/2000:13:32:29	6142381 holly.baynham@uspto.gov	11/Jan/2001:10:39:12	5533674	
ted.parr@uspto.gov	21/Nov/2000:13:42:34	9138909 sam.gilbert@uspto.gov	11/Jan/2001:10:42:09	5700642	
ted.parr@uspto.gov	21/Nov/2000:13:43:28	6138909 holly.baynham@uspto.gov	11/Jan/2001:10:44:39	5405087	
ted.parr@uspto.gov	21/Nov/2000:13.55:40	6047808 holly.baynham@uspto.gov	11/Jan/2001:10:45:53	5332156	
ted.parr@uspto.gov	21/Nov/2000:14:17:42	6135352 holly.baynham@uspto.gov	11/Jan/2001:10:46:55	5285965	
ted.parr@uspto.gov	21/Nov/2000:14:25:31 d404115	holly.baynham@uspto.gov	11/Jan/2001:10:49:31	5397060	

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ted.parr@uspto.gov	21/Nov/2000:14:35:26	6129273	sam.gilbert@uspto.gov	11/Jan/2001:10:50:21	5585242
ted.parr@uspto.gov	21/Nov/2000:14:36:09 d342843		holly.baynham@uspto.gov	11/Jan/2001:10:51:50	5645958
brooks.hunt@uspto.gov	21/Nov/2000:14:37:56	5555555	holly.baynham@uspto.gov	11/Jan/2001:10:53:27	5587072
brooks.hunt@uspto.gov	21/Nov/2000:14:49:12	5555555	holly.baynham@uspto.gov	11/Jan/2001:10:57:49	5360488
brooks.hunt@uspto.gov	21/Nov/2000:14:52:43	5555555	holly.baynham@uspto.gov	11/Jan/2001:11:00:20	5405087
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ted.parr@uspto.gov	21/Nov/2000:16:22:15	6012048	holly.baynham@uspto.gov	11/Jan/2001:11:08:36	5574530
ted.parr@uspto.gov	27/Nov/2000:09:35:37 d342843		holly.baynham@uspto.gov	11/Jan/2001:11:09:12	5560544
ted.parr@uspto.gov	27/Nov/2000:09:54:41 d342843		holly.baynham@uspto.gov	11/Jan/2001:11:10:30	5358149
ted.parr@uspto.gov	27/Nov/2000:10:39:09	5757286	sam.gilbert@uspto.gov	11/Jan/2001:11:10:39	5681327
ted.parr@uspto.gov	27/Nov/2000:10:40:44	5708425	sam.gilbert@uspto.gov	11/Jan/2001:11:19:23	5681327
ted.parr@uspto.gov	27/Nov/2000:10:41:23	5640156	sam.gilbert@uspto.gov	11/Jan/2001:11:25:28	5569266
ted.parr@uspto.gov	27/Nov/2000:10:44:09	5568406	holly.baynham@uspto.gov	11/Jan/2001:11:27:18	54683333
ted.parr@uspto.gov	27/Nov/2000:10:45:37	5554984	holly.baynham@uspto.gov	11/Jan/2001:11:28:05	5665195
ted.parr@uspto.gov	27/Nov/2000:10:46:03	5509082	holly.baynham@uspto.gov	11/Jan/2001:11:30:02	5423938
ted.parr@uspto.gov	27/Nov/2000:10:48:52	5392034	holly.baynham@uspto.gov	11/Jan/2001:11:34:03	5571370
ted.parr@uspto.gov	27/Nov/2000:10:49:23	5101200	holly.baynham@uspto.gov	11/Jan/2001:11:34:39	5562796
ted.parr@uspto.gov	27/Nov/2000:10:54:29	5392034	holly.baynham@uspto.gov	11/Jan/2001:11:37:14	5477901
ted.parr@uspto.gov	27/Nov/2000:10:56:33	5509082	holly.baynham@uspto.gov	11/Jan/2001:11:38:35	5472556
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ted.parr@uspto.gov	27/Nov/2000:11:15:59	5880443	holly.baynham@uspto.gov	11/Jan/2001:12:10:53	5669003
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ted.parr@uspto.gov	27/Nov/2000:11:20:51	5962840	holly.baynham@uspto.gov	11/Jan/2001:12:21:48	5615824
ted.parr@uspto.gov	27/Nov/2000:11:46:25	4567890	holly.baynham@uspto.gov	11/Jan/2001:12:26:51	5577657
ted.parr@uspto.gov	27/Nov/2000:12:01:07	5678901	holly.baynham@uspto.gov	11/Jan/2001:12:27:51	5533665
ted.parr@uspto.gov	27/Nov/2000:12:03:48	5432101	holly.baynham@uspto.gov	11/Jan/2001:12:28:33	5460319
ted.parr@uspto.gov	27/Nov/2000:12:23:17	5712367	holly.baynham@uspto.gov	11/Jan/2001:12:29:34	5452840
ted.parr@uspto.gov	27/Nov/2000:12:24:27	5220012	holly.baynham@uspto.gov	11/Jan/2001:14:10:11	5649599
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ted.parr@uspto.gov	27/Nov/2000:12:31:57	5987346	holly.baynham@uspto.gov	11/Jan/2001:14:11:46	5620143
ted.parr@uspto.gov	27/Nov/2000:13:12:39	5852289	holly.baynham@uspto.gov	11/Jan/2001:17:14:12	5685939
ted.parr@uspto.gov	27/Nov/2000:13:12:46	5852289	holly.baynham@uspto.gov	11/Jan/2001:17:20:24	5580407
ted.parr@uspto.gov	27/Nov/2000:13:13:36	5852289	holly.baynham@uspto.gov	11/Jan/2001:17:21:00	5562790
ted.parr@uspto.gov	27/Nov/2000:13:14:10	5671525	sam.gilbert@uspto.gov	12/Jan/2001:06:46:15	5551946
ted.parr@uspto.gov	27/Nov/2000:13:15:12	5612532	sam.gilbert@uspto.gov	12/Jan/2001:06:48:53	5402768
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ted.parr@uspto.gov	27/Nov/2000:13:17:36	5321240	sam.gilbert@uspto.gov	12/Jan/2001:07:11:20	5700642
ted.parr@uspto.gov	27/Nov/2000:13:18:34	4463971	sam.gilbert@uspto.gov	12/Jan/2001:07:29:02	5407225
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ted.parr@uspto.gov	27/Nov/2000:15:14:41	6146773	sam.gilbert@uspto.gov	12/Jan/2001:08:55:10	5525127

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ted.parr@uspto.gov	27/Nov/2000:15:15:30	d395383	sam.gilbert@uspto.gov	12/Jan/2001:09:00:07	5516444
ted.parr@uspto.gov	27/Nov/2000:15:16:01	6145740	sam.gilbert@uspto.gov	12/Jan/2001:09:00:51	5516342
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ted.parr@uspto.gov	27/Nov/2000:15:48:17	4380292	ted.parr@uspto.gov	12/Jan/2001:13 40:15	5559670
ted.parr@uspto.gov	27/Nov/2000:15:48:17	6138917	ted.parr@uspto.gov	12/Jan/2001:13:43:42	5526023
ted.parr@uspto.gov	27/Nov/2000:15:49:18	6141161	ted.parr@uspto.gov	12/Jan/2001:13:47:13	5567258
ted.parr@uspto.gov	27/Nov/2000:15:49:35	6131817	ted.parr@uspto.gov	12/Jan/2001:13:48:09	5604516
ted.parr@uspto.gov	27/Nov/2000:15:49:58	5452873	ted.parr@uspto.gov	12/Jan/2001:13:49:55	5563631
ted.parr@uspto.gov	27/Nov/2000:15:50:27	6129283	ted.parr@uspto.gov	12/Jan/2001:14:18:42	5551957
ted.parr@uspto.gov	27/Nov/2000:15:50:40	3972498	ted.parr@uspto.gov	12/Jan/2001:14:20:08	5516342
ted.parr@uspto.gov	27/Nov/2000:15:50:46	6128604	ted.parr@uspto.gov	12/Jan/2001:14:34:37	5361105
ted.parr@uspto.gov	27/Nov/2000:15:51:04	6128598	ted.parr@uspto.gov	12/Jan/2001:14:36:06	5583565
ted.parr@uspto.gov	27/Nov/2000:15:51:16	5009383	ted.parr@uspto.gov	12/Jan/2001:14:37:40	5200827
ted.parr@uspto.gov	27/Nov/2000:15:52:04	5114105	ted.parr@uspto.gov	12/Jan/2001:14:41:19	5587741
ted.parr@uspto.gov	27/Nov/2000:15:52:33	5646371	ted.parr@uspto.gov	12/Jan/2001:14:44:11	9253055
ted.parr@uspto.gov	27/Nov/2000:15:54:28	6119935	ted.parr@uspto.gov	12/Jan/2001:14:46:39	5274453
ted.parr@uspto.gov	27/Nov/2000:15:55:50	6039258	ted.parr@uspto.gov	12/Jan/2001:14:50:49	5253055
holly.baynham@uspto.gov	27/Nov/2000:15:55:53	5646371	ted.parr@uspto.gov	12/Jan/2001:14:54:21	5369449
ted.parr@uspto.gov	27/Nov/2000:15:56:23	5646371	ted.parr@uspto.gov	12/Jan/2001:14:55:41	5583565
ted.parr@uspto.gov	27/Nov/2000:15:57:33	6138915	ted.parr@uspto.gov	12/Jan/2001:15:47:17	5611479
ted.parr@uspto.gov	27/Nov/2000:15:58:04	d387649	ted.parr@uspto.gov	12/Jan/2001:15:52:41	5626277
ted.parr@uspto.gov	27/Nov/2000:15:58:41	6123263	sam.gilbert@uspto.gov	16/Jan/2001:06:20:50	5687592
ted.parr@uspto.gov	27/Nov/2000:16:00:34	6085981	sam.gilbert@uspto.gov	16/Jan/2001:08:11:25	5639725
ted.parr@uspto.gov	27/Nov/2000:16:01:13	d425127	sam.gilbert@uspto.gov	16/Jan/2001:08:11:48	5665870

