

# Do Patents Translate to an E-Business Environment?

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## Abstract

The Internet presents a unique challenge for intellectual property management. The state of patents in the current e-business environment was investigated through a survey of the literature and an interview. Copyrights are discussed briefly in the introduction. Current e-business patent trends and issues are discussed. The findings indicate that patents do translate in an e-business environment.

**Keywords:** E-Business, E-Commerce, Intellectual Property, Patents

### 1. INTELLECTUAL PROPERTY IN THE E-BUSINESS ENVIRONMENT

The Internet presents a unique challenge for intellectual property management. "Perhaps the simplest, yet most difficult, of the problems is how digital information can be distributed without losing control of it – sharing it but not surrendering it." (Davis, 1999) The establishment and protection of intellectual property rights is central to this problem.

According to the E-Business Technology Forecast (PricewaterhouseCoopers, 1999), e-business opens new channels and resources to create strategic advantage. As the time to market quickens, global markets open, and business models never before possible appear, our existing business models and structure seem inadequate.

In our current e-business environment, there are multiple issues that arise when discussing intellectual property. To discuss these issues, it is imperative to understand the difference between patents and copyrights. A copyright covers the actual expression of an idea, but does not prevent anyone from incorporating that idea into their own work (Oppedahl & Larson, 1993-1995, a). A patent, on the other hand, prevents the incorporation of your work into a system embodying your ideas (Oppedahl & Larson, 1993-1995, b).

Digital copyright issues pertain to a variety of industries: the publishing industry, the music industry, the movie industry, as well as the fine arts. With print copies (e.g.: books, magazines, records, film,

photographs) the artist is able to control circulation of their product, and thereby collect copyright royalties, which translates to revenue. The Internet, however, presents a new challenge given the ease that digital distribution provides.

In the case of Church of Spiritual Technology v. Dataweb B.V., the Church of Scientology (CoS) claims copyright infringement against 22 internet service providers (ISPs) and a journalist (Karen Spaink) when portions of unpublished CoS teachings, known as OT-Works and Scientologist Ability Major, were posted on a website (Flint, 1999).

In the first round of proceedings, the ISPs and Spaink were victorious; the court found that the posting of the affidavit was "fair use" of the document and that ISPs are not liable for their users' content (Flint, 1999).

CoS appealed the decision. In the second round of proceedings, the ISPs did not fair as well. It was found that although an ISP is not responsible for the content of a users' web site, it is responsible for upholding copyrights if it has been informed of a copyright infringement. This includes removing or blocking a url, as well as links to other known offending sites/urls (Flint, 1999). This finding supports the translation of copyrights to the e-business environment.

Digital copyright issues are also evident in the music industry. Artists distributing their music over the Internet could be at a distinct monetary advantage as they have eliminated the middleman and are controlling their own copyrights; musicians can demand a 50-75% of sales revenue for music sold via the web

(PricewaterhouseCoopers, 1999). On the other hand, musicians signed with major record labels can demand only 8-10% for their copyrights (PricewaterhouseCoopers, 1999). MP3 (MPEG Audio Layer 3) is one digital format for audio files; the sound quality is as good as CDs, and is much cheaper – if not free. Any proceeds from the sale of an MP3 file/song go directly to their artist versus a record label.

The frequency of lawsuits currently pending indicates that the future interpretation and enforcement of both copyrights and patents are still uncertain in the digital environment. Jesse Berst, Editorial Director of ZDNET Anchor Desk, believes patent attorneys, and thereby patents, are a threat to internet progress. He asserts that the business processes that occur on the Internet are not original, but rather an adaptation of an already existing method of conducting business (Berst, 2000). Mel Duvall, contributor to *Inter@ctiveWeek*, also contends that e-commerce is simply the evolution of the way people have been doing business for years (Duvall, 2000).

Take for example, the case of *Priceline vs Microsoft*. Priceline is suing Microsoft for utilizing their “name your price” business model. Duvall asserts that people have been bargaining for the best price for centuries (Duvall, 2000). Tim O’Reilly has dedicated an entire section of his company’s website to discussing the case between Amazon.com and Barnes & Noble’s online division, *Barnesandnoble.com* (O’Reilly, 2000, a). Amazon.com has been granted a patent for their 1-click technology, which allows for the ability to purchase goods online in one single click of the mouse. Barnesandnoble.com’s attempt to implement an identical feature on their website resulted in a lawsuit.

## 2. PATENTS AND THE DIGITAL ECONOMY

Given the current e-business environment, do patents have a place in a digital economy? There are many topics that must be addressed when discussing patents in a digital economy, including the application for patents, the granting of patents, as well as patent infringement.

