

Cyberlaw and Computer Technology: A Primer on the Law of Intellectual Property Protection

by David R. Ellis

The Internet! Computer networks and online systems! Today, we find a dizzying array of new technologies that are accessible to anyone with a computer, a modem, and a telephone line. As more and more Americans are plugging into the infrastructure of the "new information age," they encounter a variety of issues in "cyberspace" that have an impact on society, culture, and our legal system.

What are some of the legal issues in the online world? The law is developing at a rapid rate to embrace many traditional areas of law and apply these legal concepts to computers and cyberspace. These areas include issues of privacy, defamation and obscenity, intellectual property law, and crime. Many of these issues are being considered by Congress, state legislatures, government commissions, and private groups. For the first time, computer law cases are coming before the courts and decisions are being rendered by judges and juries.

One of the significant concerns about the online world is the threat of invasion of privacy through unauthorized access to data on individuals that are available on the nets. As early as the 1960s, Congress considered proposals for a national data bank that would have coordinated all kinds of information about individuals and businesses that had been gathered by the federal government. The outcry at the time was so great that the proposal was shelved. Since then, Congress has passed the Electronic Communications Privacy Act, 18 U.S.C. §§2701 *et seq.*, and other laws to address threats to individual privacy.

Other issues of interest include the potential liability of operators of electronic bulletin boards and web sites for messages and material placed on their bulletin boards that are defamatory or obscene, or that infringe upon copyrights or trademarks. Cases involving Prodigy and Playboy have tested some of these issues and have produced precedents

in the courts. There are also trademark issues such as who owns rights in Internet domain names.¹

In addition, a host of potential criminal issues surround the use of computers, the Internet, and other online technologies. These issues include attempts to obtain unauthorized access to computers, networks, and data, denial of access to authorized users, stealing passwords, tampering with data, introducing worms and viruses into networks, and running criminal enterprises such as drug dealing, money laundering, and pornography. Federal, state, and local governments have passed a variety of laws over the years to govern electronic and computer crime, but these laws have to be constantly reviewed and updated to keep up with current technology. Florida's computer crime statute, F.S. Ch. 815, for example, was enacted in 1978, and has not been amended significantly since. In addition, law enforcement officials are often far behind the technology and need to be updated frequently to the current state of the art in order to understand the technology and prosecute those who misuse it.

One of the most important areas of concern is the protection of intellectual property. In 1995, the Working Group on Intellectual Property Rights of the Task Force Information Infrastructure, a federally supported commission, published a report addressing these issues. Entitled "Intellectual Property and the National Information Infrastructure,"² the report discussed copyrights, patents, trademarks, and trade secrets, technology issues such as user access and security, and made recommendations for future legislation and regulation.³ A bill based on the report was introduced in Congress but was not passed after hearings disclosed serious disagreements between users and providers over the direction national policy should take.⁴

Conflict over the scope of protection for intellectual property has long existed in literary, artistic, and entertain-

ment fields, and is now being extended to the new technologies. Creators of intellectual property seek the broadest possible protection for their endeavors in order to exploit their creations and secure economic returns on their intellectual investments. Users, on the other hand, seek narrow protection so that they can have the freedom to use others' creations with few restrictions. This natural tension informs the debate over the scope of protection of computer technology and cyberspace, the legal rules of which are governed primarily by the law of copyrights, trade secrets, trademarks, and patents.

Copyrights

Perhaps the most important method of protecting computer technology is through the law of copyrights, a statutory scheme of protection dating back almost 200 years in this country to the Constitution. Although Franklin, Madison, and Hamilton did not have personal computers at their disposal, they established a concept of protection for authors and inventors by granting them exclusive rights in their writings and discoveries for limited periods of time.⁵ Congress enacted the present Copyright Act in 1976, 17 U.S.C. §§101 *et seq.*, and clearly extended protection to computer programs in 1980.⁶ Under the law the author of a copyrighted computer program has the exclusive right to reproduce and distribute the program and any derivative versions, and to authorize others to do so during the term of the copyright (lifetime plus 50 years for individuals, 75 years for corporations and other works for hire).⁷

Thus, the author of a copyrighted computer program has the right to restrict all persons from copying the program without consent and to bring suit against violators who infringe the copyright. There are three exceptions for computer software and these can be invoked by the user only in limited circumstances.