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ted.parr@uspto.gov	27/Nov/2000:16:02:07	d424566		sam.gilbert@uspto.gov	16/Jan/2001:08:12:09	5677278
ted.parr@uspto.gov	27/Nov/2000:16:03:49	d414206		sam.gilbert@uspto.gov	16/Jan/2001:08:12:24	5489529
richard.gluck@uspto.gov	27/Nov/2000:16:04:02		5586872	sam.gilbert@uspto.gov	16/Jan/2001:08:13:01	5409897
ted.parr@uspto.gov	27/Nov/2000:16:05:15	d394454		sam.gilbert@uspto.gov	16/Jan/2001:08:13:38	5576288
richard.gluck@uspto.gov	27/Nov/2000:16:07:31		5549458	sam.gilbert@uspto.gov	16/Jan/2001:08:14:10	5693775
ted.parr@uspto.gov	27/Nov/2000:16:08:15		6006100	sam.gilbert@uspto.gov	16/Jan/2001:08:29:31	5693615
ted.parr@uspto.gov	27/Nov/2000:16:09:26		6015125	sam.gilbert@uspto.gov	16/Jan/2001:08:32:42	5703218
ted.parr@uspto.gov	27/Nov/2000:16:10:57		6015125	sam.gilbert@uspto.gov	16/Jan/2001:08:33:22	5703207
ted.parr@uspto.gov	27/Nov/2000:16:12:48		5895016	sam.gilbert@uspto.gov	16/Jan/2001:08:33:57	5703073
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richard.gluck@uspto.gov	27/Nov/2000:16:15:40		5711654	sam.gilbert@uspto.gov	16/Jan/2001:08:35:49	5688938
richard.gluck@uspto.gov	27/Nov/2000:16:15:52		5711654	sam.gilbert@uspto.gov	16/Jan/2001:08:37:40	5690935
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ted.parr@uspto.gov	27/Nov/2000:16:16:52		5423499	sam.gilbert@uspto.gov	16/Jan/2001:08:40:28	5691166
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richard.gluck@uspto.gov	27/Nov/2000:16:19:21		4692138	holly.baynham@uspto.gov	16/Jan/2001:14:24:16	5620890
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richard.gluck@uspto.gov	27/Nov/2000:16:33:18		6082977	holly.baynham@uspto.gov	16/Jan/2001:14:43:18	5656481
ted.parr@uspto.gov	27/Nov/2000:16:33:54		6129740	holly.baynham@uspto.gov	16/Jan/2001:15:34:18	5374526
richard.gluck@uspto.gov	27/Nov/2000:16:35:04		6106249	holly.baynham@uspto.gov	16/Jan/2001:15:35:07	5374524
ted.parr@uspto.gov	27/Nov/2000:16:35:37	d431762		holly.baynham@uspto.gov	16/Jan/2001:15:38:05	5372931
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ted.parr@uspto.gov	27/Nov/2000:16:38:27	d430696		holly.baynham@uspto.gov	16/Jan/2001:16:54:10	5591646
ted.parr@uspto.gov	27/Nov/2000:16:39:42	d430616		holly.baynham@uspto.gov	16/Jan/2001:16:55:33	5506337
richard.gluck@uspto.gov	27/Nov/2000:16:39:45		6099272	holly.baynham@uspto.gov	16/Jan/2001:16:56:37	5324483
ted.parr@uspto.gov	27/Nov/2000:16:41:10	d430473		holly.baynham@uspto.gov	16/Jan/2001:16:59:50	5770456
richard.gluck@uspto.gov	27/Nov/2000:16:41:16		6074183	holly.baynham@uspto.gov	16/Jan/2001:17:01:21	5684130
richard.gluck@uspto.gov	27/Nov/2000:16:42:40		6056522	holly.baynham@uspto.gov	16/Jan/2001:17:02:12	5624711
ted.parr@uspto.gov	27/Nov/2000:16:43:09	d429625		sam.gilbert@uspto.gov	17/Jan/2001:06:31:32	5620143
ted.parr@uspto.gov	27/Nov/2000:16:44:11	d429618		sam.gilbert@uspto.gov	17/Jan/2001:06:31:51	5620143
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ted.parr@uspto.gov	27/Nov/2000:16:47:37	d429452		sam.gilbert@uspto.gov	17/Jan/2001:06:46:46	5452840
ted.parr@uspto.gov	27/Nov/2000:16:50:08	d429618		sam.gilbert@uspto.gov	17/Jan/2001:06:59:21	5426275
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ted.parr@uspto.gov	27/Nov/2000:16:54:08	d428323		sam.gilbert@uspto.gov	17/Jan/2001:07:13:44	5703043
ted.parr@uspto.gov	27/Nov/2000:16:55:02	d427881		sam.gilbert@uspto.gov	17/Jan/2001:07:17:32	5690935
ted.parr@uspto.gov	27/Nov/2000:16:56:16	d427869		holly.baynham@uspto.gov	17/Jan/2001:14:32:16	5424821
ted.parr@uspto.gov	27/Nov/2000:16:56:54	d427642		holly.baynham@uspto.gov	17/Jan/2001:14:32:24	5424821
ted.parr@uspto.gov	27/Nov/2000:16:57:28	d427506		holly.baynham@uspto.gov	17/Jan/2001:14:34:00	5460361
ted.parr@uspto.gov	27/Nov/2000:16:58:18	d427042		holly.baynham@uspto.gov	17/Jan/2001:14:34:25	5483889
ted.parr@uspto.gov	27/Nov/2000:16:58:53	d427036		holly.baynham@uspto.gov	17/Jan/2001:14:35:26	5494398

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ted.parr@uspto.gov	27/Nov/2000:16:59.45	d426761		holly baynham@uspto.gov	17/Jan/2001:14:38:16	5607146
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ted.parr@uspto.gov	27/Nov/2000:17:01:14	d426452		holly.baynham@uspto.gov	17/Jan/2001:14:43:51	5700004
ted.parr@uspto.gov	27/Nov/2000:17:01:38	d426442		ted.parr@uspto.gov	17/Jan/2001:14:44:24	5533719
ted.parr@uspto.gov	27/Nov/2000:17:03:16	d426129		holly.baynham@uspto.gov	17/Jan/2001:14:44:40	5697608
ted.parr@uspto.gov	27/Nov/2000:17:04:04	d425784		ted parr@uspto.gov	17/Jan/2001:14:45:33	5480135
ted.parr@uspto.gov	27/Nov/2000:17:04:58	d425780		ted.parr@uspto.gov	17/Jan/2001:14:46:45	5288066
ted.parr@uspto.gov	27/Nov/2000:17:05:18	d425775		holly.baynham@uspto.gov	17/Jan/2001:14:51:11	5697605
ted parr@uspto.gov	27/Nov/2000:17:06:59	d425772		holly.baynham@uspto.gov	17/Jan/2001:14:51.44	5695186
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ted.parr@uspto.gov	27/Nov/2000:17:08:55	d425396		ted.parr@uspto.gov	17/Jan/2001:14:52:33	5697608
ted parr@uspto.gov	27/Nov/2000:17:10:08	d424949		holly.baynham@uspto.gov	17/Jan/2001:14:54:11	5695183
ted.parr@uspto.gov	27/Nov/2000:17:10.56	d424913		holly.baynham@uspto.gov	17/Jan/2001:14:55.39	5695182
ted parr@uspto.gov	27/Nov/2000:17:11:33	d424908		ted.parr@uspto.gov	17/Jan/2001:14:57:15	5494398
ted.parr@uspto.gov	27/Nov/2000:17:11:55	d424904		holly.baynham@uspto.gov	17/Jan/2001:16:54:41	5367851
ted.parr@uspto.gov	27/Nov/2000:17:12.39	d424903		holly.baynham@uspto.gov	17/Jan/2001:17:18:56	d429996
ted.parr@uspto.gov	27/Nov/2000:17:13:05	d424902		holly.baynham@uspto.gov	17/Jan/2001:17:19:20	d200157
ted.parr@uspto.gov	27/Nov/2000:17:14:05	d424966		holly.baynham@uspto.gov	18/Jan/2001:08:25.54	5424727
ted.parr@uspto.gov	27/Nov/2000:17:14:33	d424405		holly.baynham@uspto.gov	18/Jan/2001:08:26:04	5424727
ted.parr@uspto.gov	27/Nov/2000:17.15:14	d424403		holly.baynham@uspto.gov	18/Jan/2001:08:28:48	5578989
ted.parr@uspto.gov	27/Nov/2000:17:15:31	d424402		holly.baynham@uspto.gov	18/Jan/2001:08:30:07	5585783
ted parr@uspto.gov	27/Nov/2000:17:15:53	d424396		holly.baynham@uspto.gov	18/Jan/2001:08:34:20	5633651
ted.parr@uspto.gov	27/Nov/2000:17:16:41	d423904		holly.baynham@uspto.gov	18/Jan/2001:08:34:59	5642066
ted.parr@uspto.gov	27/Nov/2000:17:17:02	d423898		holly.baynham@uspto.gov	18/Jan/2001:08:35 50	5686986
ted parr@uspto.gov	27/Nov/2000:17:17:26	d423892		holly.baynham@uspto.gov	18/Jan/2001:08:43:50	5677669
ted.parr@uspto.gov	27/Nov/2000:17:18:22	d422892		holly.baynham@uspto.gov	18/Jan/2001:08:44:44	5627513
ted.parr@uspto.gov	27/Nov/2000:17:18:53	d422874		holly.baynham@uspto.gov	18/Jan/2001:08:46:52	5572188
ted.parr@uspto.gov	27/Nov/2000:17:19:34	d422727		holly baynham@uspto.gov	18/Jan/2001:08:47:41	5450058
ted.parr@uspto.gov	27/Nov/2000:17:20:40	d422463		sam.gilbert@uspto.gov	18/Jan/2001:09:02:24	5501043
ted.parr@uspto.gov	27/Nov/2000:17:21:13	d421891		ted.parr@uspto.gov	18/Jan/2001:09:03:17	5424727
ted.parr@uspto.gov	27/Nov/2000:17:22:26	d421888		sam.gilbert@uspto.gov	18/Jan/2001:09:03:46	5596843
ted parr@uspto.gov	27/Nov/2000:17:23:06	d421885		sam.gilbert@uspto.gov	18/Jan/2001:09:04:17	5623797
ted.parr@uspto.gov	27/Nov/2000:17:23:46	d421615		sam.gilbert@uspto.gov	18/Jan/2001:09:07:20	5666778
george.chadwick@uspto.gov	28/Nov/2000:07:14:11		4567890	sam.gilbert@uspto.gov	18/Jan/2001:09:07:36	5685115
ted.parr@uspto.gov	28/Nov/2000:07:56:59		6000000	ted.parr@uspto.gov	18/Jan/2001:09:07:57	5585783
george.chadwick@uspto.gov	28/Nov/2000:08:07:16	D421615		sam.gilbert@uspto.gov	18/Jan/2001:09:08:31	5701710
george.chadwick@uspto.gov	28/Nov/2000:08:09:52		5388795	ted.parr@uspto.gov	18/Jan/2001:09:12:06	5450058
george.chadwick@uspto.gov	28/Nov/2000:08:32:12		6056522	sam.gilbert@uspto.gov	18/Jan/2001:09:18:03	5692356
ted.parr@uspto.gov	28/Nov/2000:09:28:42		5679943	sam.gilbert@uspto.gov	18/Jan/2001:09:19:35	5688078
ted.parr@uspto.gov	28/Nov/2000:09:28:51		5679943	sam.gilbert@uspto.gov	18/Jan/2001:09:20:48	5658483
ted parr@uspto.gov	28/Nov/2000:10:01:30	d342843		sam.gilbert@uspto.gov	18/Jan/2001:09:21:29	5640824
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ted.parr@uspto.gov	28/Nov/2000:11:10:26		6012048	holly.baynham@uspto.gov	22/Jan/2001:10:16:35	5668005
ted.parr@uspto.gov	28/Nov/2000:12:49:09		6140941	holly.baynham@uspto.gov	22/Jan/2001:10:17:39	5618711

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ted.parr@uspto.gov	28/Nov/2000:13:02:03		4567890	holly.baynham@uspto.gov	22/Jan/2001:10:20:47	5541009
ted.parr@uspto.gov	28/Nov/2000:14:38:41		5388795	holly.baynham@uspto.gov	22/Jan/2001:10:21:50	5500363
ted.parr@uspto.gov	28/Nov/2000:14:43:51	d421615		holly.baynham@uspto.gov	22/Jan/2001:10:26:39	5491086
ted.parr@uspto.gov	28/Nov/2000 14:50:27	d421615		holly.baynham@uspto gov	22/Jan/2001:10:28:34	5489523
ted.parr@uspto.gov	28/Nov/2000 14:53:56		6056522	ted parr@uspto.gov	22/Jan/2001:10:29:14	5500363
ted.parr@uspto.gov	28/Nov/2000 15:03:12		4692138	ted.parr@uspto gov	22/Jan/2001:10:34:45	5491086
ted.parr@uspto gov	28/Nov/2000:15:08:25		5987654	holly.baynham@uspto.gov	22/Jan/2001:10:38:23	5466591
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holly.baynham@uspto gov	29/Nov/2000:08:15:30	d342843		gchadwick	29/Jan/2001:11:26:48	4567890
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holly.baynham@uspto gov	29/Nov/2000.13:46:22		5388795	ted.parr@urpto.gov	30/Jan/2001:10:37:10	5587937
brooks.hunt@uspto.gov	30/Nov/2000:11:58:52		5555555	holly.baynham@uspto gov	30/Jan/2001:10:37:57	5703787
Holly.Baynham@uspto.gov	30/Nov/2000.12:28:17	d421615		holly.baynham@uspto gov	30/Ja.v/2001:10:40:06	5701463
holly.baynham@uspto gov	30/Nov/2000:12:29:12	d421615		holly.baynham@uspto.gov	30/Jan/2001:10:44:06	5701462
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richard.gluck@uspto.gov	04/Dec/2000:16:05:26		4455667	ted.parr@uspto.gov	30/Jan/2001:10:49:50	5584020
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Mr. COBLE. Thank you, Dr. Martin.
Mr. Cottone?

STATEMENT OF JAMES F. COTTONE, PRESIDENT, NATIONAL INTELLECTUAL PROPERTY RESEARCHERS ASSOCIATION

Mr. COTTONE. Thank you, Mr. Chairman. Before proceeding with my testimony, I want to thank Chairman Coble and Ranking Member Berman for their recent letter of April 9th to Director Godisi, expressing their concerns with the possible premature disposition of the paper files and the public library collections. NIPRA believes that the preservation of these facilities is of critical importance to the quality of issued patents and registered trademarks, and we believe your letter, which we salute, is an important step in the first direction. We thank you for that.

My testimony today will cover selected several areas of special concern to NIPRA, and I will just touch upon them briefly and refer you to my written remarks for the more detailed explanation of each. The first and probably singlemost important effort where deficiency in the PTO present processes is leading to poor quality patents is classification. The serious problem that has arisen in the

last 10 years is that of classification. It has been asserted by many that the proper classification of patents and references is no longer necessary because, quote, "We now have word searching," close quote. NIPRA strongly disagrees.