The research will address intellectual property protection in terms of patents. Any technologies relevant to a specific patent will also be discussed. Neither the history of intellectual property nor the history of e-business will be addressed. Neither copyrights nor trademarks will be discussed.

## 3. METHOD

### Literature

A thorough examination of the current literature has been conducted. The majority of the research was conducted via the web through various knowledge

portals, AskJeeves, HotBot, and Yahoo to name a few. Online journals and magazines were also evaluated. Search terms included e-business, e-commerce, patents, and copyrights. Articles were evaluated for references to the evolving state of patents in e-business.

Relevant websites were also evaluated. These sites include the United States Patent and Trademark Office (<http://www.uspto.gov>), the World Intellectual Property Organization (<http://www.wipo.org>), Business 2.0 (<http://www.business2.com>) and the Industry Standard (<http://www.thestandard.com>).

### Interview

An interview was conducted with Mr. Walter Effross, Professor of Law at American University Washington College of Law. One area of his research includes the legal culture of the Internet and the emerging rules of digital commerce (Effross, 2000). See Appendix A for a list of interview questions.

## 4. FINDINGS

### Patent Trends

Patents are awarded based upon a thorough review of the patent claim as well as a review of the prior art (PTO, 1999). Patents are only granted when a request can be proven to be both non-obvious and original (W. Effross, personal communication, 8 March, 2000).

Quoting directly from the U.S. Patent and Trademark Office (PTO) web site, a patent guarantees “... the right to exclude others from making, using, offering for sale, or selling the invention in the United States or ‘importing’ the invention into the United States. What is granted is not the right to make, use, offer for sale, sell or import, but the right to exclude others from making, using, offering for sale, selling or importing the invention.” (PTO, 2000, c) Inventors exchange the secret of their inventions in return for a twenty-year monopoly.

There are three different kind of patents: utility, design, and plant. The type of patent that is relevant in the digital economy discussion is the utility patent. Any computer related patent would fall under the technological arts classification (PTO, 1999).

The statistics published by the PTO (PTO, 2000, a, b, c) show a dramatic increase in the number of applications for utility patents. Utility patent applications are up 40% since 1992 (see Figure 1). Utility patent awards are up 58% since 1992 (see Figure 2). In 1998, 61% of utility patent application requests were awarded (see Figure 3). The trends show an increase in both the numbers of utility patent awards requested and granted.

### **Patent Issues**

Utility patents traditionally have been awarded for inventions, but in recent years awards have included business methods (W. Effross, personal communication, 8 March, 2000). The controversy surrounding the patenting of business methods has become so great that the PTO has created a Business Method Patent Initiative (<http://www.uspto.gov/web/offices/com/sol/actionplan.html>) to address the growing concerns.

Amazon.com has been awarded two controversial patents, the 1-Click patent and the Associates patent. Their 1-click patent only protects the single "point and click" aspect of an online purchase, such that the sale is made without any confirmation step (O'Reilly, 2000, b). Their Associates patent is a mechanism that allows individuals or companies to establish a virtual bookstore on their website, with fulfillment by Amazon (O'Reilly, 2000, b).

## **5. DISCUSSION**

### **Is a patent really necessary?**

The Amazon.com patents lend themselves to controversy for many reasons, including the fact that they are business methods. There is also great controversy over whether they meet the un-obvious and original patent criteria (O'Reilly, 2000, a). But the patents have guaranteed them shelter from direct competition. Barnesandnoble.com has been forced to add another step to their purchase process. If you are Amazon.com, yes, the patent is necessary.

Looking at this from an Internet start-up perspective, patents can validate a business plan and ensure the next round of venture capital (W. Effross, personal communication, 8 March, 2000). If you are employed by this start-up and your stock options depend upon the patent, yes, the patent is necessary.

In both of the above situations, the necessity for patents has been illustrated. But what about the flip side? What about the unspoken code of technologists everywhere – open source? What about innovation?

### **The Quest for Innovation**

According to James Gleick in a New York Times article titled "Patently Absurd," the PTO is in the middle of a crisis. Gleick states that the patent system itself is a threat to the digital economy. Many believe that the PTO has begun to choke the very innovation it is intended to nourish (Gleick, 2000).

Does granting Internet patents stifle innovation? "The web, and the world, thrive on information which is accessible to all." (Berners-Lee, 2000) Theoretically, all future Internet based products are based on past products. All work is built on work that has been accomplished in the past. Patents present a roadblock

to any individual or company attempting to accomplish the same task as the individual or company granted a patent.