The first exception is essentially a technical point: It is not considered an infringement if a copy of the program is created as an essential step in the utilization of the program by

conditions, a user may have a limited right to duplicate all or part of a copyrighted work for purposes such as criticism, comment, news reporting, teaching, scholarship, or research.¹⁰ In determining whether a particular use is a "fair use," a number of factors are considered, including the purpose of the use (whether it is for commercial or nonprofit educational purposes); the nature of the program; the amount of the program that is used and how substantial that portion is in relation to the entire

program; and the effect of the use upon the potential market or value of the program.¹¹

Before a copyright can be enforced in court, the owner must register the copyrighted program with the U.S. Copyright Office in Washington, D.C.¹² The original and all copies of a computer program should be marked with a copyright notice—either the word "Copyright," the abbreviation "Copr.," or the symbol ©; the date and the author's name, *e.g.* © 1997 Ima



the computer. This means that if, as the program runs, a duplicate is necessarily created or transformed "inside" the computer, there is no infringement of the author's copyright.

The second exception is more practical. A user may make a copy of the program for archival (backup) purposes; however, the copy must be destroyed in the event the user sells or otherwise ceases to have a lawful right to possess it.⁹

The third exception is called the doctrine of "fair use." Under certain

Programmer.¹³ The copyright notice should appear on all documentation, and at the beginning of all printouts and screens generated from the program. It should also be included on other media such as CD-ROMs and Internet web page displays.¹⁴

The copyright may be registered by completing an application and depositing a printout of the program or web pages with the Copyright Office.¹⁵ If a computer program is more than 50 pages, only the first 25 and last 25 pages are required. For programs that

contain trade secrets, the author may omit a portion of the code in accordance with Copyright Office regulations.¹⁶

Registration gives the copyright owner the right to sue in federal court to stop infringers.¹⁷ In a case of copyright infringement, the court can issue an injunction prohibiting further infringement, order the seizure and destruction of infringing items and the means to make them, and award damages to the copyright owner based on the author's lost profits or the infringer's ill-gotten gains.¹⁸ If registration has been made prior to the infringement (or within three months after first publication of the work), the owner may ask the court to award statutory damages ranging from \$500 to \$20,000 for each work infringed, plus attorneys' fees.¹⁹ In the event of willful infringement, statutory damages can rise to \$100,000 for each work infringed, and under some circumstances, criminal penalties can be imposed.²⁰

Trade Secrets

A second method of protecting computer technology is through the law of trade secrets. "Trade secret" law offers protection against theft of computer technology and, on a broader basis, against misappropriation of other valuable ideas and items that are useful to a company's business.

A "trade secret" is a formula, pattern, device, or information that is used in the operation of a business and provides the business an advantage or an opportunity to obtain an advantage over those who do not know or use it.²¹ A trade secret includes scientific, technical, or commercial information such as designs, processes, procedures, or supplier or customer lists. In order to remain a trade secret, the owner must take measures to prevent the trade secret from becoming available to individuals other than those expressly selected by the owner to have access. Under the law, the trade secret owner is protected against disclosure or unauthorized use of the secret by those to whom it has been confided under a restriction of nondisclosure or use when knowledge is gained, not through the intention of the owner,

To qualify as a trade secret, it is not necessary that only one or two people know the information; a wide circle may know if appropriate safeguards are taken.

but through some improper means such as theft or wiretapping.

To qualify as a trade secret, it is not necessary that only one or two people know the information. Rather, a wide circle of individuals may know the secret if the owner has taken appropriate safeguards to restrict overall access. For example, a software developer may reveal the program code to its employees in order to debug, modify, or enhance the program, without the element of secrecy being lost. Similarly, the developer may license the use of the software to its customers without losing trade secret protection if reasonable precautions are taken to keep the information confidential.

