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By MARK POHL

Internet Business Techniques Are Patentable

Many Internet companies have recently become involved in Internet business patent litigation. For example, Priceline.com sued Microsoft Corp. in September alleging that the software giant's "Expedia Web" Internet travel service's reverse auction hotel room service infringes upon a Priceline Internet auction patent.

In October, Amazon.com sued Barnes & Noble's b&n.com over Amazon's "One-Click" ordering system patent. A month later, DoubleClick Inc. sued L90 Inc. for allegedly infringing on DoubleClick's Internet advertising technique patent.

This article will examine some recent Internet patent lawsuits and then review the current legal standard of patent availability for Internet businesses. It will look at how this standard applies to general commerce as well as innovations on the Internet. Lastly, the article will review some of the key benefits of having — and dangers of infringing upon — patent protection.

E-Business Patents

Amazon.com has patented parts of its e-commerce operation. One part is the

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"One-Click" purchasing feature used on its World Wide Web site. This feature is patented as the "Method and System For Placing a Purchase Order Via A Communications Network," U.S. Patent No. 5,960,411. That patent discloses a method whereby an Internet server combines information about the purchaser, to generate a purchase order with billing and shipping information included, where the purchaser "effects the ordering of the product by selection of the order button."

Thus, rather than having an online customer repeatedly enter their billing and shipping information for each item purchased, the customer can simply key the information in once, and, in effect, reuse the information for each item purchased, with just "one click" of the mouse.

Barnes & Noble's b&n.com division then began to use a "one-click" system on its Web site. On Oct. 21, Amazon sued to enjoin b&n.com from using the convenient feature. Within six weeks — and just in time for the peak holiday shopping season — Amazon had won a preliminary injunction, forcing b&n.com to stop using the convenient feature. Query how much additional incremental holiday sales, and consequent long-term value added to the company's market capitalization, resulted from Amazon's investment in its patent portfolio.

Like Amazon, Priceline.com has patented numerous innovations, including

an auction method, a method for the sale of airline-specified flight tickets. That patent covers a way to give travelers a reduced fare in return for flight-time flexibility. (Priceline has a variety of other patents in its portfolio.)

Obtaining these patents has proven fortuitous for Priceline. The company had been negotiating with Microsoft to discuss forming a marketing joint venture. To that end, Priceline founder Jay Walker allegedly met with Microsoft head Bill Gates and Greg Maffei, chief financial officer of Microsoft's Expedia Web travel service. Priceline and Microsoft made several nondisclosure agreements and during the negotiations, Priceline allegedly disclosed its confidential technology and business information to Microsoft. A few weeks after Priceline's meeting with Gates, however, Microsoft's "Expedia Web" service launched its "Hotel Price Matcher" service to directly compete with Priceline's service.

Luckily, Priceline had the forethought to patent its Internet innovations. On Oct. 13 — armed with its patents — Priceline sued to stop Microsoft's new service. As with Amazon.com, Priceline's patents appear to have given it a way to forcefully protect against its much larger competitor.

Not surprisingly, Amazon patented other parts of its business model. For example, Amazon patented a "Secure

Method and System for Communicating a List of Credit Card Numbers Over a Non-Secure Network," U.S. Patent No. 5,715,399, and other patents, as do many other prominent Internet businesses.

In addition to Priceline's patented auction process, there are several other patented e-commerce auction techniques. These patented techniques address auctioning goods as diverse as automobiles (the "Electronic On-line Motor Vehicle Auction and Information System," U.S. Patent No. 5,774,873), commodity metals (the "Method and System for Matching Sellers and Buyers of Spot Metals," U.S. Patent No. 5,715,402), financial bonds (the "Bond-Trading System," U.S. Patent No. 5,915,209) and loans (the "System and Method for Conducting Loan Auction Over Computer Network," U.S. Patent No. 5,966,699). Similarly, Health Hero has patented its way of conducting an online, real-time auction, its "Method Of Conducting an On-line Auction With Bid Pooling," U.S. Patent No. 5,794,219.

These examples show that patents protect innovative e-commerce solutions. Patent law, however, is not custom-tailored to protect only e-commerce. Rather, the same law that protects e-commerce innovations protects innovations in other areas of commerce. We now survey a general legal standard that has allowed e-commerce patents.