The current downgrading of the classification operation is a legitimate subject of oversight for this Subcommittee, and NIPRA recommends that the office be encouraged to reconsider their priorities in this manner. Because we professional public searchers have virtually the same need as PTO examiners in this regard, the subject of classification is important to us, and, most importantly, without serious and ongoing classification efforts, the benefits of the hardcopy paper files will soon disappear.

Talking about the public hardcopy paper files, NIPRA is already on record as being strongly opposed to any decrease in the quality or quantity of the publicly-available hardcopy files for patent and trademark searching. Based on many years of experience, we feel certain that should be PTO build down these hardcopy files, it would lead to important losses in the ability of the worldwide IP community to investigate and determine the value and quality of their intellectual property.

Because of the unique watchdog role us public searchers play in the worldwide intellectual property system, we are relied upon by all parties having an interest in intellectual property. So it is absolutely crucial for the health of the IP system that us public searchers continue to have rapid and unhindered access to patent and trademark information, and that the information that the PTO disseminates be of the highest possible accuracy, reliability, and retrievability.

For the foreseeable future, we believe only the classified hardcopy files meet these criteria. We envision the need for hardcopy files to be in the range of the next 8-10 years, before any serious consideration be given to transitioning over to totally electronic media. Next, NIPRA is seeking the support of this the Subcommittee for our hereby-submitted proposal to expand the existing public hardcopy search facility, now housed in the Crystal City Public Search Room, into a new facility that would establish and maintain all U.S. patents and foreign patents and trademark documents searchable in U.S. classification order.

We would be interested in working with the Subcommittee's Members and staff to flesh out the details of our proposal. We believe that allowing the present PTO attitude on the hardcopy files to prevail will merely continue a de facto, salami-slice decommissioning of these hardcopy files.

Finally, I would just like to just stray slightly away from patents and address an issue which is, I think, of equal importance, and that is the issue of improving quality and curing defects in U.S. patents has a virtual exact analog with respect to registered U.S. trademarks. For the same reason as in patent matters, the hardcopy trademark paper search files must be preserved for the foreseeable future.

Mr. Chairman, I want to thank you and the other Members who have provided us this opportunity to present our views on the several key quality-related issues. We believe that an ounce of prevention is worth a pound of cure, and therefore, rather than talking

about how to cure defects in patents, NIPRA concentrates on how to get the highest quality search done initially, so that the IDS, which the examiner gets with each application, will have a fairly high threshold and the quality of the process for each application will start at some reasonably high level.

That concludes my prepared remarks. I will stand by for questions, if our Chairman will so allow.

Thank you, sir.

[The prepared statement of Mr. Cottone follows:]

PREPARED STATEMENT OF JAMES F. COTTONE, PRESIDENT, NATIONAL INTELLECTUAL PROPERTY RESEARCHERS ASSOCIATION

Good Afternoon Mr. Chairman, and members of the Subcommittee.

My name is James Cottone, of Leesburg, Virginia. I'm here today testifying on behalf of the National Intellectual Property Researchers Association, NIPRA, which represents the professional and business interests of nongovernmental professional people and firms who specialize in worldwide intellectual property information retrieval and dissemination. Our members are intimately linked to the information dissemination functions of the PTO and typically have many years of experience—10 to 20 or more—working with the PTO in various capacities, as well as in using all branches of the PTO's facilities. Our members serve as the world's main concentration point for intellectual property (IP) information from the PTO. Every working day of the year, they receive thousands of requests from clients worldwide, and, using their knowledge of and access to the PTO's facilities, locate, retrieve and interpret the information needed to respond to these requests.

My testimony today will cover selected areas of special concern to NIPRA which I believe will make a contribution to the purposes of this hearing. These are: [A] the continuing need for serious PTO Classification effort; [B] Problems with the existing PTO Quality Review procedures; [C] The need for full maintenance of the public's Hard Copy (paper) Files; [D] A new Proposal for a Single Central Search Facility (SCSF); and [E] Parallel Trademark considerations.

** [A] - CLASSIFICATION **

A serious problem that arisen in the last ten years is that of Classification. It has been asserted by many that the proper classification of patents and other references is no longer necessary because "we have word searching." NIPRA disagrees.

A quality patentability examination results when the examiner has a complete, closed set of all the pertinent references before him/her. Considering all the members in this complete set, the examiner then selects a subset of the references most relevant to the claims of the application under consideration and then applies them in an appropriate Office action. The size of this complete set will vary by technology and particular patent application, but typically will be in the 1000–3000 document range. It does not matter if one is using either an electronic retrieval means or the more reliable hard copy search—the examiner needs to consider the complete set of relevant documents in order to determine the "point of departure" for proper patentability determination, as is required by *Graham* vs. *John Deere* [381 U.S. 1; 148 USPQ 459]. In the opinion of many senior examiners, a "word search" inherently often cannot support such a determination; only a properly classified search file can do that consistently in most arts.

Retention of employees has been a longstanding problem with the Office—currently it is estimated that 55% of examiners have been with the Office 2 years or less. This was also a problem back in 1912, as was analyzed in the "Report of the Investigation of the United States Patent Office" of December 9, 1912, to then President Taft. Their recommendation then was to have senior examiners involved in continuing reclassification efforts. If these senior people left, their knowledge and expertise would then be left behind in the form of tightly classified search files, so that subject matter could be easily and quickly retrieved later by those not nearly so skilled. The current downgrading of the Classification operation and the apparent lack of appreciation of its importance by the current PTO management is a legitimate subject of oversight effort, and NIPRA recommends that the Office be encouraged to reconsider their priorities in this matter. A reasonable place to start would be to examine the present and near out-year budgeted amounts for classification, and compare these with the amounts expended in the peak years before the downgrading began to help quantify the trend. Because professional public searchers have virtually the same needs as PTO examiners in this regard, the subject of clas-

sification is important to us. And without serious and ongoing classification efforts, the benefits of the hard copy files will soon disappear.

** [B] - PTO QUALITY REVIEW **

On the subject of improving patent quality and curing defects, a good starting point should ask—how well is the PTO now functioning, and at what level of quality are its patents now being issued? Before recommending any changes in PTO operations, we must have the very best information as to the problems being experienced and the likely effects of changes thereto.

The Office of Quality Review was originally set up to objectively monitor exactly these quality concerns, and also to provide a teaching tool for all examiners as to how to properly search and examine patent applications. However, recently much of Quality Review has been folded into the "Technology Centers" and are under the control of the various Center Directors. Several qualified observers have expressed the view that a Quality Review Office, completely separate from the PTO (and possibly even separate from the Department of Commerce), is essential to be set up. Appropriate places might be: at the Government Accounting Office [GAO], or at the Library of Congress, where in past years other reviewing and information gathering offices had been set up to inform Congress and others with great success.

When Roger Smith was Chairman of General Motors, GM was losing billions of dollars, and losing significant market share. Asked what the problem was by reporters, Mr. Smith could only answer: "It's all very mysterious." Clearly, Mr. Smith's information had been carefully massaged by layer upon layer of GM management and staffers until little of validity or importance remained. If it is determined that it is useful to set up such a separate review office (at least totally separate from the Technology Centers which it will monitor), that organization will need people of skill, great personal integrity, and a loyalty only to the highest standards of examining and patent granting in order to get reliable, valid data to make appropriate decisions and recommendations. U.S. Patents need to not only be perceived as valid, but be valid, in order to be enforceable.

Recent court decisions, however, such as throwing out all the claims in the Rambus litigation case, do not bode well for the widespread perception of validity of issued U.S. Patents. Indeed, Mr. James Pooley of Gray, Carey issued a report in February, 2000, at the National Academy of Sciences Intellectual Property Conference indicating that in many areas industry leaders have recently switched from patents to trade secrets as a preferred IP protection tool. Such recent controversial court decisions as *In re Festo* additionally have the effect of significantly diminishing the value of issued patents to such an extent that the honored Mr. Joseph N. Hosteny of Niro, Scavone in a recent Intellectual Property Today column [Volume 8, No. 5, May 2001, p. 44, at p. 45] under section "Fourth, Don't File a Patent" has suggested that property holders consider trade secrets as opposed to patents for intellectual property protection. If widely taken to heart, a rise in trade secrecy would represent a major step backwards in the status of the U.S. as a world technological leader.

Because NIPRA's members constantly carry out Validity, Infringement, Right-to-Use and Due Diligence searching, in addition to the more routine patentability seaches, we see first hand the many weaknesses that flow from a less than ideal quality review process.

** [C] - THE PUBLIC'S HARD COPY FILES **

NIPRA is on record as being strongly opposed to any decrease in the quality or quantity of the publicly available hard copy (paper) files for patent and trademark searching. Based on many years of experience, we feel certain that should the PTO build down these hard copy files it would lead to important losses in the ability of the worldwide IP community to investigate and determine the value and quality of their intellectual property. We also believe that PTO examiners have identical (or at least parallel) needs for their hard copy files—but we leave that issue for resolution between the parties affected—the Office and POPA.

There are sound and simple reasons for not only continuing full maintenance of the publicly available hard copy files, but for expanding their content as well. First, they are available 24 hours a day, 365 days a year with virtually zero down time. They are dirt cheap to maintain compared to automated files, and provide an ultra reliable and secure back up search medium which is almost 100% failure resistant to the problems/threats of power outages, computer crashes, desktop terminal glitches and lockouts and hacker/terrorist attacks. However, beyond these basic strengths, the hard copy files provide a *statistically independent search medium*,

which significantly improves the quality of searching, and hence the validity of issued U.S. patents and registered trademarks.

Because of the unique watchdog role public searchers play in the worldwide IP system, they are relied upon by all parties having an interest in IP—mergers and acquisition (M&A) firms, initial public offerings (IPO), patent departments of fortune 500 companies, small start up companies and independent inventors—to find and provide the highest possible quality information regarding patents and trademarks. So its absolutely crucial for the health of the U.S. IP system that public searchers continue to have rapid and unhindered access to patent and trademark information, and that the information the PTO disseminates be of the highest possible accuracy, reliability and retrievability. For the foreseeable future, we believe only the classified hard copy files meet these criteria.

How long is the foreseeable future—does NIPRA believe that hard copy paper search files are needed forever? Most likely not, we envision the need for hard copy files to be in the range of the next 8–10 years before transitioning over to totally electronic media. Ideally, this interval should be divided into two distinct stages. We suggest first a three year side-by-side comparison of newly issued patents be accomplished by knowledgeable outside referees. When the automated search results are judged to be fully equivalent to those obtained by *combined* hard copy and online searching (the present system) for a sustained three year evaluation interval under a well-defined quality measuring protocol, then the PTO should be allowed to start building down the examiner's hard copy files. The second stage of building down the publically available hard copy files could then be started. This second stage should be incremented slowly over a five year period so as to detect and respond to any unintended adverse side effects. Prudent risk managment demands nothing less.

** [D] - PROPOSED SINGLE CENTRAL SEARCH FACILITY (SCSF) **

In view of these "need-to-have" factors, NIPRA is seeking the support of this subcommittee for our hereby submitted proposal to expand the existing public's hard copy search facility, now housed in the Crystal City PSR+ and environs, into a new facility that would establish and maintain all U.S. and foreign patent and trademark documents, searchable in U.S. classification order. We would be interested in working with the subcommittee's members and staff to flesh out the details of our proposal. As a starting point, a few specifics are proffered. Looking forward to the planned space consolidation move to the new Carlisle Campus, our proposal calls for the establishment of a Single Central Searching Facility (SCSF) to house this expanded hard copy file. The facility would include complete copies of all U.S. and foreign patent documents and all U.S. trademark documents housed in the first and second floors of Crystal Plaza buildings 3, 34 and 4. The SCSF would support the needs of all searchers, public, PTO and government, and its foreign art collection would be initially seeded with any foreign art and digests that are surrendered by the examining corps, as is now being considered by the Office/POPA/OPM approval process.

We believe that allowing the present attitudes on the hard copy files to prevail, as is repeatedly expressed by the Office, will continue a de facto, salami slice decommissioning of these hard copy files. This will cause the loss of a searching capability which is badly needed for several years to come. We also believe that failure to establish the proposed SCSF will do irreparable harm to many aspects of the U.S. IP system, not the least of which will be a downward spike in the quality of issued patents and a generalized slowdown in worldwide IP activity due to the business uncertainty which will follow the inability of public searchers to do their historical best for their clients.