### **Enforcing Patents**

Given that patents are granted for e-business purposes, the question changes from "Do Patents Translate to an E-Business Environment?" to "What are the Repercussions of Enforcing Patents in an E-Business Environment?"

Jeff Bezos, founder and CEO of Amazon.com, states that he will only enforce patents on larger companies that present a threat to their business, like BarnesandNoble.com (O'Reilly, 2000, a). If the patent will not be enforced across the board, is there any merit to issuing the patent? Should Amazon.com be allowed to arbitrarily and capriciously claim patent infringement?

O'Reilly suggested a boycott of Amazon.com after their actions against Barnesandnoble.com (O'Reilly, 2000, a). Over 10,000 web users posted comments in agreement. The e-community flexed its muscle. Professor Effross prophesied that Amazon.com could be a target for hackers due to their 1-click patent enforcement (W. Effross, personal communication, 8 March, 2000).

Another impediment to enforcing patents could be the cost. One cost could be the cost associated with potentially alienating users (as described above). The other would be the cost associated with paying to include patented software or business methods in to a new product as it goes to market. The cost would be passed on to the customer, perhaps making the new product cost prohibitive. It might be more economical to not make the new product, and therefore the original patent has in fact stifled innovation.

### **Patents in the New Millenium**

Bezos discusses shortening the patent protection period from 20 years to 3 years (O'Reilly, 2000, b). Professor Effross indicates that we need to find a way for the PTO to be more knowledgeable in the prior art (W. Effross, personal communication, 8 March, 2000). The observations are a good place to start the inevitable patent reform discussions.

Another issue that should be addressed is the PTO's website. It is extremely outdated and makes no reference to the Amazon.com patent issue. The state of their website is a direct indication of the state of patents in the e-business environment. The lack of attention to the e-business patent issue on the website indicates a lack of appreciation for the severity of the issue.

### **Future Research**

Future research could be conducted on the repercussions of the Amazon patents. Research could

also be conducted using the PTO's "Examination Guidelines for Computer-Related Inventions" to determine if there is subjectivity in the patent process.

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8. FIGURES

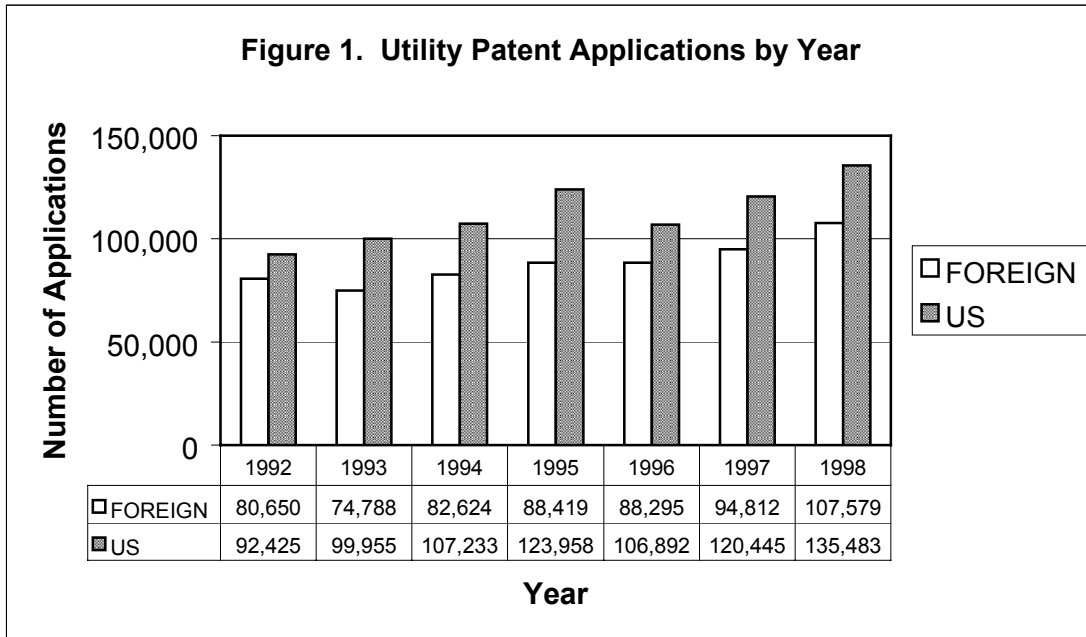


Figure 1. The number of utility patent applications by country of origin and by year.

