

Legal Trends (Part I): Patenting the Internet

By George H. Pike*

Virtually every window of time can be identified by its technological advances. The industrial revolution of the 1800's gave way to the transportation revolution of the early 20th century. The development of synthetics such as nylon and plastics were followed by an electronics revolution built on transistors and early computers. The silicon chip led to personal computers and chip-driven devices as the 20th century wound down.

But these technological changes pale to that which the Internet has brought to the information industry. After 500 years of building on print technologies, the Internet has restructured this industry in a way that is unmatched by other fields of endeavor. The transformation brought on by the Internet, occurring over a fraction of the industry's life-cycle, has been nothing short of—to use the cliché—revolutionary.

Promoting progress

All of these technological transformations operate within a number of legal structures. One of the most critical of these structures, yet often least understood, is patent law. Patent protection, like copyright protection, finds its origins in the United States Constitution. Article I, Section 8, which provides, “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”. Copyrights and patents give creators a limited monopoly on their creativity, in order to provide the economic motivation to “promote” and move knowledge forward.

The Internet and its related technologies—such as e-mail, web browsing, TCP/IP software and e-commerce—are protected by thousands of patents. A recent search of the United States Patent database (www.uspto.gov/patft/index.html) located over 5,600 patents with “Internet” in the title or abstract. However, the role of Internet patents has come into question as a number of patents have been issued covering routine Internet practices such as media streaming, hyperlinks, and online test administration.

Federated searching and the patent public domain

Recently, WebFeat (www.webfeat.org) was granted United States patent #6,807,539 for its federated search engine technology. The patent specifically applies to, “a method and system for retrieving search results concurrently from multiple disparate databases, whether such databases be available through the Web, or other proprietary internal networks.” Searching and search engines, however, have been part of electronic information access for years, even more so with searching on the Internet. How can such a common technology be patented? Several of WebFeat's competitors are reportedly considering challenges to the patent on the grounds that federated searching was, “considered public domain.”

But is there a “public domain” in patent law? University of Pittsburgh law professor Janice Mueller, author of *An Introduction to Patent Law* (Aspen Publishers 2003), indicated that there really is not a public domain in patent law, at least in the same sense as public domain exists in

copyright law. A more accurate analysis, according to Prof. Meuller, is whether the invention is sufficiently novel when compared with the existing technology to be patentable.

Unlike copyrights, which are considered to legally exist the moment a work is created, patents are specifically granted by the U.S. Patent and Trademark Office. The process of obtaining a patent is quite rigorous and can take several months, or even years before one is issued. Patents rest generally on three core questions: Is it patentable under U.S. law? Is it novel? Is it non-obvious? If any one of these three questions receives a “no” answer, then the patent cannot be legally issued, or the patent can be overruled after the fact.

Process, machine or manufacture

The Patent Act provides that any “new and useful process, machine, manufacture, or composition of matter” or any “improvement thereof” may be patented. Machines, manufactures and compositions of matter are the most straightforward categories, largely what might be thought of as inventions. Machines and manufactures are inventions with a part or parts arranged to produce a resulting unique entity. The individual parts may be raw materials, or previously patented parts, as long as the resulting thing is unique. A jet engine is a machine. A golf club is a manufacture. Computer hardware will be generally patented as either a machine or a manufacture. A computing device with integrated software was determined to be a patentable machine. Software may be patented if it is intended to have a specific function and will produce a tangible result.

More complex and increasingly controversial is the “process” category of patent. Traditionally, a process is the series of steps used to accomplish a result. The assembly-line steps in building a car, or the combining of ingredients with heat to create cured silicon rubber products (my summer job in college!) are traditional examples of process patents. The patent awarded to WebFeat fits more in this category, as it describes a “method and system” for searching multiple databases, then outlines the series of steps that WebFeat uses to complete the search.

A more recent innovation that has particularly invaded the Internet and e-commerce world is the “business methods” patent. Considered a form of process patent, this allows patent protection for any unique method for engaging in a particular business activity. This type of patent is a child of the e-commerce world, having been first accepted in 1998 with patents involving software-based management of mutual funds and the use of computer codes to identify telephone calling plans. Since then, thousands of business method patents have been issued including patents covering on-line auctions, e-commerce shopping carts, finance and payment systems, online advertising, digital rights management, and search engine structures.