** [E] - TRADEMARK CONSIDERATIONS **

The issue of improving and curing defects in U.S. patents has a virtually exact analog in trademark considerations. Because the two branches of IP intersect so closely in matters of automated and hard copy searching, it is worthwhile to briefly look at related trademark quality matters.

The quality of both the PTO examination and those tools used to accomplish it are of paramount importance as the publication or issuance of a confusingly similar mark can result in costly litigation and/or the dilution or diminution of a prior mark's value. It is the responsibility of the Office to deny registration to such marks, and failure of the PTO examination process leaves owners of legitimate marks with the aforementioned unpleasant and expensive consequences. It should be noted that adversarial proceedings can result in legal fees that many businesses simply cannot afford. In those instances, the owner of a legitimate mark then suffers the economic injury of having its trademark diminished by dilution.

In the course of daily research , our members have seen a dramatic decrease in the quality of trademark examination. These observations are bolstered by similar observations of many trademark practitioners. We believe this deterioration can be linked to three principal factors: 1. Errors and omissions in the data created by the PTO; 2. poorly configured search software; and 3. Examiners who have been inadequately trained in the use of those systems and who have insufficient experience in trademark law.

The quality of the PTO Trademark Search Databases and the performance of the electronics search systems are of great interest and great concern to professional searchers and those businesses they ultimately serve. Currently, the PTO offers two publicly accessible trademark search systems, X-Search, the trademark search system used by the PTO examiners, and TESS, an online version of X-Search. A comparison of the data on those systems with hard copy paper records indicates that a significant percentage of the data contained in the automated systems is either corrupt or missing. Regular experience with these databases has revealed countless errors with regard to the identification of the trademark, design codes, ownership information, etc. Many of these errors come about as a result of data entry and scanning errors, errors which go uncorrected as the PTO appears to have little if any quality control measures in place to detect them. For example, PTO clerks have assigned the famous design of the "Playboy Bunny" the design code for a costumed primate—and have keyed in marks such as "Lido" as Lid0. Such errors make these marks virtually impossible to find online even when using proper search commands and techniques. The effect of these errors is compounded by additional problems typified by omitted registrations, applications, pseudomarks and missing or illegible images. Further, the search systems, particularly TESS, are plagued by search engine problems that make it impossible to perform certain types of trademark research.

Our members regularly review examiners' search strategies and in many instances have determined that the examiner will repeatedly restrict the scope of a given search until only a handful, or in many cases, no citations are returned. Similarly, our members have found search strategies that limit potential citations to those owned by the owner of the mark being searched and thus ignoring all potentially conflicting marks. Such poor search strategies must be the result of inadequate training or ignorance of the fundamentals of judicious trademark research. Additionally, our members have consistently found examiners who do not enter phonetically similar terms into their search strategies, instead relying on the database to search those terms for them. Unlike many commercial databases whose search engines perform this task with varying degrees of success, X-Search relies on the manual entry of those terms in the pseudomark field. A cursory review of any sampling of X-Search records reveals that this data entry is deficient at best. Although our members do not suggest that the examiners have the time and resources to conduct their research in the manner that public professional searchers do, they do assert that absolute reliance on the X-Search system will continue to have a negative impact on the quality of the trademark searches conducted by PTO personnel.

Assuming that the PTO can not afford to conduct the same in-depth research as that performed by professional public trademark searchers, it is critical that the hard copy paper records presently maintained in the Trademark Search Library continue to be properly and fully maintained. These hard copy paper records serve as the only check to the erroneous, missing and illegible data on the automated systems. Thus, given that the hard copy paper records provide an inexpensive, easily maintained and constantly available search tool that serves such a valuable check of online data quality, they must also be maintained, possibly for the same 7–10 year interval as recommended above for patents.

Mr. Chairman, I want to thank you and the other members who have provided us this opportunity to present our views on several key quality related issues facing the PTO and its many constituencies. I especially want to thank those on the Subcommittee on Courts, the Internet, and Intellectual Property for the invitation to present NIPRA's views and concerns on the matters of patent and trademark quality. I hope that the views expressed here find sympathetic ears, and we look forward to working closely with your staff to more fully develop the proposals and ideas provided. We also are pleased to be able to contribute to the continuation of the preeminent position now enjoyed by the PTO.

That concludes my prepared remarks, and if my oral presentation today has departed from this written testimony, please consider this written version as the official position of NIPRA on all matters covered. I'll stand by for a few questions if our chairman will so allow.

SUMMARY OF STATEMENT

NIPRA wishes to thank Chairman Coble and Ranking Member Berman for their April 9th, 2001 letter to Director Godici expressing concerns with the possible premature disposition of the paper files and the public library collections. We believe the indefinite preservation of these facilities are of critical importance to the quality of issued patents and registered trademarks.

NIPRA proposes the consolidation of existing public search facilities into an expanded Single Central Search Facility (SCSF) to be housed in the Crystal City complex; the expansion to include integration of all foreign patents and digests that may be removed from the examiners' search areas.

The need to maintain and expand the publicly available hard copy search files will be present for at least the next 8–10 years. NIPRA proposes a three year side-by-side comparison of newly issued patents before building down the examiners' hard copy files, followed by a five year incrementally phased building down of the public's hard copy files as a responsible way to handle the risks associated with these historic steps.

It has been asserted by many that the proper classification of patents and other references is no longer necessary because "we now have word searching." NIPRA disagrees. We believe the recent downgrading of the PTO's classification efforts is having a negative impact on patent and trademark quality, and the benefits of the hard copy files will soon disappear without resuming serious classification efforts.

The matter of relocating or restructuring the PTO's former Office of Quality Review should be the subject of intense review by all in the IP community. NIPRA suggests the necessity of separating this crucial function from the Technology Centers where it is now based and reconstituting it in a newly formed organization.

The issue of improving quality and curing defects of U.S. patents has a virtually exact analog with respect to registering U.S. trademarks. For the same reasons as in patent matters, the hard copy trademark paper search facilities must be preserved for the foreseeable future.

Mr. COBLE. Thank you, Mr. Cottone.

Mr. Berman has a scheduled meeting that will start imminently. so we are going to start the questioning with him.

Mr. BERMAN. I appreciate that very much, Mr. Chairman. Once again, you have gone out of your way to accommodate my sometimes aberrational behavior. I want to make one point on this funding issue. I just had a meeting with the ABA representatives, intellectual property section, and we talked about it there, as well.

Two things have to happen or this ain't going to happen. One, the PTO has to provide compelling information to the appropriation staff and to the Congress of how the problem of huge delays, inadequate compensation, and all the other deficiencies that affect patent quality, will be corrected by virtue of having more money, and that they can absorb that money and do it in a meaningful fashion.

My sense is PTO has not yet done that. Our former colleague, Mr. Rogan, may be here, may be nominated for that position. He has the political experience and, I think, the brains to understand the priority of the office doing that, and I certainly hope that is done. It is not going to happen without that. The second thing that is not going to happen is, listening to the patent bar call for the need for this, that and 99 cents will get you a cup of coffee at 7-11. You talk about your clients. I hear words like Genentech and IBM and all these others.

When they decide to give one-quarter of the effort to put into Y2K—that was such a compelling crisis, we had to deal with that—or making permanent the research and development tax credit, which I agree with—in other words, those top issues for high-technology firms that are so important. When they put that into that list and make it a political issue for the leadership of both parties, you then create a political dynamic, along with the substantive

demonstration that the money will actually produce the results, that will make it happen.

Until the patent bar can't do it, and I don't think two Members or even an interested Subcommittee can do it. Those dynamics have to change. I just throw that out. Questions, first to Dr. Martin. What you have seems very, very interesting. You make a quite astonishing assertion, that one-third of U.S. patents have no value because there is direct overlap of claims with other patents. The implications of that are quite something. Can you support the assertion, and, in your—can the things your system finds—is there concern that what you find might be an insufficient basis for rejection when a patent examiner refers to it? Could you respond to that?

Mr. MARTIN. I am only guilty of understating the severity of that one-third number. We can show that it is significantly higher than that. I call your attention to several of the reports that not only have been issued by our corporation, but also have now been involved in fairly significant Federal cases of rather profound litigation, where an automated system happened to find the smoking gun that the infinite number of examiners and prosecutors spending, according to Rambus, $7.3 million in their last 90 days, happened not to find.

The Senate Government Affairs Committee, the GAO, and several other entities on this Hill have all found that this is an understated problem, not an overstated problem, with respect to the one-third. If you look at the Rambus report that we added into the record at the beginning of this hearing, you will make note of the fact that not only did an automated system detect linguistic overlap, and we are very strong opponents of a simple word search, and I think Mr. Cottone's comments are absolutely correct there, but what we do is integrate not only conceptual searching, but we also integrate an analysis of images; and if you look at what we found in the Rambus case, you actually find that there is actually pictorial plagiarism likely in that particular patent that would be not only detectable, but, oddly enough, was examined by the same subset of examiners.

So this assertion is not only defensible, but that's part of the reason why we called for the audit. This is not just an esoteric issue. This is a national crisis, and the SEC is actually now starting to prod around this issue, simply because every time you see in an S1 filing, or a 10K or a 10Q, the word "proprietary," the 1933 act is very clear, that misrepresenting your position with respect to that kind of information in a public equity offering is, in fact, a fraudulent act. And we have had conversations with the leading investment bankers in this country.

We were informed by Morgan Stanley that this is not a relevant issue for them, simply because they have opinion letters stating that the patents are enforceable. I would encourage you to reflect on the fact that Morgan Stanley represented Rambus as the singlelargest holding of equity buy recommendations, until the court found that their patents were overturned in terms of enforceability, and I think it's particularly interesting to note that, in addition to that fact, they were informed of our analysis of this in February of 2001, when the stock was trading at over $40 a share.

At last check, at about 11 o'clock this morning, I believe it is at $12 a share.

Mr. BERMAN. Maybe we'll send a copy of the transcript of this hearing to Mr. LeRock. One last question, Mr. Chairman. Well, I do have that meeting. Mr. Kirk, you state you don't support the provisions of H.R. 1333, creating a presumption of obviousness for non-novel computer implementations of prior inventions, because you believe this provision is unnecessary, confusing, likely to lead to unnecessary litigation. We can try and deal with the confusing part of this through elaborating and defining better. But I'm interested in why you think creating such a presumption is unnecessary.

Mr. KIRK. Mr. Berman, the language in that presumption basically requires that the examiner have discovered that the particular invention is known and available, and once you have done that, I think you get to the point of simply applying the information you found regarding that invention under the obviousness criteria of section 103. You can reach the correct result without having to impose this kind of a presumption. You can, I think——

Mr. BERMAN. Even though it's a computer implementation of that invention?

Mr. KIRK. That is correct. Let's talk about a business method, for example, just for discussion purposes. If the business method is old, and you have discovered that, because you have now got references that demonstrate that this is not a novel business method, and there is an application of this business method in a straightforward, state-of-the-art type computer implementation, I would submit that any examiner, properly trained and skilled, would find this invention to be obvious and therefore not grant a patent claim.

Mr. BERMAN. What about the reverse option?

Mr. KIRK. I'm not in a position to tell you what was in the file of the reverse option patent, and I'm not going to sit here and tell you that every patent that was issued by the United States Patent and Trademark Office was properly examined and issued and is valid. We know that from looking at the cases in all fields of technology, that examiners sometimes don't find the best prior art, and sometimes when they do, their judgments are little bit short. But they are human. There are 3,000 of them.

Mr. BERMAN. I just wonder why the presumption wouldn't at least provide a little bit of a nice security blanket to that examiner who now might be looking for a little guidance that his ultimate determination—his determination is ultimately upheld.

Mr. KIRK. I would submit, Mr. Berman, that the examiner can make this kind of rejection today if he is properly trained and wishes to do so. One of the underlying problems we see here is that such a presumption could impose a burden of establishing a negative on the applicant. If you start out at the beginning of section 102, it states that a person is entitled to receive a patent, unless——

Mr. BERMAN. Well, if one-third of the patents are, on a conservative estimate, pretty useless because of prior art, maybe adding a little bit of a negative hurdle to this process wouldn't be such a terrible idea.

Mr. KIRK. Mr. Berman, I was born and raised in Florida, but on this particular point, I'm from Missouri. I heard the presentation and I read the statement that Dr. Martin gave, but I'm afraid it's going to have to be a show-me.

Mr. BERMAN. Okay. Thank you.

Mr. MARTIN. Delighted to do so.

Mr. COBLE. Thank you, Mr. Berman.

Mr. Kirk and Mr. Kushan, you have discussed how the current re-examination process is not widely used, or, as a law professor of mine used to say, the re-examination process is not widely used. Do you have any statistics available for the Subcommittee on how many re-examinations are requested each year, and how many involve third parties, A; and do we know who these parties are, that is, law firms, small businesses, universities, libraries, et cetera?

