

Intellectual Property Law Newsletter

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The Bayh-Dole Act in the Age of Proteomics

by **Lawrence B. Ebert**

In 1980, at a time when U.S. technology seemed to be losing ground to the Japanese, Senators Robert Dole (R-Kansas) and Birch Bayh (D-Indiana) sponsored a bill to integrate more actively federally-funded university research into the commercial arena. The resultant law, commonly known as the Bayh-Dole Act and codified at 35 USC 200 ff, states that the policy of Congress is "to use the patent system to promote the utilization of inventions arising from federally supported research or development; to encourage maximum participation of small business firms in federally supported research and development efforts; to promote collaboration between commercial concerns and nonprofit organizations, including universities; to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise."

The Bayh-Dole Act allows universities to take and maintain title in patents for inventions derived from federal funding and to negotiate licenses (exclusive or non-exclusive) with private companies. By involving both private sector knowledge and funding, the act was designed to speed the creation of practical devices derived from academic research. That is, by allowing greater participation of private enterprise in inventions derived from federally-funded research, the public would obtain more readily useful products by virtue of the market-savviness of the private partner.

The act had a dramatic effect on the number of patents to universities. Before the act, there were about 250 patents a year, and in 1998, there were more than 4,800.

The act benefitted universities. A 1998 survey by the Association of University Technology

Managers (AUTM) showed that the University of California system obtained \$73.1 million in licensing fees, Stanford University \$43.2 million, the University of Washington \$21.3 million and MIT \$18.05 million. AUTM also claimed that \$33.5 billion were added to the economy and that 280,000 jobs were created as a result of academic licensing.

Some universities have utilized a "home run" strategy wherein a key patent generates a big reward. Examples include Stanford's Cohen/Boyer patent on recombinant DNA and Florida State's related to TAXOL®, as well as the University of Rochester's prospective legal effort as to COX-2 inhibitors such as CELEBREX®. Other universities have utilized a bundling approach. For example, Penn State created a pack with three distinct packages of technology including a drug-delivery technology for controlling animal fertility, a product which reduces *E. Coli* contamination, and a genetic marker for "boar taint."

A topic of recent discussion has been the role of universities in research, and patenting, of aspects of the human genome. In July, the Subcommittee on Courts and Intellectual Property of the House Judiciary Committee held hearings concerning the role of patents for genes in affecting openness and sharing of information among academic institutions.

Dr. James Severson, president of Cornell Research Foundation and, separately, president of AUTM, observed that most universities are not engaged in gene sequencing to the same extent as companies. To the extent they are involved, universities, depending on the facts, may offer either nonexclusive or exclusive licensing. Even in cases of exclusive licensing,

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Message from the Chair

I am pleased to report to the membership for the first time as chair of our Intellectual Property Law Section.

As chair I must recognize the outstanding leadership that the immediate past co-chairs, Rob Lindefeld and Michael Petock, have provided over the years. They founded the Intellectual Property Law Committee in 1997, and grew the committee into a section in an amazingly brief time. All of us in the section owe them a debt of gratitude for their outstanding service and leadership.



Robert E. Rosenthal

In the new year, we have new leadership. John McIlvaine takes over as chair-elect; Barry Cohen has become vice chair. Carmen Santa Maria has taken over the duties of secretary, and Tim Ryan has taken over as treasurer. Among the committee chairs, we have both those who have agreed to take on new roles, and those who are continuing. Steve Koffs has taken over as editor of the newsletter, and has already put together an outstanding first issue. Jennifer Slinsky takes over as chair of the Patent Committee; Randall Notzen takes over as chair of Community Outreach, Kurt Sanders in Continuing Legal Education, and Marc Farrell with Electronic Media Review. Abigail Byman has agreed to a continuous chair of the Copyright Committee, and Arthur Eglington as chair of Invention Submission Firms, along with Mark Kuller as chair of Licensing, and Immediate Past Chair Rob Lindefeld has agreed to serve on the Bylaws Committee.

Our section remains active in the area of Pennsylvania legislation. The Pennsylvania version of the Uniform Trade Secrets Act, which the Bar Association, on the recommendation of the section, has endorsed, has been reintroduced in the legislature. Earlier this year, under the leadership of Timothy Ryan and Michael Petock, the section approved recommendations for proposed changes to a proposed new Pennsylvania Right of Publicity Law, which the section saw through to approval by the House of Delegates at the annual meeting. The Uniform Computer Information Transactions Act (UCITA) is under consideration in Pennsylvania. Rob Lindefeld has agreed to head up an ad hoc committee to provide our section's comments. In the areas of public education, Arthur Eglington is leading our efforts to finalize a new Pennsylvania Bar Association brochure that will advise independent inventors about invention submission firms, and the requirements of the federal statute regulating those firms. Randy Notzen is hosting a Web-based television program called "Inventor's Insider" at www.fromusalive.com. Randy is interested in guests, including members of the section and others, who can address issues of interest to inventors.

In the wake of the Supreme Court's College Savings Bank decision, which immunizes states from suits in Federal Court, concerning patent infringement, the section has begun looking into what remedies, if any, Pennsylvania provides for patent infringement by state agencies. Ultimately our goal would be to consider whether legislation needs to be adopted.