General Patent Requirements

Patentable inventions must meet a key legal requirement. For a discovery to be patentable, it must be in the right kind of field, or be of the right kind of subject matter. The scope of patentable subject matter is based in part on the fundamental purpose of patents. The U.S. Patent and Trademark Office is part of the Department of Commerce. The Commerce Department promotes economic development. The patent office shares this mission. The office does not promote science per se.

Rather, its mission is to promote economic development. Thus, economic development is a central theme in defining what types of discoveries are patentable. A pretty good nutshell summary of this area of the law is that to be patentable, the invention must be of a class of invention potentially economically valuable. (Note, however, that the law

does not perform economic valuations here, nor require that the invention actually have a minimum economic value. It is sufficient that the invention *may* have some value. In other words, it should be of a class that includes potentially valuable members.)

For example, laws of nature, mathematical formulas and the like, in and of themselves, do not promote economic development. Laws of nature do not produce revenues, unless applied in some concrete way (such as, to the operation of a machine or chemical reaction) to promote economic growth. For example, Albert Einstein posited that $E = mc^2$. Discovering this merits him a place in history. It does not merit Einstein a patent.

His discovery, of itself, does nothing to promote economic development. It does not change the speed of light or the quantum of energy obtainable from a given mass. It does not change Con Edison's cost of generating power. This relationship has economic impact only when applied in some concrete, economic embodiment, such as a nuclear power plant design. The economic embodiment — the power plant design — is patentable. The purely theoretical relationship is not. Thus, while mathematical formulas are not patentable, an economically useful process created with the aid of a scientific principle may be.

This general policy of economic development is codified in the patent statute. The statute enumerates the types of discoveries accorded patent protection. To promote the policy underlying the patent system, Congress employed broad language in enumerating which types of inventions are patentable. The classes of patentable inventions include both any machine and any process (or "method") that uses a machine. To promote the underlying policy of furthering economic development, the statute has been, and should be, given a broad scope, even when assessing new technologies. The Supreme Court thus said that patentable subject matter includes anything under the sun that is made by man.

For example, a system for marking negotiable instruments was found patentable. The system entailed marking checks with magnetic ink to denote account classifications, reading the ink classifications with a machine and storing and processing the information in a data

processor. Initially, the patent office found the claimed invention went solely to the personal relations between a bank and its customers. The office thus held the invention was not patentable subject matter. However, the patent office was reversed on appeal, in *Application of Johnston*, 502 F.2d 765 (C.C.P.A. 1974), rev'd on other grounds sub nom., *Dann v. Johnston*, 425 U.S. 219 (1976). The Court of Customs and Patent Appeals found that the invention was a machine system. Machines, and the processes for operating them, are patentable. The appeals court thus reversed the Patent Office.

This case shows that patentable machine systems may enable or improve a method of business, such as banking; the use of an otherwise patentable machine system in business does not bar patenting it. Given this breadth of the law, it is not surprising that the patent office has recently deemed patentable many innovations in e-commerce, and in modern business generally. To see how this law is put into actual practice, we now survey some business patents in areas different from, but similar to, e-commerce.

Other Commerce Patents

Several accounting systems have been patented. For example, the "Transaction Tracking Data Processing System," U.S. Patent No. 4,994,964, monitors a client's business orders over time and, based on predetermined criteria, determines the client's vested interest in funds deposited into special client accounts. Similarly, the "Data Processing System and Method," U.S. Patent No. 4,918,602, can apparently "encompass the totality of banking transactions of a traditional institution." It also may be used in diverse nonbanking businesses. The "Financial Data Processing System Using Payment Coupons," Patent No. 4,974,878, is a check-writing system that uses machine-readable coupons to generate conventional checks.

These accounting systems are considered "dumb" in that they simply record decisions made external to the system, that is, by a person. However, expert systems containing a certain amount of reasoning capacity can also be patented. For example, a patented expert system, "Processing System for Managing Bi-Media Investments," U.S. Patent No.

4,910,676, supervises and processes trades for an investment portfolio. This system manages a portfolio consisting of both revenue generating and negotiable draft investments. This system goes further than "dumb" accounting systems because it is not simply a reactive book-keeping system. Rather, it is an expert system that manages risk exposure and ensures that the present values of the portfolio components are continually hedged.