Mr. KIRK. Mr. Chairman, I don't have a complete rundown of all of that, but the statistics published by the USPTO, for example, in 1999, reveal that the patent owner requested 173 re-examinations, third parties, 181, and 31 commissioner-ordered re-examinations. I don't have a breakdown beyond that in terms of the parties.

Mr. KUSHAN. What I found interesting is that that number of approximately 350 re-examinations each year cheer hasn't changed over the past decade. They are virtually the same number that we had in 1991, when we did a review. I also know that it was difficult. We can't really find out any statistics about who is—what kind of entity is requesting the re-examination.

I would note that if you look at the filings, which have gone through the roof over the past decade, to see a flat line on re-examinations suggest two things. One, it is certainly not there in the role that it should be, to catch error rates that we know must exist; and, second, it has not gotten any more popular, especially after the AIPA, with its inter partes re-examination procedure.

Mr. COBLE. Would either of you care to weigh in on that?

Mr. MARTIN. Well, I think both of these perspectives—I think—are correct. I think that the procedural issue about re-examination right now is something that certainly Todd Dickinson's statements often were slightly misleading. While he suggested that there was a quality assurance based on the flat line that we just heard about from Mr. Kushan, I think that what failed to be addressed was the procedural barriers to actually do that.

When we actually were in USPTO in November of this past year, we showed a series of approximately 10,000 patent re-examination cases, as my colleague to the left suggests that we should show you, in good Missouri fashion, we went ahead and did that; and we asked whether or not they would like to receive 10,000 re-examination requests in 1 day. The answer is, as you can imagine, one that was not warmly received by the Commissioner's staff on that day, and I don't think it will be now.

But there is a procedural impediment that needs to be removed, because right now there truly is no mechanism for third party accountability to be brought to bear on patents. It is just financially and procedurally an impossibility.

Mr. COBLE. Mr. Cottone, do you want to add anything to that question?

Mr. COTTONE. No, sir.

Mr. COBLE. Again, Mr. Kirk and Mr. Kushan, in your testimony, you have described various protections against the re-examination process becoming a form of harassment. Now, you all know I strongly support inventors against harassment. Elaborate, if you will, on how the current system and any new system should guard against harassment and abuse.

Mr. KIRK. Mr. Chairman, first, I would agree totally with what Mr. Kushan has said about the idea of the notion of retaining what we referred to as a speed bump. One needs to continue the substantial new question of patentability as a threshold test before a re-examination is instituted, to ensure that parties cannot come in and continually harass a patentee of limited means. So I think that is one area.

A second area is the estoppel provisions properly applied. To the extent that a third party has the opportunity in a re-examination to appeal to the Board of Patent Appeals and Interferences, and to appeal to the Court of Appeals for the Federal Circuit, it is appropriate to apply certain estoppels against re-litigating those same issues so that a party cannot come in and re-litigate those issues again and again. This is not likely to happen, but the mere possibility that this might occur could be stopped with these estoppels.

We would support the notion, not only of applying the estoppel to issues that were raised, but also to issues which could have been raised, with the exception that newly found, newly discovered, previously unavailable prior art, that should be a basis for allowing a re-examination to go forward. So these are a couple of areas that we would suggest to limit the harassment.

Mr. COBLE. Information that was not available at the time, is what you're saying, Mr. Kirk; right?

Mr. KIRK. That is correct.

Mr. COBLE. Subsequently revealed. Did you want to add to that?

Mr. KUSHAN. Yes, I just would add one point. I agree with virtually everything Mr. Kirk has said. The form of re-examination requests that might be possible in a system which allows challenges not based on patents or printed publications should require some kind of structure in the legislation, either an evidentiary showing to back up the assertion that the claim is invalid under 112, or some evidence to document the information that would be the evidence of prior use or public sale of the invention.

I think it is important to have some kind of structure in the procedure that ensures that the pleadings are not too easily made to initiate a re-examination. You should have something there that is valid and can be a legitimate basis of a proceeding. If I can, just one more thing. One of the things that we've always looked at in the PTO, in the way they conduct their work, is there is a certain capacity to do these re-examinations. If you look at just the statistics on patent expirations due to nonpayment of maintenance fees, you find a very large number of patents lose commercial relevance as time passes after they are granted.

So a mechanism which would force the PTO to look at a lot of patents which are going to die anyway of their own merits because of lack of commercial significance would not be an efficient way to conduct a proceeding or structure a system. So I'd encourage—one of the benefits of having a test like a substantial new question of

patentability, is that it forces a bit of commercial reality to come into the equation before a party will go to the PTO and initiate a proceeding. It's a good mechanism for making sure you don't have too many of these things initiated.

Mr. COBLE. Let me extend my question in this manner. Can either of you discuss any specific safeguards that may be necessary as a check on expanding re-examination? For example, establishing a time-limited cap on when proceedings must be concluded?

Mr. KIRK. The study that we had commissioned internally and that we approved established a cap of approximately 12 months. We feel that the 9-month limitation that is in H.R. 1333 is in that same ballpark. We would find that acceptable. Mr. Chairman, I think when you consider this, the names can be misleading, because on the one hand, one extreme of a continuum, we have re-examination that is ex parte, with very limited grounds.

At the other end of the continuum, we have a very robust procedure where all grounds of challenge are possible. There is discovery. There is all manner of testimony, et cetera—a very complex, very involved proceeding. At the low-end of the continuum, with re-examination, that generally can go on for the life of the patent. At the far extreme, given the severity of that activity, and we personally don't recommend we go that far, but in that direction then you would want to have a limitation on the period of time that you could initiate that kind of a proceeding.

But as far as we are concerned, we believe that both proceedings can live in the same system; that is to say, a more robust, time-limited opposition-type procedure, and a somewhat less rigorous, but for the life of the patent re-examination procedure.

Mr. COBLE. Thank you, sir.

Dr. Martin, in your testimony, you suggest that people are purposely avoiding citing prior art to have a patent issued, and that this practice is routinely done. Elaborate, if you will, your basis for claiming this, and that the PTO is not diligently enforcing its own rules on searching.

Mr. MARTIN. I think there are two parts of the response to that. The first part is I would encourage you to just make a simple inquiry of IP practitioners and put the question directly to them, as we have done on numerous occasions. If you have the ability to have access to all relevant prior art, would you or would you not include that in patent prosecution then. With very limited exception, and there are exceptions, but with very limited exception, the answer is no. The reason for that is, as many people have come to know how the system works, they identify themselves as being able to draft claims with a very creative thesaurus, that allow you to take existing language and draft claims very close to those and get issuable patents which, unfortunately, aren't enforceable.

We have compelling evidence that that is not only happening routinely, but we actually have several cases that we have published where that is, in fact, provided as evidence of that being not our opinion, but others'. The more compelling problem, however, is what happens at the examiner level, because the really issue of prior art is not one of the prosecutor. It is, in fact, one of the examiner. The examiner is the one that actually has, now, not only duty, but he also has in the examination manuals the responsibility to

search, not only primary classification, but also places in which the claims may apply in nonprimary classified areas.

The problem that we see is that examiners, given the recent documents prepared by the United States Patent Office, in which the recommendation is that all patents receive no more than 16 hours for a prior art search, and that is the USPTO's documents, 16 hours. If you actually go through more than about 10 patents to determine whether they are relevant or not, and read those 10 patents, you have a very difficult time even reading them in 16 hours, much less going to the level of detail required to determine whether you find everything that's there.

A very recent patent that was prosecuted by the law firm of Finnegan and Henderson had over 250 citations, over 250 citations. The USPTO, in their PBO status, has recommended that examiners have no more than 16 hours to read the prior art cited in a patent. Now, I read quickly, but I sure as heck can't read that quick, and the fact of the matter is examiners, if they are going to live up to the standard of examination, must be afforded the ability to make a decision routinely, that there is not a time limit on the prior art examination issue, because insofar as the PBO status has led down the pathway of performance basis on piecemeal work at the examination level, we are creating a debacle by doing that; and what we found numerous times with respect to the examiners is they simply run out of time, and one of the things that you see as an action—and we've talked to several examiners very recently at the Patent Office on this issue, they default to searching primarily under the classification code in which they have expertise.

That works, were it not for the fact that a recently-issued IBM patent that was published about in the MIT Technology Review as one of the five most important patents to watch in the next five-to-10 years, was actually filed under an electronic apparatus classification in the 300 series of the U.S. classification system. Unfortunately, the majority of the claims in that patent were 705 claims. If an examiner is going to examine a patent, there needs to be an internal notification system that says when you get to claims that are not in your jurisdiction, you need to either involve other examiners for their expertise or have the opportunity to parse up the review among established claims, because the failure to do that, and this is not the examiner's fault, the failure to do that practically just says I'm going to go where I'm used to going.

So what they have is the inability to draw in prior art that would not be in their primary space, and, because of that, as a practical matter, don't look; and that's confirmed if you look at the shoes, where you wind up seeing an awful lot of searches that are class-specific. Can't do that now.

Mr. COBLE. Anybody else want to be heard on this, on the panel?

Mr. KUSHAN. I would like to touch on a couple points, because I think the characterizations that are being made about the examiners and how they do their work—they're not—there's a very different pattern of behavior in the different technology areas. In my area, when I was an examiner, I was in the biotechnology area, this is before genomics, we had very little difficulty tracking down relevant prior art, and it's because the examiners were organized fairly well and you would have a relationship within a certain tech-

nological field that allowed you to look where you knew things would be.

I have to emphasize that the characterizations that my colleague is making may be more prevalent in the business method area now, but two things struck me as not being consistent with my experience. First, most patent applicants who value the patents that are going to come out are going to do whatever they can to take the information that is relevant to the invention, and get it in front of the examiner. The best case scenario is if the most relevant prior art has been in front of the examiner and the judgment has been made by the examiner on that basis. A lot of clients that I work with actively do a search, and they will not pursue an application if there's something that is going to kill the patent. If it's too close, they make the judgment they're not going to pursue it. You want the most relevant information to get into the process, and the good applicants take that extra step to get that information in.

The second thing is in the different areas that are fairly well-settled, the examiners start to develop a very good peripheral vision about the technology, and there is a lot of communication, there is a lot of intuitive knowledge that you can't really describe or document, but that knowledge leads examiners to find relevant information pretty well.

I think the big challenge is getting examiners the tools where you don't have that intuitive experience and a capability of finding the information quickly, because, as you noted, there is a time crunch and there's no way the PTO will ever be able to operate without having somewhat of a time crunch, given their workload. So I think it is important to highlight these trends, but then look at what kind of tools and shifts in examination practices you might explore to get the information into the hands of the examiners, that will be the relevant information they need to make decisions.

But I think it's important to not paint the PTO in a homogenous form or in a profile which suggests that all technology areas have the same kind of problems. I think these kind of problems are linked to business method patents and other really fast-growing technologies.

Mr. COBLE. Mr. Kirk, did you want to insert your oars into these waters?

Mr. KIRK. Just a couple of comments. I agree totally with Mr. Kushan, that attorneys and companies that want strong, valid patents are not going to withhold anything, because the chances are that it is going to come out in litigation. Also, an attorney may lose his livelihood under rule 56 for committing fraud on the Patent Office—and that is not a popular thing for them. But more importantly, I think the integrity of the attorneys, certainly the 12,000 we have in AIPLA—and I would submit in other big associations—I don't believe that we have that kind of a mentality in our association. People want strong patents. They want valid patents. They want patents that will stand up in court, and they know in court that their opponent is going to do a lot more work, spend a lot more money than the office could ever spend in terms of searching and trying to find holes in a patent or the claims of a patent.

So, I really have a difficult time understanding that. As far as the examiners themselves are concerned, admittedly, back when I

was an examiner, we were still working with rock and chisels; but if you took your chiseled stone over to another part of the office when you had a situation that the claims really did not belong in your art area, you could ask and have the application transferred to another part of the office for them to examine.

Now, that's been some years. I don't know if that practice is still current or not, but that certainly was the case.

Mr. COBLE. Thank you.

Mr. MARTIN. Mr. Chairman, if I could just call your attention, however, to the written statement that I included in my testimony from Mr. Mosinov of Oblum Spivak. This actually is a gentleman who I actually have a high degree of respect for. I've seen a lot of his work and I think it's exceptional; but when you bother to put in written testimony that there's little or no economic value in conducting a search, and applications can be filed without a formal search, that seems to rely extremely heavily on FMC v. Hennessy case, where the duty is clarified as to who exactly has the duty; but, with all due respect, Oblum Spivak is not a second-rate law firm. It's a spectacular law firm, and to put that into writing certainly indicates that this is not my opinion.