In order to keep our members better informed of our activities, we have begun distributing our minutes to all of the membership. In addition, we have a list service. You can sign up for that by going to the Pennsylvania Bar Association Web site at www.pabar.org, clicking on our members-only section and following the directions.

I look forward to seeing as many of you as possible at the Nov. 30 Committee Section Day at the Harrisburg Hilton and Towers, at 1:30 p.m. ■

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New & Noteworthy

By Paul Gagne

COPYRIGHT — Contributory Infringement — Napster In *A&M Records v. Napster, Inc.*, 55 USPQ2d 1781 (N.D. Cal. Aug. 10, 2000), the District Court preliminarily enjoined defendant from violating, or helping others to violate, plaintiffs' copyright in musical works.

The case involves Napster's service allowing customers to access songs in the digital MP3 format free of charge via the company's Web site. Plaintiffs are 18 record companies that own copyrights to the vast majority of works on Napster's song list. The Napster service has become extremely popular, particularly among college students; Napster estimated that it would have 75 million users by the end of 2000. When a user logs in, the Napster software allows her to access MP3s on the hard drives of other logged-in users, and the songs on her hard drive become accessible to other users. The music does not actually reside on Napster's servers.

The court found that Napster users clearly infringed the copyright in the downloaded works, and that Napster was guilty of both contributory and vicarious infringement, since it knew or should have known that its users were downloading works to which neither they nor Napster owned the copyright and materially contributed to the violations. The court rejected defendant's contention that such unauthorized downloading constituted "fair use" consisting of "space-shifting" by users (moving songs legitimately purchased from a user's own computer to another using the Napster service): the evidence showed that very little user activity involves space-shifting. Use of Napster, the court determined, is motivated primarily by economics, not convenience, since users "get for free something they would ordinarily have to buy." The court also rejected Napster's First Amendment defense, due to the minimal extent of the non-infringing aspects of the service. Because "defendant has contributed to illegal copying on a scale that is without precedent," the court ordered Napster to develop a plan to determine that no additional copyright violations occur as a result of its services.

Editor's note: for a discussion of the Napster case and its impact on piracy, see Stephen Schott's feature on page 4.

PATENTS — Offer for Sale — *Rotec Industries v. Mitsubishi Corp.*, 55 USPQ2d 1001 (Fed. Cir. June 13, 2000). In this case, plaintiff owned a patent on a tower crane supporting a concrete conveyor belt system.

Defendants had made an offer to sell certain conveyor components of a concrete delivery system, but not the tower crane. The court noted that in *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972), the Supreme Court had held that the sale of component parts to foreign buyers who would then assemble an infringing device abroad did not infringe under § 271(a), since the accused device must include all of the limitations found in the patent claim. In *Rotec*, the Federal Circuit held that the same principle applies to "offers to sell" less than a complete infringing device. Nor, the court held, was there liability under § 271 (f) (2), which Congress enacted in response to the *Deepsouth* decision, since that provision imposes liability only on those who "supply" or "cause to supply" infringing components for use abroad, and does not cover offers to sell.

TRADEMARKS — Attorneys' Fees — Exceptional Case In *Securacomm Consulting, Inc. v. Securacom Inc.*, 55 USPQ2d 1820 (3d Cir. Aug. 21, 2000), the Court of Appeals for the Third Circuit held that recovery of attorneys' fees, which may be awarded in an exceptional case under 15 U.S.C. §111(a), does not require a showing of willful infringement. Attorneys' fees, the Court held, may be granted under the statute for vexatious litigation conduct.

TRADEMARKS — Cybersquatting In *Lucent Technologies Inc. v. Lucentucks.com*, 95 F. Supp. 2d 528 (E.D. Va., May 3, 2000), the District Court ruled that an *in rem* proceeding under the Anti-Cybersquatting Consumer Protection Act was inappropriate where defendant was a California resident who had registered the allegedly infringing domain name with NSI in Virginia. According to the court, this act satisfied constitutional minimum contacts requirements, and process *in rem* was therefore inappropriate. In addition, the court held that eight days' notice of the *in rem* action failed to give a cybersquatter adequate due process. ■

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Would Killing Napster Prevent Digital Copyright Piracy?

By Stephen B. Schott

Today's younger entrepreneurs are putting down their Clearasil long enough to create troubling conflicts in intellectual property. In a recent interview, Shawn Fanning, the baseball-cap attired 20-year-old founder of Napster, looked like he awoke fresh from the prom to discuss the program he created that is so disturbing in intellectual property circles. This inventive young man is public enemy number one of the Recording Industry Association of America (RIAA), the trade group that represents the U.S. recording industry. Shawn Fanning's Napster is currently being sued for contributory and vicarious copyright infringement and related state law violations by the RIAA. However, for the RIAA this lawsuit is like trying to stop the flow of the Mississippi with a single sandbag (*A&M Records, Inc., et. al. v. Napster, Inc.*, No. C 99-05183, 2000 U.S. Dist LEXIS 6243 [N.D. Cal. 2000]). Stopping Napster will not stop the copyright infringement of digital music on the Internet because the problem of music piracy is a problem at the individual infringer level more than the corporate level.

