

**LEGAL PROTECTION OF INFORMATION**

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**May 1990**

**CISR WP No. 207  
Sloan WP No. 3154-90**

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Published in Weaver, Vol. 7, No. 1, Fall 1989.

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## LEGAL PROTECTION OF INFORMATION

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Reprinted from Weaver, Vol. 7, No. 1, Fall 1989

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As we have become more aware of the importance of information, and more dependent on information technologies, we have begun to think more explicitly about using the law to help protect information. Traditionally, the law has been used as a means for protecting people and property. Legal doctrines that developed for these two, more traditional purposes provide the foundation for what we conceptualize today as the legal protection of information.

Consider, for example, legal protection from computer crime, from patent and copyright infringement, from theft of trade secrets. These protections treat information as a kind of property. Indeed, patents, copyrights, and trade secrets are three forms of what lawyers call "intellectual property." Consider, on the other hand, protection from libel and slander, protection of free speech and press, protection of privacy. These doctrines protect information as an extension of the person.

To see more clearly how the legal means for protecting information has developed from a multitude of more traditional

legal protections, we can look more closely at some of the examples just mentioned. With respect to the protection of personal rights, we will briefly survey American law relating to privacy, concluding with statutes directed primarily at privacy threats perceived from computer and communications technology. With respect to the protection of property, we will look briefly at U.S. patents, copyrights, and trade secrets, and at how these forms of intellectual property can be useful for protecting computer software.

### Legal Protection of Personal Privacy

Most areas of American law have their roots in the pre-revolutionary common law and statutes of England. Privacy law does not; it is essentially an American invention. And it is a relatively recent invention: the first explicit mention of a "right to privacy" appeared in the legal literature just under 100 years ago.[1] Over those hundred years, American privacy law has evolved along three distinct paths:

- (1) the right to sue someone for tortious invasion of privacy;
- (2) the protections against governmental invasions of privacy afforded by our federal and state constitutions; and
- (3) statutory protections resulting largely from the fear that privacy would be lost as more and more personal

information became stored in large-scale computer databases.

### The Privacy Torts

The earliest form of privacy law developed in the area known as tort law. Torts are wrongful actions by one party that injure another. The injured party sues to recover compensatory damages. Until about 100 years ago, invasion of privacy was not recognized as a tort in American courts. In 1881, a Michigan woman was awarded damages for an intrusion, during her childbirth, of a man pretending to be a medical assistant. But such cases were then rare.

In 1890, privacy was analyzed as a legal doctrine for the first time in a now famous law review article by Louis Brandeis and Samuel Warren. The authors were concerned about a new technology--instantaneous photography--that permitted the taking of unauthorized photographs. They argued that taking such pictures and circulating them in sensationalistic newspapers was an injury for which the courts ought to award damages. The essence of this injury, as they saw it, was the taking away from the victim the right to decide whether the victim's likeness would remain private, or would be placed in public view. They tried to demonstrate that this principle had developed through the precedents established in other forms of tort law, and they called upon the courts to recognize the principle explicitly a "right to privacy."

The first state supreme court to agree with the article's

analysis was Georgia's. In 1905 the court awarded damages to a plaintiff whose name had been used without his permission in a testimonial advertisement.[2] Today, whether through court interpretation of common-law principles, or through legislative actions, this and similar privacy rights are recognized throughout the United States. While the different states have chosen to recognize only some of these, the four basic privacy torts can be summarized as follows:[3]

- (1) Appropriation, for the defendant's advantage, of the plaintiff's name or likeness.
- (2) Intrusion upon the plaintiff's seclusion or into the plaintiff's private affairs.
- (3) Public disclosure of embarrassing private facts about the plaintiff.
- (4) Placing the plaintiff in a false light in the public eye.

#### Constitutional Privacy

A second branch of privacy law developed with respect to constitutional protections from governmental invasions of privacy. Some state constitutions have been amended to list privacy, explicitly, among the fundamental rights enjoyed by citizens of those states. The U.S. Constitution makes no explicit mention of privacy. In 1965, however, the Supreme Court in the case Griswold v. Connecticut interpreted the language of the Constitution, and of prior Supreme Court precedents, so as to

reveal constitutional "zones of privacy" that had to be protected if full meaning is to be given to the enumerated rights in the first ten amendments.[4] The court specifically discussed the following rights as embodying or requiring constitutional protection of privacy:

First Amendment: right of free assembly.

Third Amendment: freedom from the quartering of troops in private homes.

Fourth Amendment: freedom from unreasonable searches and seizures.

Fifth Amendment: right against self-incrimination and the right to due process.