Mr. COBLE. Mr. Cottone?

Mr. COTTONE. Yes, I'd like to weigh in briefly on some of these matters. I think that Mr. Martin or Dr. Martin has overstated the case on this particular problem of the IBM patent masquerading as an apparatus patent, and indeed having business method claims. This is kind of a sneaky practice. It has been done over the years. For the most part, it's an aberration and a rarely-used tactic. But the procedures to settle this are already very well in place, and, as Mr. Kirk said, the transference of cases between art units where claims start out as claiming—claims one-through-five are strawberries, and claims 10-through-12 are bananas, they transfer them regularly through the art units. Of course, they cross-reference after they issue. But I wanted to tackle the issue of Rule 56; and probably, as I understand from Congressman Berman, 1332's approach, making the IDS more closer to being mandatory.

We have historically Rule 56, which puts the burden—on everybody who participates in a patent—for duty to disclose, and the duty to disclose rises commensurately with how much you participate in the preparation of that patent. So the attorney of record, of course, has a monumental duty to disclose; the inventor has a moderate duty to disclose; and everybody down the line has one, as well. However, historically, also the information disclosure statement has been voluntary. Every time you see title 37 updated, you find that the IBS requirements are getting a little bit more—higher and higher. Indeed, just a few months ago, I had an examiner return an application to me because I put a description of the prior art and the specification where I've been putting it for 30 years. The examiner says, "Oh, no, you've got to take it out of the IBS, out of the specification, and put it in an invention disclosure statement."

Well, I responded that the invention disclosure statement was voluntary. Our client was choosing not to authorize me to do that, and I had met my duty under Rule 56 to disclose by including it in the specification, but the disconnect continues. We have a duty

to disclose, but there's no requirement to produce an IDS. As I understood, Congressman Berman was talking about probably making the IDS more mandatory in 1332. I had not studied the bill in detail yet. But, in any event, I just wanted to go on record as saying I agree with both Mr. Kirk and Mr. Kushan, that there are perfectly fine procedures already in place in the PTO which are used regularly for transferring cases and for finding cases where the claims are bifurcated in some strange ways, and I think that the example cited by Mr. Martin is probably an aberration, where the system broke down, and the examiner was just not astute enough to know that claim one said apparatus, but claim 10 said business method.

Mr. COBLE. Well, we will examine this, folks, in more detail. This will not be ending, when we terminate today, but I wanted to put a question to you, Mr. Cottone. It seems that Dr. Martin may be trying to automate by computer what your Members have done by hand for years, or manually. Give me your opinion as to how reliable is the search technology that his company offers.

Mr. COTTONE. Thank you for the question. I am not familiar with—I am very familiar with the searching techniques. Searching is NIPRA's raison d'aittre, and we have been in the craft for decades and decades. I'm not familiar with M•CAM, so I can't comment specifically; but I am very much a devotee of automated searching. However, way back about 5 years ago, I did a personal investigation of several thousand cases which I had personally searched and developed, 421 cases where we had produce a 102 reference, that is, a blocking reference. This was done, not in the Patent Office, but out of my own docket.

Luckily, my search notes were clean enough so that I could determine where the 102 came from, and we found some amazing things, including that hand-searching found the 102, oh, some 60 percent of the time; automated searching found the 102 about, oh, something like 30 percent of the time; and, about 10 or 15 percent of the time, the 102 came from a friendly examiner, who said, "Oh, you're looking for ABC? Go find the Jones patent."

So our historical record tells us—teaches us that automated searching and manual searching must exist side-by-side. Indeed, in my testimony, I say that probably the most important reason for manual searching is to provide a statistically independent look at the art. Back in 1912, President Taft commissioned a report on the Patent Office, to try to find out why we were losing so many examiners, and the report said, among other things, that one of the key things we should do to solve the retention problem was to make sure that the senior examiners classified the art very, very well, so that the junior examiners would have a, quote, "closed set of art to look at, limiting his search time to 1,000 patents or less." But we have no objection to automated searching, which reaches across all art units and finds some surprising things.

But, in the end, I think patent searching is going to be a lot like medicine; that is, we want a good old country doctor with hands-on, who is going to use the best tools he can get, automated sometimes, hand-search other times, depending on the case at hand. I think both technologies should go side-by-side; and we think that they hand-search for the next 8-10 years is a must, because the

technology for automated searching just is not ready to make that historical transition.

Mr. COBLE. Thank you, Mr. Cottone.

Gentlemen, thank you all. Thank you in the audience for having stayed with us. This is very interesting and I am sure will be worthwhile. In conclusion, I want to remind you again, at the risk of sounding like a broken record, I want to revisit the diverting of funds problem. Let it be known that it is indeed serious. I talked to President Bush about this, about three or 4 weeks ago. I talked to the Secretary of Commerce about it, alerting each of them of the significance of the problem.

You all help me on this heavy lifting, if you will, and disseminate that word to as many Members of Congress as you can. I guess the appropriators and the administration are both going to be key players here. But I've got to terminate that diverting of funds one way or the other. Otherwise, there's going to be a problem. Mike, you touched on it early on in your testimony.

Again, gentlemen, thank you. The Subcommittee very much appreciates your contribution. This concludes the oversight hearing on patent quality issues. The record will remain open for 1 week.

Mr. COBLE. Thank you for your presence and your testimony, and the Subcommittee stands adjourned.

[Whereupon, at 3:31 p.m., the Subcommittee was adjourned.]

APPENDIX

MATERIAL SUBMITTED FOR THE HEARING RECORD

ONE HUNDRED SEVENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON THE JUDICIARY

2138 RAYBURN HOUSE OFFICE BUILDING

WASHINGTON, DC 20515-6216

(202) 225-3951

MEMORANDUM

TO: Members, Subcommittee on Courts, the Internet, and Intellectual Property

FROM: Howard Coble, Chairman

DATE: May 7, 2001

RE: Oversight On Patents: Improving Quality and Curing Defects

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1. Purpose of the Hearing

On Thursday, May 10, 2001, at 1:30 p.m., in room 2141 of the Rayburn House Office Building, the Subcommittee on Courts, the Internet, and Intellectual Property will hold an oversight hearing which will explore ways to improve the patent system. Specifically, the Subcommittee will examine the current system for reviewing the role of relevant technical information ("prior art") relating to the issuance of a valid patent. In addition it will look at the system currently in place to cure defects in issued patents (an administrative proceeding called reexamination), assess its effectiveness, and determine whether legislation is needed to expand the proceedings to improve the quality and fairness of issued patents. The following witnesses will testify: Mike Kirk, Executive Director of the American Intellectual Property Lawyers Association (AIPLA) representing the patent bar; Jeffrey P. Kushan, patent attorney, Partner, Powell, Goldstein, Frazer and Murphy; David E. Martin, CEO, M-CAM; and, James F. Cottone, President, National Intellectual Property Researchers Association.

2. Background

The U.S. intellectual property system is considered one of the strongest regimes in the world, while simultaneously advancing the public storehouse of knowledge and generating numerous benefits to citizens. Our system features broad protection for technology through patents. Patents

are government-granted intellectual property that are narrowly-tailored in scope and limited in duration for the exclusive rights to an invention or discovery. Patents were considered an important federal policy objective and included by the Framers in the Constitution.[1] The first patent law was enacted by Congress in 1790 and Thomas Jefferson is considered to have been the first Patent Commissioner.

The U.S. Patent and Trademark Office (PTO) is the agency that receives and examines patent applications and awards patents that meet the necessary statutory criteria.[2] It is observed that the judgment of the PTO and its examining corps in applying the statutory criteria for patentability during examination has provided a successfully balanced-system for more than 200 years. While patents are commonly granted on machines, processes, and other applied technologies (e.g., biotechnology innovation, software, business methods), there is concern among some critics regarding the fairness and quality of some patents that may be lacking due to a variety of reasons, including insufficient resources used during the initial examination process by the PTO.

The U.S. patent system essentially establishes a bargain-for-exchange. Its incentive permits an innovator to received a narrowly-tailored property right (e.g., limited in scope and duration) in return for allowing that innovation to be dedicated to the public at a defined point in the future. Currently, the duration of a patent is 20 years from the earliest filing date. It is important to remember that the patent office will publish most applications after 18 months of pendency pursuant to the American Inventors Protection Act (AIPA).[3] The average pendency of a patent is approximately 22 months today. Observers note that the patent system creates incentives for innovation, while benefitting the public at large by speeding the dissemination of technology on a wide-spread basis through publication.

Supporters of patents note that without effective patent protection, innovators could rely on trade secret protection to guard the investment in their ideas. But secrecy arguably hurts the public interest. Trade secrecy is primarily a means of protection available under state law where new inventions or discoveries are only known or used internally within a firm or clinic. Critics note that trade secrets rarely benefit the public,[4] since the duration of trade secret protection is theoretically unlimited (and as such, the public loses on gaining the right to use the innovation freely). In

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[1]U.S. CONST., Art. I, sec. 8., cl. 8. "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their Respective Writings and Discoveries."

[2]35 U.S.C. §§ 101 *et seq.*

[3] Intellectual Property and Communications Omnibus Reform Act of 1999, S. 1948, Pub. L. No. 106 - 113 (Nov. 11, 1999).

[4]There are practical drawbacks to trade secrecy protection of an invention for the firm or clinic (e.g., contracts requiring silence by employees, enhanced security measures).

addition, the public does not receive prompt, if any, knowledge of the discovery.

Today, U.S. patent law is largely based on the Patent Act of 1952, which is the modern foundation of our system. The PTO may grant an innovator a patent if it examines and then subsequently approves a patent application that complies with the substantive and procedural statutory requirements of Title 35:

1. *Utility (§ 101).* A patentable invention may be "any new and useful process, machine, manufacture, or composition of matter."
2. *Novelty (§102).* The invention is considered new or not used, known, or commercially exploited up to one-year before filing the patent application.
3. *Non-obviousness (§ 103).* The invention is intended to be an improvement over the current state of the art of the technology as viewed by person skilled in the given field (thus not obvious).
4. *Written disclosure (§ 112).* The statute requires the inventor submitting an unambiguous description of the invention to the office in "full, clear, concise, and exact terms."

It is also worth noting that once a patent is issued, there are several legal procedures available as an additional check on the patent office. Ultimately, the decisions of the PTO are based on human judgment in light of the office's limited resources, such as the finite amount of time available for an application's review and the relevant technological information is available to the public for consideration.

There are means available to patent owners and third parties to correct a patent and challenge the validity as well as the scope of a patent through administrative proceedings and the federal courts. In these matters and during examination, "prior art," or any information that is relevant in determining the state of the technological science pertaining to an invention, is very important in deciding validity and the scope of a patent.

2.1 Recent Congressional Action

In 1999, Congress passed the American Inventors Protection Act (AIPA). This landmark legislation contained several provisions aimed at improving the patent system and reducing some of its frustrations. The AIPA updated our patent laws and created three provisions that relate to this issue:

(1) The PTO becomes a more efficient agency that will have greater flexibility and ability to retain and manage its personnel and resources.
(2) Patent applications will now be published 18 months from filing, which enables the public to scrutinize the applications in light of applicable prior art.
(3) An administrative proceeding, reexamination, is expanded to encourage its use as a way for third parties of challenging potentially invalid patents in lieu of expensive litigation.

2.2 Post-Issuance Patent Quality Review

Since the PTO is the agency with the expertise and "first look" at a patent's validity and scope, Congress decided that the PTO was the proper agency with the necessary expertise to take a "second look" at a patent's validity in those cases when new information became available. In 1980, Congress created an *ex parte* (one party) reexamination system.[5] This system was considered useful and efficient, but limited the participation of third parties. In 1999, as part of the AIPA, Congress created an expanded reexamination system which allowed its use by third parties, *inter partes* reexamination.

With *inter partes* reexamination, it is believed that the best balance can be achieved toward the goal of improving patent quality and validity. This type of reexamination is praised because it is intended to be a cheaper and more efficient procedure to review bad or otherwise defective patents than through the federal courts. The participation by third parties is considered vital because in many circumstances they have the most relevant prior art available to invalidate a bad patent. In recent Congresses (104th-106th), small and independent inventors expressed concern that this system must be balanced or it would duplicate, if not compound, some of the costly and time-consuming problems of court litigation.

In response, Congress adopted an *inter partes* reexamination in the AIPA that was severely limited. It contained several restrictions regarding the conduct of the process, including estoppel, the scope of patents reviewable under this system, the effective date, and appeals to federal court. However, critics consider the current *inter partes* system unviable, arguing that it limits the ability of a third party to challenge effectively bad, overbroad, or defective patents in any discipline, such as pharmaceutical products, genetic-related inventions, software, and business method fields.