Napster is a program that takes advantage of a popular digital audio compression technology called MP3. MP3 technology permits extremely high-quality audio transfer, storage and categorization on almost any computer. MP3 files can be downloaded to CD-ROMs, transferred to portable MP3 players, or played on PCs. The files are of digital quality, so they do not undergo the sound degradation that traditional magnetic tapes suffer. Napster users store MP3 files on their hard drives by transferring them from their own CDs, and the Napster program sends a list of the songs on a user's hard drive to its central servers, thereby creating a giant searchable MP3 database. With Napster, users can locate and download their favorite music (in the MP3 format) with a convenient, easy-to-use interface. Unfortunately for Fanning, studies have shown that over 90 percent of the music exchanged through Napster is protected by copyright.

The RIAA may win its infringement case against Napster, and indeed many legal pundits believe that the RIAA will win their case. However, the press from the case has elevated Napster to one of the most visited sites on the Internet, increasing new visitors to napster.com by an amazing 480 percent since February. While Napster is the tool that users are most likely to use to download music files, it is not the only program available.

Napster makes an easy target for the music industry because it uses a centralized server to store the file names of the songs of the users logged in at a given time. If the RIAA can shut down the main servers of Napster, the RIAA will shut down Napster entirely, thereby taking advantage of

existing copyright laws. The RIAA can attack similar centralized server companies that allow MP3 file sharing and shut down those as well, but there are at least three problems the RIAA cannot easily overcome.

At first blush, web-surfers could not seemingly care less about the copyrightability of music. The model of the libertarian Internet is delivering to users music that comes fast, free, with high quality and surprising variety.

The second reason the RIAA may not win against digital music piracy in the long run is that new software programs such as Gnutella do not use easily targetable centralized servers. Gnutella is a simple program, freely downloadable, and unlike Napster connects users in an anonymous web to each other. Gnutella cannot be shut down except by shutting down the anonymous individual users one by one, which is not to say that enforcement against Gnutella users is entirely impossible, but it will certainly be extremely difficult. Gnutella is also more varied than Napster in that it allows users to trade any digital file. That is, Gnutella is not limited to music files, but any file can be searched for and downloaded over the network of Gnutella users, so a user with a fast Internet connection can easily search for a copy of any computer application, and download that application for installation on her PC. This enables users to not only download copyrighted files, but also patented computer applications. In addition, on the afternoon I checked it, the Gnutella network of users had forty times the volume of files available for transfer that Napster had, making it virtually unstoppable, more varied, and a potentially bigger threat to copyright infringement than Napster.

The final reason that the RIAA, or someone with similar interests, may not stop digital piracy is that despite any encryption the industry places on its digital files, some computer hacker will break the encryption and place it on the Web. That is what happened with the supposedly uncrackable DVD encryption; it took only a few weeks for someone to crack and distribute the encryption key on the Internet. Any encryption will be broken, as anticipated by Judge Ferguson in *Universal City Studios, Inc. v. Sony Corp. of America*, 480 F.Supp. 429 (C.D. Cal. 1979), the copyright infringement case instituted after Sony's introduction of its video tape recorder. He was contemplating a proposed device that would make it impossible to record a television program without the copyright owner's permission when he said:

[A]s sure as you or I are sitting in this courtroom today, some bright young entrepreneur ... is going to come up with a device to unjam the jam. And then we have a device to jam the unjamming of the jam and we all end up like jelly.

Paul Goldstein, *Copyright's Highway: The Law and Lore of Copyright from Gutenberg to the Celestial Jukebox* (1994).

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Filing Patent Applications Via the Internet - It's Just Around the Corner, So You Might As Well Start Preparing For It Now

By Marc J. Farrell

Introduction

The United States Patent and Trademark Office (USPTO) has recently established a strategic information technology goal of conducting business electronically with its customers (yes, that includes patent attorneys) over the Internet. While the PTO still devotes significant resources to converting much of the information provided by its customers and partners into an electronically processable format, its goal is to electronically transact 80 percent of its business by the year 2003. With the tremendous growth in application filings for both patents and trademarks, and the inability of the PTO to hire and keep a sufficient number of employees to match that growth, the PTO continues to face serious challenges in processing patent and trademark filings in a timely manner and providing satisfactory service to its customers.

Electronic Progress Made With Regard to Trademarks

The USPTO has undertaken a number of pilot projects related to electronic filing of patent and trademark application information. On the trademark side, electronic filing of applications and other items has become quite popular. The PTO has implemented the Trademark Electronic Application System (TEAS). TEAS allows the user to complete a trademark application, check it for completeness, and submit the completed validated application directly to the PTO over the Internet (The user can also print out the completed form using PrinTEAS and send the application to the PTO via "snail mail"). The applicant may pay the necessary fee(s) using an online credit card transaction or a PTO deposit account. Effective Aug. 1, 2000, if a trademark application is filed via TEAS, the PTO will no longer mail a paper filing receipt for electronically-submitted applications. Instead, the user receives an e-mail summary of the application data, which will serve as the official filing receipt.

In addition to applications, the following trademark-related items may be filed electronically via TEAS: (a) Statement of Use; (b) Amendment to Allege Use; (c) Request for Extension of Time to File a Statement of Use; (d) Section 8 Declaration; (e) Section 15 Declaration; (f) Combined Section 8/15 Declaration; and (g) Combined Section 8/9 Renewal Declaration.