The steps a firm must take to safeguard the secrecy of information and prevent it from falling into the public domain may vary according to the nature of the information and the person given access to the information. With computer technology, a company is advised to have a written agreement with each employee and outside contractors making clear that the company regards its technology as proprietary; that the company retains all ownership rights; and that all information, data, flow charts and diagrams, software source and object code and documentation, and ideas, concepts, inventions, and know-how are to be held in confidence and not be disclosed to any outside party without the express

written consent of the company. Inclusion of noncompete covenants in contracts with employees and independent contractors may further safeguard the company's trade secrets and competitive position.²²

With regard to computer software and other technology offered to customers, a company should use comprehensive license agreements asserting trade secret protection and requiring customers to acknowledge the technology's proprietary nature and agree to appropriate confidentiality and nondisclosure restrictions.²³ No trade secrets should be released to prospective or actual customers without first obtaining a signed license agreement; to do so runs the risk of the information losing trade secret protection and falling into the public domain.

The typical software license agreement will include restrictions by which the user agrees not to copy the program or disclose it to third parties without the consent of the developer. Sometimes an exception is made for archival copies for backup purposes; in other instances, the user may be permitted to make a limited number of copies for use on multiple computers at the same site, either with or without an additional fee.

Wrongful disclosure or use of a trade secret may be enforced in court against anyone who has a duty to maintain secrecy. Therefore, a software vendor could sue a customer who violates a software license by making unauthorized copies or disclosures to outside parties. Similarly, a software developer could sue a former employee or contractor who has disclosed or marketed the same or similar program in violation of their confidential relationship or contract. In some cases, the developer might also have a right of action against a third party recipient if that person knew that the program was a secret and that disclosure was a violation of the disclosing party's relationship or contact with the developer.

Trademarks

A third major area of law affecting computer technology is the law of trademarks. A trademark protects the name and logo of a company's goods

and services and distinguishes them from competing products or services sold by others. Thus, a computer manufacturer seeking a name for a new line of personal computers might decide to sell them under the name "PRUNE." (This might be a particularly apt name if the company has a Danish subsidiary.) A logo then could be adopted to go with the name and an advertising campaign developed.

If a computer company is selling its product or services only in Florida, the company may register the trademark with the Department of State. The initial term of registration is 10 years, and it may be renewed every 10 years thereafter if still in use. By registering the mark, the owner can prevent others from using the same or a confusingly similar trademark for a similar product or service in Florida.²⁴

If the goods or services are provided in more than one state, the trademark may be registered in the U.S. Patent and Trademark Office (PTO) in Washington.²⁵ A federal trademark is good for 10 years and may be renewed as long as continually in use. A federal trademark gives the owner the exclusive right to use the trademark throughout the United States, and to prevent others from doing so by suing in either federal or state court.

Before attempting to register a trademark, a search of the records of the PTO to determine whether there have been any previous filings or registrations of this or any similar name is advisable. Often such a search includes all state trademark offices, and various publications such as trade directories, in order to reduce the likelihood that the trademark has been previously used or registered. This search can be done relatively inexpensively through commercial services with extensive databases.

Once the trademark is registered, either at the state or federal level, the registrant can bring suit against infringement,²⁶ which is the unauthorized use of the trademark in connection with any product, service, or advertisement that is likely to cause confusion, mistake, or deception.

In a case of infringement, the court can order the infringer immediately to cease unauthorized use of the mark. The court also can order all infringing products destroyed and award money damages to the trademark owner. In determining the amount of damages, the court may require the infringer to pay to the trademark owner all profits derived from the wrongful use, plus the cost of suit.²⁷

Patents

A fourth method of protecting computer technology is through the law of patents. A patent is a grant by the federal government to an inventor giving him or her the right to exclude all others from making, using, selling, or offering to sell the invention throughout the United States, its territories, and possessions.²⁸ Patents are granted by the government acting through the Patent and Trademark Office.

A patent may be issued to anyone who invents or discovers a new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement of these items. A mere idea or suggestion is not eligible for a patent nor are methods of doing business or printed matter. These items, however, may be eligible for trade secret protection, which can be significant though not necessarily as valuable as patent protection.