An "opposition" is a more advanced type of patent validity proceeding found in other major patent systems, including Europe and Japan. It allows a more comprehensive procedure to challenge a patent's validity, while imposing a strict time limit. In the past, the adoption of an opposition practice was opposed by a vocal lobby of independent inventors. (Although Congress never tried to create a foreign-styled opposition process as part of AIPA). In response, however, the AIPA contained an express provision barring the U.S. from adopting an opposition practice.

In light of the experience with the new law, it is appropriate for the Subcommittee to review whether the public deserves additional advanced legal tools to fight the continuing problem of defective patents. Recently, Ranking Minority Member Howard Berman introduced legislation, "The Patent Improvement Act of 2001," H.R. 1333, aimed at making general improvements to the patent system and establishing a U.S. opposition system. In addition, several subcommittee

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[5] 35 U.S.C. §§ 301 *et seq.*

members are pursuing more modest reforms through improvements to the current reexamination system available under current law *(see attached)*.

Through the hearing, it may be possible to review the experience in Japan and Europe to determine whether the American public might now benefit from even a scaled-down opposition system. The challenge for the Subcommittee in this oversight hearing is to review the balance in the current examination system and determine how to improve it for both inventors and the public. Specifically, the Subcommittee must proceed to preserve safeguards for patent owners (e.g., independent inventors) and promote patent quality assurances for those members of the public who are concerned about invalid patents as described above.

2.3 Issues

As part of this oversight hearing the Subcommittee Members will need to review the following options to improve reexamination:

- *The Scope of Reexamination Review.* Currently, reexamination does not allow for all questions of patentability to be considered. Critics argue that allowing such challenges under §112 during reexamination would be valuable in exposing a broader array of defective patents.
- *Type of Information Allowed.* The PTO may only receive a very limited type of information (prior art) during these proceedings. Especially in the business method area, there may be other types of documentary information that would be useful in addressing important issues of patentability.
- *Removing Restrictions on Federal Court Appeals.* The AIPA contained a limitation on a third-party challenging a defective patent to appeal this decision to the federal courts.
- *Estoppel.* The AIPA also contained a prohibition extremely limiting the use of reexamination by later prohibiting a party from raising factual and legal issues at a federal court proceeding.
- *Time Limits on Actions.* Critics of reform argue that any changes adopted must be applied within a specified time limit (e.g., six to 12 months) thereby mitigating the opportunity to harass a patent holder while providing greater certainty to the process.

2.4 Outlook

There is sincere and constant concern about defective patents in many fields. In turn, there is strong consensus that there should be a process to improve the fairness and quality of defective patents that is fair to all inventors without imposing the burdens, costs, and expenses of federal court litigation.

3. Issues

Whether the procedures concerning the examination of applications and issues pertaining to the validity of patent available to the public through the Patent Act, the courts, and the PTO are in fact adequate to reconsider defective, unfair, or poor quality patents and what remedial legislation, if any, should Congress pursue to enhance post-issuance quality reviews?

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If you have questions about the hearing, please contact Chris Katopis of the Subcommittee at x5-5741.

[Discussion Draft] H.L.C.

107TH CONGRESS
1ST SESSION

H. R. _____

IN THE HOUSE OF REPRESENTATIVES

A BILL

To amend title 35, United States Code, with respect to patent reexamination proceedings.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Defective Patent Reexamination Act".

SEC. 2. REQUESTS FOR INTER PARTES REEXAMINATION ON ANY BASIS.

Section 311 of title 35, United States Code, is amended—

(1) by amending subsection (a) to read as follows:

"(a) REQUEST FOR REEXAMINATION.—

"(1) AT ANY TIME.—Any person may at any time file a request for inter partes reexamination by the Office of a patent on the basis of any prior art cited under the provisions of section 301.

"(2) WITHIN 9 MONTHS AFTER ISSUE OR REISSUE OF A PATENT.—Any person may, within 9 months after the date on which a patent is issued or reissued, file a request for inter partes reexamination by the Office of the patent on any question of patentability under section 102(a), (b), or (e), section 103, or section 112."; and

(2) in subsection (b)—

(A) by striking "The request" and inserting "Any request under subsection (a)"; and

(B) in paragraph (2), by inserting after "is requested" the following: ", or, in the case of a request under subsection (a)(2) on a basis other than prior art, set forth in detail the basis on which the request for reexamination is made".

National Association of Manufacturers

David Peyton
Director
Technology Policy

May 17, 2001

Honorable Howard Coble
Chairman
Subcommittee on Courts, Intellectual Property, and the Internet
Committee on the Judiciary
B-351A RHOB
Washington, DC 20515

Dear Mr. Chairman:

The National Association of Manufacturers (NAM)– 18 million people who make things in America – is the nation's largest and oldest multi-industry trade association. The NAM represents 14,000 member companies (including more than 10,000 small and mid-sized manufacturers) and 350 member associations serving manufacturers and employees in every industrial sector and all 50 states. Headquartered in Washington, D.C., the NAM has 10 additional offices across the country. The NAM wishes to submit the following statement for the record of the Subcommittee's May 10, 2001 hearing on patent quality.

The NAM notes that the Internet is now helping to deal with controversial new patents. While we have no operational connection to any of them, there are now new tools for parties concerned about dubious issuances to gather their forces. BountyQuest.com, for instance, marries traditional financial rewards with Internet ease to assemble invalidating evidence. As another example, PriorArt.org affords a public facility by which inventors, often computer programmers, can post technology for public inspection by any party, including patent examiners. Furthermore, such efforts can arise in the context of both reexamination and litigation. Faced with demands by computer programmer Bruce Dickens and his attorney for payments based on a patent for the windowing technique for Y2K remediation,[1] numerous companies contributed prior art to back up the characterizations of the patent as outlandish by leading Y2K experts. The resulting Internet-based collection[2] provided former Commissioner Dickinson with ample facts to order a reexamination himself.

Quality Management and Measurements

The matter of the overall quality of patents issued, in the business methods area in particular, begs for order and discipline. Faced with the need to improve quality themselves, manufacturers start by taking measurements, and the NAM strongly suggests the same here. Just as the logic of zero defects as a stated goal has prevailed in industry, we call on the PTO to

[1] U.S. patent no. 5, 806,063.

[2] The industry prior art Web site evidently is no longer active but was found at www.itaa.org/year2000/dickens.htm.

1331 Pennsylvania Avenue, NW • Washington, DC 20004-1790 • (202) 637-3147 • Fax (202) 637-3182 • dpeyton@nam.org • www.nam.org

declare a goal of zero patent issuances later invalidated by prior art. To be sure, attain perfection in practice isn't possible; against about 150,000 issuances a year, some mistakes are inevitable. A key lesson from industry, however, is that setting such a goal starts one on the path of what *can* be attained, which is continuous improvement.

First, measurements establish a baseline. For each measurement period, controversial patents should be counted, considered as the sum of reexaminations, court cases filed, and Internet-enabled efforts to gather invalidating evidence. That total should be compared to total issuances. Then, the PTO should state a public goal to reach the following year. Essentially, it will become an exercise in improvement to see how far over 99 percent the PTO can go. In manufacturing, Six Sigma represents a goal not yet achieved even by America's leading manufacturers: reaching 3.4 defects per million.[3] As patent examining involves individual human judgment, it would be inappropriate to establish such a goal; even in discrete parts manufacturing, the best yet achieved is about 1 defect per 100,000, or 5.8 sigma. But this well-known statistical structure and the continuous improvement that it measures does represent, we believe, the right approach.

Another measurement that suggests itself is the number of non-patent prior art citations per issuance. The absence of any such citations in a new patent can be a trouble sign, especially in the new technology fields such as software. Software lacks the established reference systems built up in chemistry, for example, and most prior art resides outside the existing patent base. The NAM applauds the PTO's recent publication in the *Gazette* and on the agency Web site of the databases that it relies on[4] and hopes that practitioners will supplement that already extensive list as appropriate. Nonetheless, the only way to know whether this initiative, or any other, is working is to measure. While the PTO has initiated some measures along these lines, they receive only a very brief mention in the most recent published annual report. Instead, there should be a detailed discussion, including publication of measurements. In so doing, the PTO would be taking a major step to becoming the effective performance-based organization that it is supposed to be.

To sum up: the PTO should

- Adopt a publicly stated policy of zero invalid patent issuances;
- Establish a measured baseline with announced, sigma-denominated results;
- Set sigma-denominated goals for continuous improvement.
- Make this effort a major feature of its annual report.

PTO Funding

The single most evident reason for inadequate PTO performance is Congress's decade-long bad habit of treating the agency as a convenient source of cash. After 10 years, the cumulative diversion or withholding amounts to about $600 million, or about half of fee

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[3] While scarcely the only such text, the NAM recommends and sells *Implementing Six Sigma: Smarter Solutions Using Statistical Methods* by Forrest W. Breyfogle (New York: John Wiley), http://www.nam.org/namshop/product.asp?dept%5Fid=17&pf%5Fid=432.

[4] http://www.uspto.gov/web/menu/busmethp/figurenpl.htm.

collections at the current annual rate.[5] This situation distresses everyone who truly cares about the effective functioning of the patent system. The NAM is keenly aware that this result has been the work of the Appropriations Committees rather than the Judiciary Committees. Enclosed with the testimony is a series of charts detailing how continued and rising fee withholding has been the key factor in deteriorating PTO performance, with average patent pendency rising from 18 months to 25 months. In our view, it has become irrefutable that the continued funding drain has yielded deteriorating performance. No comparable statistics exist for quality performance, but we are urging their creation.

The PTO should get credit for holding the line on time to issuance in the past year, keeping it from getting even longer than 25 months, under the most trying circumstances. With respect to quality in the business methods domain, two major steps have made a clear difference. Moving about 50 examiners from other areas into Class 705, combined with the extra layer of review instituted by former Commissioner Dickinson, has clearly reduced the number of issuances in this class and has brought its issuance rate *appreciably below the average for all classes.* At the public workshop on business methods on March 1, PTO managers stated that the approval rate for Class 705 is 43 percent, as opposed to 65-70 percent for all utility patents. Management also expressed an intention to hire 20 to 30 more examiners for business methods, when money becomes available – which today it is not. In effect, the PTO has alleviated the pain felt in business methods, but only by spreading a little more pain everywhere else. Fundamentally, however, the PTO should never have been put in that position in the first place.

Moreover, the appreciable drop in allowance rates in this class indicates that permitting each examiner to devote greater personal attention to each application does make a difference. Roughly speaking, the allocation of more personnel to class 705 increased the amount of work time per application by about half, from about two person-days to three. Conversely, the disturbing judgment of fraud the *Rambus* case[6] indicated the poor results that can occur when – as appears to be the case in the computer memory area – examiners are so pressed to get the work out that they simply cannot devote adequate attention to each case.

By all means, one should not blame the victim. The PTO did remarkably well to hold pendency time constant at 25 months in the last year, even as more than a tenth of its workflow-generated revenues were siphoned off. Greater examining resources, however, would enable application of the fundamental requirements of invention: subject matter, novelty, utility, and nonobviousness. With business-methods patents, criticism most often goes to questions of novelty – or finding prior art – and nonobviousness. Here is the underlying question: How can the PTO do a better job? More examiners can spend more time per application searching for prior art and examining the case, and, as we have suggested, measurements of issuances with no prior non-patent art should be taken.

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[5] For a detailed history, see the 15-association letter to Congress of April 10, 2000, http://www.nam.org/tertiary_search.asp?TrackID=&DocumentID=20893.

[6] *Infineon v. Rambus*, decided May 9, 2001 (E.D. Virginia). The jury verdict, following a judge's decision the previous week dismissing the original infringement suit brought by Rambus against Infineon, awarded $3.5 million to Infineon based on a finding of fraud by Rambus. See http://www.siliconvalley.com/docs/news/svtop/rambus051001.htm.

Permitting the PTO to spend all the fees it takes in every year – from a public policy standpoint, the only defensible outcome – would also lift the agency out of the dilemma of spending money to hire or to automate that has been forced upon it for far too long. High private-sector salaries – led by law firms in price-inflated Silicon Valley --- continue to result in a hemorrhage of several hundred patent examiners a year. Nowhere else, other than being a young military doctor, can a federal employee increase earnings so much by leaving federal employment. Regrettable as the situation may be, private compensation lies beyond the power of Congress to affect and must be accepted. Private employment cannot be made less attractive; so government employment must be made more attractive.