Patents Slowly Catching Up to Trademarks

On the patent side of things, however, the process has moved much slower. Of course, the primary reason for this delay cannot be blamed on the PTO (for once). Rather, it is due to the confidential nature of patent applications (a

concern not presented by trademark applications). The PTO has been working to address the confidentiality and integrity issues involved in transmitting sensitive information, such as a patent application, over the Internet.

In December 1999, the PTO received its first patent application filed in electronic form. The representing law firm successfully transmitted the appropriate form, a fee transmittal, a complete specification of 29 pages with claims, seven sheets of informal drawings, and a signed declaration and power of attorney. All were received in complete and readable form, and a filing date was granted. That accomplishment came on the heels of a successful electronic filing of a gene sequence listing for a pending biotechnology application — a filing that inaugurated EFS-BIO, one of the components of the evolving electronic filing system. EFS-BIO eliminates the cost and delay of physically handling, processing, and delivering gene sequence listings.

Latest Developments

The USPTO has recently announced that beginning this fall, it will make software available to allow the preparation and filing of patent applications via the Internet. The USPTO's Electronic Filing System (EFS) software will accomplish the assembling of all the various components that make up a patent application. The EFS software will also calculate fee information, validate application content and enable the application to be compressed, encrypted and transmitted to the USPTO. This development could have a tremendous impact on each of our day-to-day practices. Soon the days of going through a large stack of formal papers, preparing return postcards, etc., may be a thing of the past.

What is the Specific Time Frame?

In late October 2000, the basic EFS software will be available from the Electronic Business Center (EBC) Web site for anyone who wishes to begin taking advantage of this new option for filing patent applications. Then, in early November 2000, the USPTO will begin mailing EFS CD packets containing a comprehensive suite of materials, including a complete set of software, instructions manuals, quick reference guides, instructional videos and sample materials to help in developing patent applications for electronic submission.

What's the Catch?

Other than concerns of security, user-friendliness, etc., that all of us may experience to some degree or another, one concrete obstacle to being able to take advantage of electronic

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PAIR-ing Up With the USPTO

By Marc J. Farrell

If you already have a customer number, or if you obtain one in order to use the Electronic Filing System (EFS) software (see *Filing Patent Applications via the Internet — It's Just Around the Corner, So You Might As Well Start Preparing For It Now*, on page 5), you should also be aware that your customer number can be used to access the Patent Application Information Retrieval (PAIR) system.

Launched at the end of 1999, the PAIR system makes it possible for patent applicants, and their designated agents or attorneys, to securely obtain up-to-the-minute information on their pending or abandoned patent applications. Examples of information available from PAIR include: (a) whether a filing date has been recorded; (b) current status of the application; (c) the examiner's name and examiner contact information; (d) the prosecution history; and other helpful information.

As with the Electronic Filing System, the first step in being able to take advantage of PAIR is to obtain a customer number. Only those applications which are associated with a particular applicant's or agent/attorney's customer number can be accessed using PAIR. If you already have a customer number, or once you receive your customer number, it must be associated with all of your currently-pending (or abandoned) patent applications. This information must be sent on a diskette to the PTO in a spreadsheet format (instructions and forms for accomplishing this are available from the PTO, which has instructed interested persons to contact Terry Downey at 703-308-6845 for forms, answers to questions, and any other information regarding Patent Application Information Retrieval). Make sure that any new applications you file with the PTO include your customer number, in order for you to be able to access information about them with PAIR.

The next step is for you to complete a Certificate Action Form (also referred to as the PAIR access form), which must be mailed to Box EBC, Washington, DC 20231 (it cannot be faxed, and the PTO will not accept a copy). See the PTO Electronic Business Center (EBC) Web site at <http://www.uspto.gov/ebc/index.html> for the form and instructions. The Certificate Action Form is essentially a request to the PTO to issue to you a set of public key certificates (a digital signing certificate and a confidentiality certificate). The USPTO Certification Authority (PTO CA) issues User Certificates, which are digital signature certificates that bind identity and other information to an electronic key used to encrypt and sign digital information. By issuing a certificate, the CA confirms the accuracy of the certificate information. Each user's certificate is

unique, meaning that no other certificate, from whatever source, may be used as a substitute.

Each public key certificate includes the public key of a public/private key pair. The digital signing key pair is generated by the subscriber's personal computer via software provided by the PTO and the public key becomes part of the digital signing certificate. Only the subscriber holds the private key corresponding to the public key contained in the digital signing certificate. Both the public and private keys of the confidentiality certificate will be generated by the PTO CA and sent via a secure channel to the subscriber. The PTO CA will hold a copy of the subscriber's private key corresponding to the public key contained in the confidentiality certificate in order to provide key recovery capability.

Once your Certificate Action Form has been approved and your original signature has been verified, you will receive two codes, a Reference Number via e-mail, and an Authentication Code that will be given to you over the phone. These two codes are required during the installation process.