Another patented expert system, the "Extended Coverage Monetary Regulation System," U.S. Patent No. 4,985,833, automatically allocated a customer's deposits among multiple financial institutions. The allocation ensures Federal Deposit Insurance Corp. (FDIC) or Federal Savings and Loan Insurance Corp (FSLIC) coverage for the full aggregate amount of the deposits, regardless of amount. This system incorporates and automatically responds to federal deposit-insurance regulations. Therefore, it is capable of making proactive business decisions, rather than mere reactive book-keeping activity.

Expert systems such as these do more than passively track decisions. These systems actually made decisions. In so doing, they approach the capabilities of some of the patented securities trading systems.

Similarly, novel securities and commodities trading systems may be patented. For example, the "Automated Securities Trading System," U.S. Patent No. 4,674,044, actually makes trading markets in securities. It qualifies trading orders to determine whether the order comports with predetermined trading limits (this feature is reminiscent of the accounting systems responsive to FDIC regulations). Another system for derivative securities trading, the "Renewable Option Accounting and Marketing System," U.S. Patent No. 4,823,265, covers an options-trading system. It includes the capacity to value options contracts and to automatically roll over maturing hedges.

Several other patents have issued on trading systems that incorporate and auto-

mate legal requirements. For example, a commodity exchange, the "Automated Futures Trading Exchange," U.S. Patent No. 4,903,201, verifies compliance with

pricing information.

Planning Tips

Patents are widely available to protect e-commerce innovations. Perhaps more significantly, patents are available to protect innovative business methods generally, whether on the Web or otherwise. Patents can be both beneficial, as a tool to protect a client's marketshare and investment in innovation, and detrimental, for the company that unwittingly infringes another company's patents.

As the Amazon.com lawsuit demonstrates, patents can quickly hamper, or even completely block, a competitor's service or product, allowing time for the patent holder to establish itself as market leader. Within the space of five weeks — and at the height of the Christmas shopping season — Amazon.com enjoined a large competitor from using a convenient, one-click feature.

Patents can also be an effective tool to protect a company's investment in innovation. As the Priceline.com lawsuit illustrates, patents are a valuable — even essential — component of the umbrella of legal protection for novel technology, to prevent piracy.

Just as patents can be advantageous, they can be detrimental for the company that infringes — even unwittingly — another company's patents. For example, Microsoft and b&n.com are both large enough to withstand an adverse injunction. Query, however, whether L90 Inc. is large enough or diverse enough to prosper (or survive at all) if DoubleClick succeeds in enjoining L90 from alleged infringement.

In addition to injunctions, patent infringement may create liability for treble damages and personal (not just corporate) liability. Patent infringement has put more than one company in bankruptcy and, for public companies, may create securities law liability exposure. It is therefore essential for high-tech and Internet companies to protect their innovation, and to ensure that their business does not infringe upon another's rights. ■

For an invention to be patentable, it must be economically viable. For example, Albert Einstein posited that $E = mc^2$. Discovering this merits him a place in history. It does not merit Einstein a patent.

Commodities Futures Trading Commission regulations, automatically executes trading orders and stores order data. Another patented trading system, the "Goods Database Employing Electronic Title or Documentary-Type Title," U.S. Patent No. 5,063,507, automatically creates title evincing the new ownership of traded goods.

Several other expert systems capable of performing higher level business analysis have been patented. One, the "Method and Apparatus for Evaluating a Potentially Insurable Risk," U.S. Patent No. 4,975,840, analyzes insurance data to determine the cost of extending insurance to a given risk. Another, a "Securities Valuation System," U.S. Patent Nos. 4,334,270 and 4,566,066, uses a computer to store, retrieve and edit securities

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55 Madison Ave.
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Dear Mr. Pohl:

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I want to add that I found your article very interesting. I don't know anything about patents, and this was written well and contained "current events" that I found interesting. Marian Raab will post it on our American Lawyer editor's bulletin board, and perhaps other of our regional papers will republish it.

Enclosed is our editorial calendar for the coming year. If you want to write again, you can do so as an "In Practice" piece in the weekly paper, as this is, or write for a particular supplement, especially the summer "Intellectual Property" supplement. For that purpose please contact Marian three months before the publication date of the supplement.

Sincerely yours,