At the same time that the agency keeps staffing up to adequate levels, full funding would enable automation to proceed as it should. Electronic filing just started belatedly in the last year. It is still at an awkward early stage in which the applicant's electronic submission is printed out, processed traditionally, then reconverted again at the end of the process. What is obviously needed is full electronic case management, end-to-end.

Summary and Conclusions

Mr. Chairman, here is the NAM's vision for the PTO. By the end of the current Administration, the PTO

- Will have completed the transition to electronic filing and file management;
- Will operate as a true performance-based organization with the same continuous improvement techniques well known in industry;
- Will maintain reasonable and transparent rules neutrally across all fields of technology, especially as technologies become more interdependent;
- Will be poised to leave its inefficient, disjointed office space for modern unified space at the new location.

If Congress shares that vision, then these implications are clear:

- Leave all the fees at the PTO, especially to ensure that full automation is achieved before the move. Conversely, it is hard to see how the PTO can make true progress if Congress continues to treat it as a convenient source of cash.
- Hold annual oversight hearings on quality management, measurements and performance-based organization progress.

I would be pleased to provide any further information and appreciate your consideration of our views.

Sincerely,

David Peyton

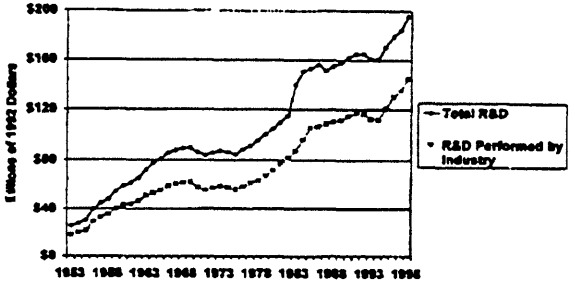
David Peyton
Director, Technology Policy

Enclosure

THE PATENT BOTTLENECK IN THE LONG ECONOMIC EXPANSION (1)

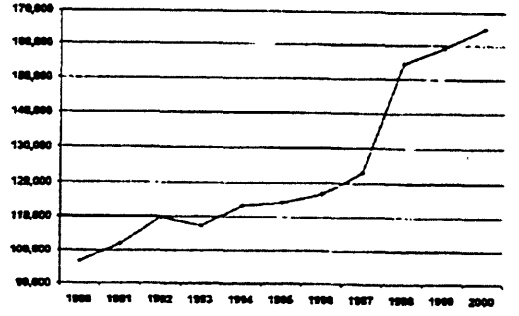
Patents Contribute Centrally to the Expansion....

INDUSTRY PERFORMS THREE QUARTERS OF THE NATION'S R&D



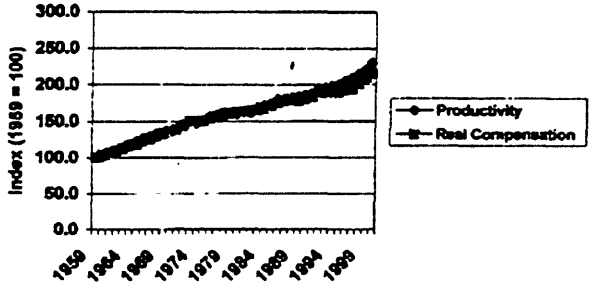
SOURCE: NSF

PATENT ISSUANCES ARE UP



SOURCE: PTO

Productivity and Compensation



SOURCE: BLS

THE PATENT BOTTLENECK IN THE LONG ECONOMIC EXPANSION (2)
And, Patents Lead To Growth and Jobs ....

Patents pull overall state economic performance		
STATE	NEW ECONOMY INDEX RANK	PATENT PER CAPITA RANK
Massachusetts	1	4
California	2	7
Colorado	3	12
Washington	4	21
Connecticut	5	2
Utah	6	13
New Hampshire	7	8
New Jersey	8	5
Delaware	9	1
Arizona	10	16

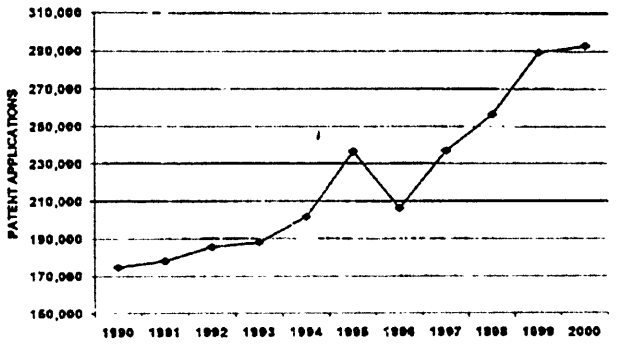
Source: State New Economy Index

LEADING EXAMPLE: Healthcare Technology in Massachusetts		
YEAR	PATENTS	JOBS
1992	351	29,064
1993	425	30,447
1994	464	31,946
1995	467	31,128
1996	615	31,800
1997	846	32,722

Source: Regional Financial Associates, Collaborative Economics, Massachusetts Division of Employment and Training, and CHI Research

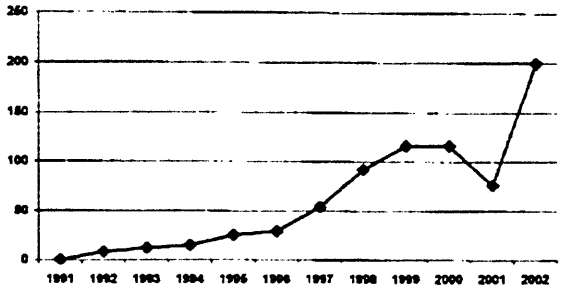
THE PATENT BOTTLENECK IN THE LONG ECONOMIC EXPANSION (3)
But, The PTO Can't Keep Up

THE WORKLOAD IS BOOMING

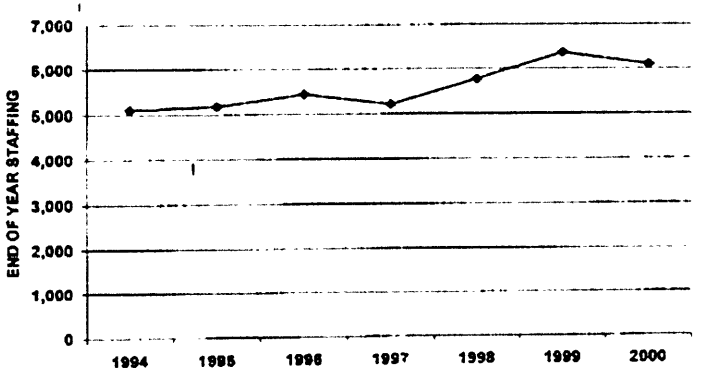


SOURCE: PTO

AS FEE WITHHOLDING RISES

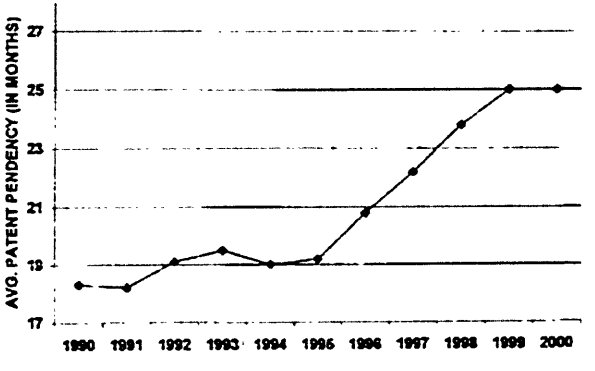


THUS, STAFFING IS CONSTRAINED



SOURCE: PTO

AND DELAYS LENGHTHEN



Alliance for American Innovation

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Phone: 202-546-8700 Fax: 202-546-5779

May 15, 2001

The Honorable Howard Coble, Chairman
Subcommittee On Courts, The Internet
and Intellectual Property
United States Congress
Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Coble:

The Alliance For American Innovation is writing to respond for comments on the hearing for the bills HR 1333 and HR 1332 which were introduced by Congressmen Berman and Goodlatte.

The Alliance For American Innovation is a company representing independent inventors and small business entities on intellectual property and trade related matters. The Alliance "affiliates" are very much aware that patents and innovation are crucial to the American economy.

The Alliance affiliates believe that the American patent system was set up to prosper the country and to protect the individual. In discussions about patents and copyrights at the Constitutional Convention there was nothing said about protecting companies, but there was about inventors discoveries. Nor does the Constitution mention companies but as a class inventors and writers are protected.

David Ramsey, biographer of the Revolution and Thomas Jefferson were anticipating creating an "American Athens" and stimulating creativity and the arts with the patent and copyright clause. Your proposed changes to the system reflect only the concern for large companies and not the inventor and certainly not as a stimulate to innovation. We have the following concerns about the legislation:

1. Patent reexamination: The changes being proposed in legislation in patent reexamination will make it extremely difficult for an independent inventor to be able to create a business while at the same time defending his patent in the "opposition panel of judges". The process of obtaining a patent is expensive enough without adding further legal charges for the inventor.

The independent inventor who does not have the deep pockets of the transnational corporation is gradually being squeezed out of consideration of the patenting process because of the cost. Is this the ultimate goal of the people proposing the changes for the Patent Office? Many inventors believe that it is. The proposed changes are making it too costly for independent inventors to defend their patents.

The reason for the "opposition panel' is obvious. The large companies do not want to go to the Federal Court of Appeals where two-thirds of the cases have backed up the inventor. Instead those same large companies believe they stand a better chance at the Patent Office where you can raise the question of patentability. The Alliance participated in meetings last year to develop the regulations on patent reexamination where members of organizations stated they would save money by going to the Patent Office in reexamination procedures.

The business of the Patent Office is to grant patents and not be a court, but now you are setting up an "opposition panel of administrative judges." Allowing rules of evidence and barring the original examiner granting the patent "smacks" of an entirely new examination case which may or may not be granted on the basis of patentability and technology but on legal grounds. The rules of evidence and affidavits do not necessarily help decide the patent on the basis of technology. The three man Board of Patent Appeals is a knowledgeable board to decide issues of technology. This attempt at an "Opposition Panel" sounds like a first strike for a registration system, which the U.S. tried once and ultimately threw out because it did not work.

2. Estoppel: The estoppel to the Federal Court by the third party requester should be retained. The reexamination process is favors someone who does not have the investment, nor the time in the invention, but can come in with some prior art which may or may not be valid. If the big company disagrees with the decision of the Patent Office then they want the right to appeal the decision which favor the inventor to the Federal Court. It is apparent that the goal is capturing the technology by whatever means.

The small inventor will not be able to withstand this long challenge of uncertainty for his patent. The challenge must be filed in 9 months and the panel has 18 months to decide which is a long time for an inventor if your pocket is lean of funds), particularly with the patent term being eaten away since we no longer have an established term of certainty under the TRIPS. This process which is uncertain will potentially scare off investors for a period of 27 months.

The system being proposed makes it possible, according to the sponsors, emphasizes the question of patentability. Why would you suppose the "opposition panel" would be more qualified than the examiner who works day after day in questions of patentability and talks and exchanges view with other examiners? Is this experience worthless for the PTO? The sponsors of the bill are raising issues and not addressing them, but adding on another layer of bureaucracy favoring transnational companies and not the individual.

If the desire is really to obtain quality patents why not put the funding that would be required for a 18 man "opposition panel of administrative judges" plus their supporting staff into higher pay for or hiring more examiners instead of adding more layers to the process? Why not use the funds in more training and enhancements of information for examiners? Why not use the money to file the 2.5 million pieces of foreign art and information in the files for the examiners instead of boxing it or throwing it out?

The decision to stop filing the foreign art was made in March 1995. Now we are having hearings in 2001 to develop more quality patents and introducing radical changes to our patent system, but nothing has been done for five years to make this vital material available for the examiners.

If the object is to make certain that prior art is available then put the foreign filings and the technical bulletins filed by large companies in the files for the examiners to use in the issuance of patents. Electronic systems for these particular files are not as accurate because they are incomplete and need heavy cross referencing in different data bases making it more time consuming for the examiners.

We are on a very slippery slope in the patenting process with the proposed changes that are now being made and with the process mandated by earlier legislation. With 18 months publication it is now possible to see what is in an application and as one corporate lawyer admitted, "We want to see what is there and design around it." This whole process is fraught with a potential for fraud.

3. We do not believe it is necessary nor desirable for an applicant to disclose his search for "prior art". This is already covered by Rule 56 and another process is a redundancy.

The Alliance sincerely appreciates the time and interest of the committee in these matters. We respectively disagree with the process we have discussed as not being beneficial for the patent system and for American inventors.

Sincerely yours,

Steven Michael Shore
President

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