You will then need to download software from the PTO's Web site. In order to address the confidentiality concerns associated with making sensitive information available over the Internet, the PTO requires users of the PAIR system to download Public Key Infrastructure (PKI) software on their computers in order to access pending and abandoned application information. Functions of the PKI software include encryption and a digital signature, in order to ensure the confidentiality and integrity of the application data. The PTO provides the PKI software free-of-charge to approved users of PAIR. Without the PKI software, you will not be able to access any information regarding pending and abandoned applications.

Once you have received your codes and the PKI software has been installed correctly, you will have direct secure access to real-time patent application information. If you want a sneak preview of the PAIR system, go to the PTO's EBC (at the address previously given above), and select the PAIR button. Enter any patent number to see for yourself the information that can be readily accessed via the Internet. There is also general information available on the PAIR system, answers to frequently asked questions, and instructions on how to request PAIR access.

Now instead of playing phone tag with an examiner, you can get an up-to-date status report on your pending applications via PAIR. As with the EFS, your clients are likely to expect you to have this tool at your fingertips. ■

Marc J. Farrell is with Reed Smith in Harrisburg.

PTO Provides Customers With the Ability to RAM

By Marc J. Farrell

The USPTO's Revenue Accounting and Management (RAM) system allows customers to perform a variety of transactions over the Internet through the PTO using a secure environment. The RAM system was upgraded in December 1999 to provide customers with added convenience and enhanced financial services, as part of the PTO's long-term strategy to modernize its practices and procedures and to provide improved service to its customers.

Using RAM, one may perform the following transactions:

- Replenish deposit account balances using a credit card (the PTO currently accepts any of the following credit cards: American Express, Discover Card, MasterCard or Visa);
- View deposit account information including holder name, address, and current balance;
- Request a deposit account statement;
- Add, change or delete deposit account authorized users;
- Request a form to change entity status;
- Pay maintenance fees using a credit card; and
- View 3.5, 7.5 and 11.5 year payment window dates for maintenance fees;

The PTO provides current deposit account holders, in their monthly statements, passwords and access codes in order to be able to perform the above tasks. Customers using either the Netscape Navigator (version 2.0 or higher) or Microsoft Internet Explorer (version 3.0 or higher) browsers can access the enhanced financial services feature. The browser must be properly configured to use Secure Sockets Layer technology, which encrypts data traveling between the user's browser and the PTO server for privacy protection.

To RAM the PTO, go to <https://ramps.uspto.gov/psv23/default.htm> (yes, there is an "s" after the *http* portion of this address — that is not a typo). ■

Continued Examination Changes Under the American Inventors Protection Act of 1999

By Joan T. Kluger

Pursuant to the American Inventors Protection Act of 1999, 37 CFR '1.114 has been implemented and provides a procedure under which an applicant may continue examination of an application that is under final rejection, appeal, or notice of allowance. Continued examination under '1.114 is effectuated by filing a Request for Continued Examination (RCE), filing a submission and paying a fee. The procedure under '1.114 is applicable to any utility or plant patent filed on or after June 8, 1995. The procedure is not applicable to (1) an application in which the office has not mailed at least one of an office action under 35 U.S.C. '132 or a notice of allowance under 35 U.S.C. '151; (2) a provisional application; (3) an application for a utility or plant patent filed under 35 U.S.C. '111(a) before June 8, 1995; (4) an international application filed under 35 U.S.C. '363 before June 8, 1995; (5) an application for a design patent; or (6) a patent under reexamination.

A submission as used in '1.114 includes, but is not limited to, an information disclosure statement, an amendment to the written description, claims, or drawings, new arguments, or new evidence in support of patentability. A submission under '1.114 must meet the requirements of '1.111 if an office action under 35 U.S.C. '132 is outstanding.

An applicant may be faced with the decision of whether to file a continued prosecution application (CPA) under '1.53(d) or a request for a continued examination (RCE) under '1.114. A CPA is applicable to any non-provisional application filed before May 29, 2000, including design applications. An RCE is applicable to any non-provisional utility or plant application filed on or after June 8, 1995. Therefore, a non-design application filed after June 8, 1995, but before May 29, 2000, may be prosecuted either as a CPA or an RCE.

The effect of the patent term adjustment rules, which became effective on May 29, 2000, differs between a CPA and an RCE. A CPA is considered a new application whereas an RCE is a continued examination of the same application. Accordingly, an application on which an RCE is filed will only be entitled to a patent term adjustment if the application was filed on or after May 29, 2000, and then only term adjustments

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Part 1**Pre-Issuance Publication and Provisional Rights:
Changes to Sections 102 and 103**

By Gregory J. Lavorgna

Part I of this two-part series explains changes to patent statutes, and explores unsettled issues in implementation of the statutes by the U.S. Patent and Trademark Office (PTO) and the courts. In the next issue, the author explores strategies that patent attorneys and their clients can employ to maximize the benefits of the new changes to the patent statutes.