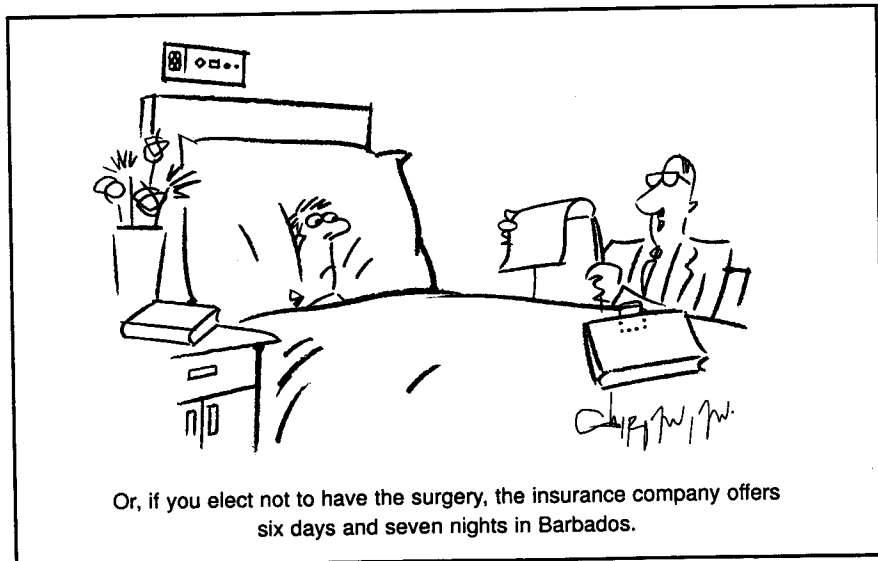
Discoveries of the laws of nature also are not patentable. Thus the

mathematical equations that describe Newton's laws of motion could not be patented, but a motor vehicle that necessarily follows those laws as an essential element of its functioning may well be patentable.

Similarly, mathematical algorithms used in computer programs are not themselves patentable since they are essentially laws of nature. However, the U.S. Supreme Court has ruled that the utilization of these algorithms in an original and useful computer program may rise to the level of invention sufficient to support the grant of a patent to the developer of the program.²⁹

To be patentable, an invention must be novel. If the invention has been patented or described in a printed publication anywhere in the world, or been in public use or on sale in this country before the applicant made his or her invention, a patent may not be granted. Also, if the invention has been patented or described in a printed publication anywhere, or been in use or on sale in this country more than one year before the date of filing of the application, a patent cannot be granted.³⁰ This is true whether the publication, use, or sale was by the inventor or another person.

In addition, even if an "exact" version of the particular invention has not previously been patented or described, a similar version may not be patented if it is essentially just an "improvement" of the existing inven-



tion such that it would be obvious to a person having "ordinary skill in the art."³¹ Thus, an updated or enhanced computer program that simply manipulates more calculations, handles more accounts, or carries more items of inventory would probably be considered an "obvious" improvement to a competent computer programmer ordinarily skilled in the art of writing computer software, and therefore would not be patentable.

The term of a patent extends from date of issuance by the Patent and Trademark Office and continues for 20 years from the date of filing.³² A patent grants the inventor the right to exclude others from making, using, selling, or offering to sell the patented invention during its term. The patent does not, however, by itself grant the inventor the right to make, use, or sell the invention. Thus, a software developer with a valid patent is not automatically free to practice his or her invention: for example, if the program necessarily incorporates the patent of an earlier developer, the patentee would not be able to make, use, or sell the program unless a license is first obtained from that patent owner. If such a license is not obtained, the patentee would be deemed to be infringing on the rights of the prior patentee.

Anyone who makes, uses, sells, or offers to sell a patented invention without the authority of the patent owner is an infringer.³³ Unlike trade secrets, a patent can be enforced against an independent developer of the same invention. Thus, a person who develops an invention without knowing of a previous patent still infringes on the patent and can be sued by the patent owner.

In trade secret law, by contrast, it must be shown that the invention was actually obtained through wrongful disclosure of the trade secret. Thus if an individual independently develops a software system functionally equivalent to another's unpatented system, that person will not be liable for infringement or trade secret misappropriation if he or she had no access to the original program.

