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Intellectual Property Protection for Computer Software

Broadly defined, "software" refers to the programs that run on a computer. Stored on disks, software is a form of coded writing that instructs a computer on what to do. As a form of writing that ultimately operates as an electronic network, software embodies various forms of intellectual property, and can be a difficult concept to classify for purposes of intellectual property protection.

Although software does not fit neatly into any one category of intellectual property, protecting software from unauthorized use can be accomplished by way of patent, copyright and trade secret law.

Software Patents

Although the U.S. Patent and Trademark Office (USPTO) has traditionally rejected the patentability of software, the USPTO has been regularly issuing patents for software inventions since 1998. Examples of patented software inventions include:

- A process for a management control system for multiprogrammed data processing
- A method of constructing a task program for operating a word processing system
- A program that checks for spelling errors
- A program that converts one programming language into another

In July 1998, a federal court opened the door for Internet business method patents in State Street Bank & Trust Co. v. Signal Financial Group, Inc. "Business methods" generally include any methodologies that are involved with operating a business, such as online ordering processes. Specifically, the State Street court allowed a patent to issue for a method of calculating the net asset value of mutual funds, reasoning that patent laws were intended to protect any method that produced a "useful, concrete and tangible result."

Although the court's decision allowed patents to issue very broadly for any type of business method that produced a tangible result, the USPTO has generally limited business method patents to those business methods that depend on computer software.

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Copyrighting Computer Software

In addition to patent protection, the intellectual property embodied in software may also be protected under federal copyright law. Specifically, copyright protects all "original works of authorship fixed in any tangible medium of expression," including computer software. As federal copyright law expressly excludes ideas, procedures, processes, systems and methods of operation from copyright protection, copyright protection of software typically applies to the literal text of software (i.e., the coded writing).

In addition, courts have favored extending copyright protection to the "look and feel" of software, which is the creative appearance and presentation of software. In the 1986 case of *Whelan Associates Inc. v. Jaslow Dental Lab*, a court of appeals affirmed the extension of copyright protection beyond the literal text of a software program to "the manner in which the program operates, controls and regulates the computer in receiving, assembling, calculating, retaining, correlating, and producing information either on a screen, print-out or by audio communication." In extending copyright protection to a computer program's structure, sequence and organization, the court significantly expanded the scope of copyright protection for computer programs.

Copyright Laws Related to Computer Maintenance or Repair

Although the intellectual property embodied in software is eligible for federal copyright protection, recent developments in copyright law have been specifically crafted to protect the software service industry against claims for infringement. In the 1993 case of *MAI Systems Corp. v. Peak Computer, Inc.*, a federal appeals court ruled that a computer repair company had infringed a software company's rights by activating operating and diagnostic software created by the software company to repair a client's computer. The court reasoned that the activation of a computer automatically copies certain software into the computer's random access memory (RAM), in violation of the copyright owner's exclusive right to make and distribute copies of a copyrighted work.

However, in order to address the harsh ruling of this case (which effectively made computer repair companies liable for infringement any time they turned on a client's computer), Congress passed Title III of the Digital Millennium Copyright Act of 1998 (DMCA). In general terms, Title III of the DMCA permits the owner or lessee of a computer to authorize a service provider to activate the computer in the course of maintaining or repairing the computer.

Trade Secret Protection for Software

Where software is denied patent or copyright protection, courts can extend trade secret law to prevent the unauthorized use of software. Pursuant to the Uniform Trade Secret Act (UTSA), which has been adopted in some form by most states, a trade secret is information that satisfies the following two elements:
1. Derives independent economic value from not being generally known by individuals outside the business, and
2. Efforts have been made to maintain its secrecy.

The requisite level of secrecy for protecting software is usually met when a corporation develops software for internal use, distribution of software is very limited, or contractual or licensing provisions provide for trade secret protection. Further, trade secret protection can coexist with patent protection while a patent application is pending, and, in some cases, to prevent disclosure of the details of an invention during the term of the patent.

Despite the availability of various forms of intellectual property protection to prevent the unauthorized use of software, and the possibility of integrated patent, copyright and trade secret protection, patent protection provides the broadest protection (as discussed above). Therefore, now that patent protection is available for nearly all software inventions, it will be less necessary to extend copyright and trade secret laws to fill in the gaps.