Introduction

Congress enacted the Intellectual Property and Communications Omnibus Reform Act of 1999 (the "act") "to modernize our Patent and Trademark Office, to prevent abuses to our patent system and to ensure greater protection for American inventors around the world." *Statement of Rep. Henry Hyde before the Senate Judiciary Committee, May 7, 1997, 1997 WL 10571220.* A goal of the legislation was to "create American jobs, protect American ingenuity, and improve the lives of the American people." *144 Cong. Rec. S7934-01.*

The act requires publication of pending U.S. patent applications which have a corresponding foreign counterpart. The idea behind publication was to ensure American inventors get to see technology foreign competitors are seeking to patent much earlier than is possible today. *145 Cong. Rec. S14719.* Several benefits were expected to flow from publication:

It allows other inventors to discover what inventions have already been applied for and encourages them to invest their time and efforts in other inventions which further benefit our country. It serves as a "Do not tread on me" flag for the inventor who submitted the application, so that others know not to try to copy the invention or they will be found liable for infringement. It allows venture capitalists the opportunity to consider financing an invention which may lead to the financial success of the inventor, and it benefits society so that we can continue to move forward in science and technology instead of keeping cherished knowledge hidden below the surface. *143 Cong. Rec. H1407.*

The concept of publication was not universally embraced. Some regarded publication as benefitting big business at the expense of independent inventors. Others worried about the loss of secrecy of an invention if a published application is abandoned or never granted, and fretted over the concept of disclosure without receiving anything in return. One congressman commented, "These [proposed changes] are not only detrimental to U.S. interests, but would put most independent inventors out of business." *Statement of Rep. Dana Rohrabacher, before the Senate Judiciary Committee, May 7, 1997, 1997 WL 241206*

To address some of these concerns, the act includes a provision establishing "provisional rights," which provide a new right to a reasonable royalty from one who makes, uses, sells, or offers for sale a product as claimed in a published patent application. In addition, the act creates a new class of prior art publications, namely, published U.S. patent applications.

Confidential Status of Applications; publication of patent applications

Patent applications will still be kept in confidence by the PTO. The major exception is that applications shall be published promptly after 18 months from the earliest filing date for which a benefit is sought. There are some exceptions to this exception: abandoned applications, applications subject to a secrecy order, provisional applications, design applications, and applications whose publication would be detrimental to national security will not be published. Applications which cover an invention which is the subject of an application filed in another country that requires publication must be published.

Applications filed on or after Nov. 29, 2000, are subject to publication, but there are some things the applicant can do to control publication. The applicant can certify that the invention in the application has not been and will not be the subject of an application filed in another country that requires publication. If foreign applications are filed, the applicant can request that only a redacted copy of the application be published if the foreign applications are less extensive than the U.S. application. Timing is important, because the request not to publish must be made upon filing. However, if the applicant changes his or her mind and wants the application published, the request can be rescinded "at any time." An applicant can also request publication earlier than the 18th month.

There are some potential pitfalls. If the applicant requests the application not be published and subsequently files an application outside the U.S., the applicant must notify the PTO. If the applicant makes a request but then files an application outside the U.S. and forgets to notify the PTO, the PTO will treat the U.S. application as abandoned. Notice to the PTO must be given not later than 45 days after the foreign application is filed. If the applicant elects to publish a redacted copy of the application, the applicant should make sure the redacted copy is sufficient to enable a person skilled in the art to make and use the subject matter of the claim, or the applicant will not be entitled to provisional rights.

Provisional Rights

An issued patent will include the right to obtain a reasonable royalty for the period between publication and the

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Continued Examination Changes Under the American Inventors Protection Act of 1999

(Continued from page 7)

accumulated before the RCE filing will effect the patent term. No additional adjustments may be accumulated after the RCE is filed.

A patent issuing on a CPA filed on or after May 29, 2000, will be entitled to a patent term adjustment accumulated during the prosecution of the CPA. Any term adjustments realized in the application on which the CPA was filed do not carry over to the CPA.

If an RCE is filed after an appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal, the RCE is treated as a request to withdraw the appeal and to reopen prosecution of the application. If an appeal is pending when a CPA is filed, it renders the appeal moot because the CPA abandons the application on which it was filed. If a court action is pending on an application on which an RCE is filed, an applicant must obtain dismissal of the action to return jurisdiction to the U. S. Patent and Trademark Office. It should also be noted that an appeal brief under '1.192 or a reply brief under '1.193(b), or related papers, will not satisfy the submission requirement for an RCE under '1.114.

The fees for a CPA and an RCE differ. The fee for an RCE is the basic filing fee for a utility patent and does not include charges for additional claim fees. A CPA is considered a new application, and therefore, requires the basic filing fee plus charges for additional claims. An applicant may not defer payment of the RCE fee, unlike a CPA in which an applicant may defer payment of the filing fee under 37 CFR '1.53(f).

Other differences between CPA and RCE practice to keep in mind are: (1) an RCE is entitled to the benefit of a certificate of mailing under 37 CFR '1.8, whereas a CPA is not; (2) divisional applications are permitted under CPA practice but not under RCE practice; (3) any change in inventorship under an RCE must be made pursuant to 37 CFR '1.48, unlike a CPA where inventorship continues unless the applicant submits a statement deleting an inventor; and (4) small entity status continues with an RCE but does not with a CPA.

An RCE simplifies the continuation of an application and is, therefore, likely to be the prosecution method of choice. Applicants, however, should carefully consider cost and the resulting patent term when both a CPA and an RCE are options. ■

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The Bayh-Dole Act in the Age of Proteomics

(Continued from page 1)

Severson noted that academics may publish the results of the research after patent application submission, and that the academics will continue their basic research programs.