Intellectual property as an asset

Process and business methods patents share the greatest responsibility for the rise of patent controls on the Internet. The Internet’s underlying technology, the navigational tools that have made the Internet (semi-)manageable and the e-commerce marketplace and all entitled to—and in many cases have received—patent protection. Analysts can point to a number of reasons for this, beyond the growth of the Internet itself. The dot-com boom, bust, and recent re-boom can be

seen as largely riding on the strength of intellectual property assets. Those assets are often collateral for bank loans, venture capital, stock options and stock offerings, and must be heavily protected. It is in one sense a vicious—or positive—circle. The growing Internet spawns more patented technologies, processes and methods, which spur further growth of the Internet, and so on, and so on.

The WebFeat patent, therefore is not unique as a process patent. But many critics and competitors have asked, “Didn’t database searching exist before WebFeats patent?” “Isn’t searching a common Internet practice?” “What is unique about what WebFeat is doing?” The critics and competitors are asking the correct questions. If this form of database searching process is not unique, then WebFeat would not be entitled to a patent.

Novel and non-obvious

Patent law looks at one or both of two standards to determine whether something is unique enough to be patented. Is it novel? and/or Is it non-obvious? Novelty equates with newness. The invention or process needs to be new in the sense that it wasn’t previously known in the general marketplace of ideas. Novelty is determined by comparing the proposed invention with the “prior art”, or the available body of knowledge that is available to the public at the time of invention. Prior art includes previous domestic and foreign patents, unpatented inventions or processes, writings or descriptions of inventions or processes, and similar. Prior art may not necessarily include, however, trade secrets, proprietary processes, research notes, or other publications that were not generally available to the public.

Non-obviousness is a related but somewhat broader idea. It is not enough to say that something is merely new, it must go further to show that it arose out of some spark of imagination to be a unique invention. My kids, for example, have a standard purple Nerf football. A slightly larger blue foam rubber football may be “new”, but it isn’t really unique. But if you put grooves on the thing, and a set of fins on the back so it is easier to throw (check your local toy store!), then you have something that is an invention beyond the Nerf football, and could qualify as a non-obvious invention.

As with novelty, non-obviousness is determined by evaluating the prior art. Similarity between the new item and prior art will not necessarily derail a patent or cause one to be later overruled. Many patent applications will reference previous patents upon which they have built their new invention. The key is whether the new invention or process is different enough in both form and function from the existing or previous sources so as to qualify as a not an obvious variation or extension of the original.

WebFeat will contend that its federated searching process is novel and non-obvious when compared with the existing body of search engine knowledge. WebFeat’s competitors must show something more than the mere existence of database searching, even multi-database searching. University of Pittsburgh law professor and patent expert Janice Mueller notes, however, that patent challengers have to access to much more information than the original patent office examiner. Additionally, internet and e-commerce patent law is still developing.

“We do not have enough history with software/e-commerce/business method patents to accurately predict how these patents will withstand the rigors of litigation”, says Prof. Meuller.

Everything is new, or is it

The patent conundrum is that in once sense nothing is new. Everything is built on something that existed before and therefore is an extension of that “prior art”. On the other hand, everything is new. Human history never repeats itself and as existing things are used in new ways or for new purposes, the “progress of science and the useful arts” continues. In the world of Internet progress, the speed of growth, the complexity of the underlying technologies, and the nuances of patent law make it very difficult to distinguish the level of innovation that merits patent protection.

If WebFeat has developed something that is novel and non-obvious, then they are entitled to the rewards of their labors. That is what the Constitution intended. It also may be that the continuing growth of the Internet belies concern about patent law. If patents were such an inhibitor, then how can the Internet and technology in general have undergone the leaps of the last decade, and the leaps that will surely come? Patents may provide a foundation for the Internet, but true innovation can trump patents when the inventive mind puts itself to the test.

*George H. Pike is the Director of the Barco Law Library and Assistant Professor of Law, University of Pittsburgh School of Law.

Copyright 2005, George H. Pike

This text is the author’s final manuscript as submitted for publication. The completed article was published in Volume 22, Issue 4, *Information Today*, at 1, April 2005, and is available online from www.infoday.com. This article is posted with permission of the author and *Information Today*.