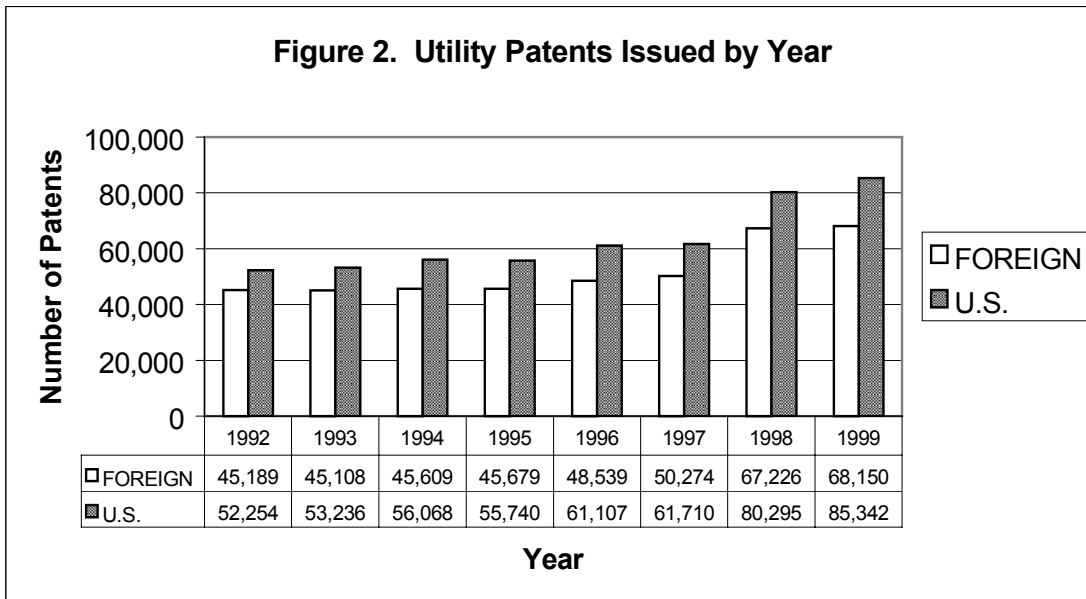


Figure 2. The number of utility patents issued by country of origin and by year.

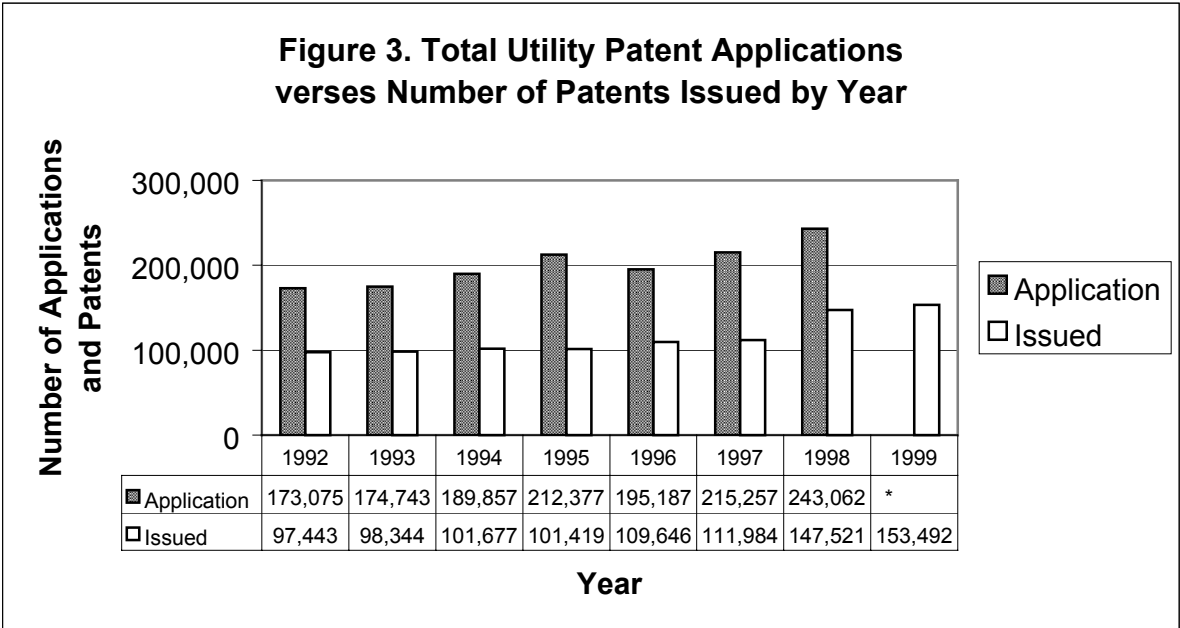


Figure 3. The comparison of the total number of utility patent applications as opposed to the total number of utility patent issued by year. \*Note: the number of utility patent requests for 1999 was not available at the time of submission.