Patents may be enforced in federal court through injunctions and

awards of money damages.³⁴ The patented articles must be marked with the word "patent" and the number of the patent in order to give notice to would-be infringers.³⁵ Damages may not be recovered from the infringer unless the infringer was duly notified and continued to infringe after receiving the notice. The marking of an item as patented when it is not in fact patented is against the law and subjects the violator to a penalty.³⁶

Summary

Taken together, the methods discussed above offer a fair degree of legal protection for proprietary computer software and other innovative technology. The law in this area is continually evolving as lawyers, judges, and legislators seek to keep up with rapid developments in computer technology and cyberspace. These developments require all those involved in the field to remain alert to changes in the law and the need to accommodate innovation while protecting the rights of individuals in our society. The law of computer technology and cyberspace thus promises to be a swiftly changing and dynamically growing area in the years ahead. □

¹ See, e.g., Nicolas Swerdloff and Juan J. Farach, *Internet Domain Name-Grabbing or Cyber-Squatting*, 71 FLA. B.J. 30-33 (Feb. 1997), and J. Feldman, "Cyber Squatting": Unauthorized Registration of Third Party Trademarks as Domain Names, 1 *Cyberspace Lawyer* 6-12 (Feb. 1997).

² Intellectual Property and the National Information Infrastructure, Report of the Working Group on Intellectual Property Rights, Information Infrastructure Task Force, Sept. 1995.

³ *Id.* at 211-238.

⁴ National Information Infrastructure Copyright Protection Act of 1995, S.1284 and H.R. 2441, 104th Congress (1995).

⁵ U.S. Constitution, Art. 1, §8.

⁶ Pub. L. 96-517, §10(a), Dec. 12, 1980, 94 Stat. 3028.

⁷ 17 U.S.C. §§106, 302; See David R. Ellis, *Ownership of Computer Programs and Other Copyrighted Works*, 64 FLA. B.J. 82-85 (Oct. 1990).

⁸ 17 U.S.C. §117(1).

⁹ 17 U.S.C. §117(2).

¹⁰ 17 U.S.C. §107.

¹¹ For more on the fair use doctrine, see David R. Ellis, *Chips, Locks and Video Games—Courts Rule on the Scope of Protection in Computer Copyright Cases*, 67 FLA. B.J. 75-79 (July/Aug. 1993), and

David R. Ellis, *As Fair As They Wanna Be—The U.S. Supreme Court Upholds the Fair Use Parody Defense*, 68 FLA. B.J. 83-86 (Nov. 1994).

¹² 17 U.S.C. §411.

¹³ 17 U.S.C. §401.

¹⁴ See 37 C.F.R. §201.20(g).

¹⁵ 17 U.S.C. §409.

¹⁶ See Copyright Office Circular 61, and 37 C.F.R. §202.20(c)(vii).

¹⁷ 17 U.S.C. §501.

¹⁸ 17 U.S.C. §§502-504.

¹⁹ 17 U.S.C. §§412, 504(c), 505.

²⁰ 17 U.S.C. §§504(c), 506. For more on enforcement of copyrights and other intellectual property rights, see C. Wilson, *Winning Techniques for Computer and High Tech Litigation* (1995).

²¹ See FLA. STAT. §812.081. For another definition, different in form but essentially similar in practice, see FLA. STAT. §688.002. Florida's enactment of the Uniform Trade Secrets Act is found in FLA. STAT. Ch. 688.

²² In Florida, a new statute was recently enacted to govern the enforcement of noncompete covenants. FLA. STAT. §542.335, effective July 1, 1996. See David R. Ellis, *Florida Enacts New Non-Compete Law*, 10 *COMPUTER L.J.* 1-2 (Apr. 1997). For the law in other states, see *Covenants Not To Compete, A State-by-State Survey*, 2d. ed., ABA Section of Labor and Employment Law (B. Malsberger, ed., 1996 and Supp. 1997).

²³ For more on the licensing of technology, see David R. Ellis, *Technology Transfer and Licensing*, 63 FLA. B.J. 58-60 (Apr. 1989).

²⁴ FLA. STAT. §§495.011 *et seq.*

²⁵ Trademark Act of 1946 (Lanham Act), 15 U.S.C. §§1051 *et seq.*

²⁶ 15 U.S.C. §§1114 *et seq.*, FLA. STAT. §§495.131, 495.141.

²⁷ *Id.*

²⁸ 35 U.S.C. §154.

²⁹ *Diamond v. Diehr*, 450 U.S. 175 (1981).

³⁰ 35 U.S.C. §102.

³¹ 35 U.S.C. §103.

³² 35 U.S.C. §154.

³³ 35 U.S.C. §271.

³⁴ 35 U.S.C. §§281, 283, 284.

³⁵ 35 U.S.C. §287.

³⁶ 35 U.S.C. §292.

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