Dr. Harold Varmus, president of Memorial Sloan-Kettering Cancer Center and formerly director of the National Institutes of Health, expressed concern that seeking IP protection early in the research cycle can have detrimental effects on science and its delivery of health benefits. Further, he noted issues with patents on "research tools," inventions which are useful for the conduct of research and development of health consumer products, but which themselves are not such products, and, separately issues with the inhibition of exchange of biological materials, which formerly might have been freely shared.

Additionally, Dr. Varmus had particular issues with gene patents per se, most particularly related to the way the utility requirement has been satisfied. Gene sequences per se have no readily envisioned use but rather encode information for a protein, which does have a use. Knowing a sequence allows one to predict the corresponding protein. By comparing this hypothetical protein to known proteins, researchers take a guess at what the underlying gene sequence does and how it might be useful (so-called "in silico biology"). This "guess" is used to satisfy the utility requirement. Dr. Varmus expressed concern that sequence patents might excessively reward the "preliminary and frankly obvious work of determining DNA sequence," and thereby diminish financial incentives for the innovative scientific work required to determine gene function, the objective that will actually benefit the public. Even with the PTO's new proposed standards, Dr. Varmus felt that patents could issue on "still quite superficial and potentially misleading information about the properties of the gene."

With the preliminary "completion" of the human genome, the issues become more complex. Research will shift from obtaining raw sequence data to "bioinformatics," the divining of information from the sequences, and "proteomics," the identification and determination of properties of the proteins that the genes encode. Finding the interconnection circuitry among 100,000 genes in the human cell is a "many body" problem, wherein important functions may be related to many sequences. A key issue is balancing the reward structure for individual university/private collaborations which solve pieces of the puzzle while maintaining incentives for integration of many of the pieces to solve the more complicated problems. ■

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Part 1**Pre-Issuance Publication and Provisional Rights:
Changes to Sections 102 and 103***(Continued from page 8)*

issuance of the patent. Provisional rights are available not only with respect to published U.S. applications. They are also available with respect to published international applications filed under the PCT and designating the United States, but the right does not commence until the date the PTO receives a copy of the publication or, if the publication is not in English, the date the PTO receives a translation of the application into English.

Any person who makes, uses, offers for sale, or sells in the U.S., or who imports into the U.S., the invention as claimed in the published application is subject to the reasonable royalty. If the invention is a process, any person who uses, offers for sale, or sells in the U.S., or imports into the U.S. products made by the process as claimed in the published application is subject to the reasonable royalty. Provisional rights do not seem to cover inducing infringement or contributory infringement.

Provisional rights are available for applications pending on Nov. 29, 2000, and voluntarily published by the applicant. Thus, an applicant can obtain provisional rights for an application filed before Nov. 29, 2000, by voluntarily publishing it.

There are some limitations on provisional rights:

- The statute suggests, although it does not explicitly state, that the right cannot be exercised until the patent issues.
- A person must have actual notice of the published application.
- The invention as claimed in the patent must be substantially identical to the invention as claimed in the published application.
- To exercise a provisional right, applicant must bring an action not later than six years after the patent is issued.

Prior Art Effect of Published Applications

Published applications will be available as prior art under § 102(e), and are effective as of their filing date. Applications filed before Nov., 29, 2000, but still pending on that date can become prior art if voluntarily published by the applicant. It is not necessary to wait until a patent actually issues for the pending application to become prior art.

"Well, this is indeed the fair, Full Employment Act for patent lawyers."

Comments of Robert Rines, executive director of Intellectual Property Owners, 16 Cardozo Arts & Ent. L.J. 601 (1998)

There are enough uncertainties in the act to keep patent attorneys busy for quite a while.

In the area of provisional rights, it is not clear whether the same defenses are available to claims of violation of provisional rights as for infringement of an issued patent. Also, suppose a competitor practices an invention claimed in a published application but ceases before the patent issues. Technically, there is no basis for an action for infringement, and an independent action for reasonable royalties is not expressly established.

When does the reasonable royalty begin to accrue? Does it accrue from the date of publication, or only from the date the defendant has actual notice? While it would be prudent for an applicant to provide notice, is that required? The act requires only that the defendant have actual notice. Can a patentee rely on proof, if available, that the defendant had actual notice of the published application even if the patentee didn't provide formal written notice? If the patentee provides formal written notice, but the notice is defective, are provisional rights precluded?

How would a court determine the scope and meaning of the claims in the published application without the benefit of a prosecution history?

Does the doctrine of equivalents apply to provisional rights? Nothing in the act addresses the doctrine of equivalents.

If a patent applicant gives notice to a competitor, does that give rise to a justiciable controversy under the Declaratory Judgments Act (28 U.S.C. § 2201)? Could the competitor bring an action to have the claims declared unpatentable even while the PTO is examining the application?

How much can a successful patentee recover in an action for violation of provisional rights? The act does not provide for increased damages. Are attorneys fees available? What about prejudgment interest?

How different can the claims in the issued patent be from the published claims before they are no longer "substantially identical"?

Does the act really eliminate submarine patents?

Clearly, much work will need to be done by the PTO, the courts, and the bar before these questions can be answered with reasonable assurance. However, patent counsel can do some things now to minimize the uncertainty. ■

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Would Killing Napster Prevent Digital Copyright Piracy?

(Continued from page 4)

For a while, a legal tug-of-war will stall some of the copyright and patent infringement through sharing digital files on the Web, but without strict adherence to the law by users, it is unlikely that this legal shadow-boxing (albeit for a large prize purse) will solve many of the infringement problems. Some prognosticators predict that the music industry is about to undergo a severe power shift, wherein the artists making the music will have to rely less on the record companies for distribution, since distribution is as easy as the click of a mouse. Perhaps these groups could raise money by requesting that users pay them directly for their music, in much the same way that Stephen King recently made a novella available on the Internet by trusting that users would pay him directly a minimal one dollar for the privilege of downloading installments of his novella (at last check, 75 percent of the people who downloaded King's *The Plant* had paid him).

Alternatively, the future of digital software and music might be as free (as in free speech, not free beer — thanks to the free software movement for this clarification) as the up-and-coming operating system, Linux. Even the most ardent proponents of intellectual property rights are recognizing the ease and inevitability of distribution of digital information over the Web. Without an overarching Internet controls system like the one contemplated by Lawrence Lessig in *Code and Other Laws of Cyberspace* (1999), digital information is inexorably marching towards free distribution.

That leaves any person or company creating work in a digital medium, or transferable to digital form, in a bind between producing a work and reaping the rewards from it. The Linux companies, who distribute their software freely (as in speech and beer) under the GNU General Public License, have changed their profit models to focus on computer support, and less on actual software development. The Linux companies, and other free software companies, leave the majority of software development to the software community as a whole, a community that finds and corrects bugs much faster than its proprietary modeled software brethren (Stephen B. Schott, "The Gnus About the Enforceability of the Gnu General Public License: Is the General Public License Enforceable?" [current draft as of August 2000, available at <http://members.home.com/sbschott/gpl.doc>]).

Rocker Courtney Love recently stated, "I'm not afraid of Napster ... There were a billion music downloads last year, but music sales are up. Where's the evidence that downloads hurt business? The recording industry is the real pirates." Indeed, *The New York Times* recently reported several new studies showing that Napster fans tend to buy more music after using the service, not less.

Music artists may be able to reap rewards by cutting out the huge profits of record companies and keeping some of that money for themselves. Perhaps, as the climate of free distribution takes hold, people will become more aware of the importance of supporting the creators of the work, like those people who voluntarily sent Stephen King their money, even though they had the option of easily downloading his book for no fee. Maybe people have more respect for copyright than some of the anti-Napster big recording and big software movement give them credit for; King's own case study shows that 75 percent of the 150,000+ people who downloaded the first installment of his novella were honest enough to send him the dollar he requested. The creators of intellectual property are entitled to protection as guaranteed by the Constitution, and King has found a way to harness rewards from his intellectual creativity without necessarily waving the legal stick of copyright at people. King promised more installments of his book in exchange for payment, and in large part received that payment.

A recent satirical article in *The Onion* predicted that Kid Rock and members of the anti-Napster mega-group Metallica are destined to become homeless and destitute due to Napster downloads. The article, with tongue fully in cheek, described these bands' spiral to desolation because of Napster downloads. It served to illustrate the absurd notion that there would not be enough money for these groups in a free digital distribution world. However, this cynical view does not justify downloading these groups' intellectual property without attribution or payment.

I, for one, will choose to believe in the good will of the people in King's test study while copyright enforcement undergoes some changes to accommodate to the digital age, since Stephen King has one of my dollars. ■

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Filing Patent Applications Via the Internet - It's Just Around the Corner So You Might As Well Start Preparing For It Now

(Continued from page 5)

patent filing is that the user must first obtain a customer number and a digital certificate. These two items are the keys to ensuring that EFS transmissions to the PTO are encrypted and secure. The PTO is advertising that "sensitive patent application information [will be] digitally encrypted from your PC all the way to the USPTO's Electronic Mailroom."

Customer Number

If you do not already possess a customer number and would like to be able to use the EFS software, it is recommended that you apply for a customer number as soon as possible. If you are a registered patent attorney or patent agent, your registration number must be associated with a customer number. Forms are available on the PTO Web site if you do not have a customer number but would like to obtain one (form PTO/SB/125A), or have a customer number but would like to update the information associated with it (form PTO/SB/124A). The author waited a month and a half to

obtain a customer number, so you may want to consider requesting one now rather than waiting until you actually desire to make use of the patent Electronic Filing System.

For more information on the EFS, obtaining a customer number and obtaining a digital certificate, visit the Patent Office's Electronic Business Center at <http://www.uspto.gov/ebc/index.html>. With your customer number and digital certificate, you will also immediately be able to access status information about your current pending patent applications via the Patent Application Information Retrieval (PAIR) program, 24 hours per day, seven days per week (see *PAIR-ing Up With the USPTO*, page 6).

You don't want to be left out in the cold when electronic patent application filing becomes available, as it will only be a matter of time before clients come to expect all patent attorneys to be capable of providing that service. ■



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