Thus far, these protected zones of privacy have come to be defined rather narrowly, extending only to intimate, personal matters. The Griswold decision itself, for example, struck down a state law prohibiting the use of contraceptive devices. In the abortion decisions in 1973, the Court held that these zones of privacy were "broad enough to encompass a woman's decision whether or not to terminate her pregnancy." [5]

#### Privacy and Computer Technology

In the mid-sixties, members of Congress began to express concern about the dangers that computers might pose to privacy. They were particularly concerned about a proposal for establishing a National Data Center, a central statistical pool of personal information to be assembled and shared by federal

agencies. Neither the proposal nor a review conducted by the Bureau of the Budget discussed the potential privacy problems. To many of its critics, the project raised the spectre of George Orwell's 1984. During the summer of 1966, hearings held before a House Subcommittee revealed that the legal protections of privacy that had developed in the tort law and under the Constitution might not be adequate to prevent privacy abuses in the environment of large-scale computer databases. The plan for the National Data Center, for various reasons, was abandoned. At roughly the same time, Congress had become concerned about another "Big Brother" activity: government wiretapping. The courts were generally allowing warrantless wiretapping if it involved no physical contact to the subject's property, while modern technology was making such remote wiretapping easier to accomplish. (Today, of course, we know that computers and communications are parts of a single composite technology.)

Congress began to perceive the need for legislative safeguards directly addressing the problems of telephone privacy and of large-scale databases, manual databases as well as electronic, and those in the hands of private organizations as well as in the hands of government.

The Omnibus Crime Control Act (1968) established the requirement of a warrant for all government wiretapping, regardless of the physical arrangement, and it established rigorous criteria and procedures for obtaining (and maintaining) the warrant. An exception was carved out, for the first time explicitly, for cases involving "national security."

The Fair Credit Reporting Act (1970) gave subjects of credit reports the right to learn the contents of their files, to challenge their accuracy, and to append statements containing their versions of the facts.

The Family Education and Right to Privacy Act ("Buckley Amendment," 1974) gave students (or their parents if they are minors) the right to see their education records at schools and universities that receive federal funds. It also prohibited release of this information to anyone outside the institution. Students are entitled to hearings if they wish to challenge the accuracy of their files, and have the right to append their own statements.

The Privacy Act of 1974 is a major compilation of regulations for the manner in which all federal agencies collect, maintain, and disseminate information about individuals. To a large extent, agencies must collect such information directly from the data subject, and not from other sources. When requesting the information, they must tell the data subject whether supplying the information is voluntary or mandatory, and, if mandatory, under what law or regulation; what the information will be used for, including possible disclosures outside of the agency; and what the consequences are, if there are any, of not supplying the information. (This accounts for the lengthy "privacy statement" most of us have seen in the I.R.S. tax instructions.) Agencies may maintain only information that is relevant and necessary to their legally defined functions. They may not maintain information concerning an individual's exercise



of First Amendment rights. Records must be kept sufficiently accurate, relevant, and timely to assure fair treatment of the data subject. Information can be disclosed outside the agency only by written permission of the data subject, or if such disclosure falls within the uses described when requesting the information. The data subject has the right to see not only his records, but also the log of disclosures.

The Right to Financial Privacy Act (1978) requires banks to notify deposit customers before disclosing information about their accounts--even to law enforcement officers with court orders.

The Electronic Communications Privacy Act (1986) extends wiretapping protections to technologies that were not covered by the 1968 legislation (e.g., digital communications).

Numerous privacy statutes similar to these have also been passed in the states.

### Protection of Intellectual Property

Next let us see how information can be protected as a kind of property. We will look briefly at the law of patents, copyrights, and trade secrets. Patents and copyrights are established by federal statutes.[6] The U.S. Constitution specifically gives Congress the power to provide for patents and copyrights in order "to promote science (interpreted to mean knowledge) and the useful arts." Patents and copyrights are limited monopolies granted in return for disclosing to the public

a new invention or an original writing. Trade secrets, on the other hand are protected by the laws of the states, and they are protected only when they are kept secret from the public.

### Patents

A patent is a right to exclude others from making, using, or selling a defined invention for a term of 17 years. For an invention to be granted patent protection, it must be new and it must be useful. It must also fall within one or more of the following statutory categories: process, machine, manufactured article, or composition of matter. A new and useful improvement in any of these categories is also patentable.

The requirement of novelty has two parts. First, the invention must be something not already known to the public. But more than that, the invention must represent such an advance over what is already known that it would not have been obvious, at the time the invention was made, to a person having ordinary skill in the field to which the invention belongs.

This latter requirement prevents most technological advances from being patentable, since most of them are, or are held by the patent office or the courts to be, obvious. This is probably the major difficulty facing an inventor who wishes to protect it with a patent.

It also makes the process of obtaining a patent very long and very expensive. It requires becoming expertly familiar with the state of the art in the field, and this includes knowing the precise details of prior patents for similar and related

inventions. It requires writing the patent application and especially the patent "claims," in which the invention is legally defined, very carefully so that the non-obviousness of the invention is demonstrated, and so that not more than what was actually invented is claimed. During the application process, many of these points are argued back and forth with the Patent Office, often with turn-around times measured in months. Needless to say all of this requires a considerable amount of legal assistance.

The rewards, however, if one succeeds in obtaining a patent, can be substantial. One reason for this is that the protected "invention" is not merely the particular embodiment that the inventor describes in detail in the patent application. It is a generalized embodiment of the idea behind the invention, lying somewhere between the particular embodiment and the idea. The idea itself, however, is not protected. Ideas, laws of nature, equations, formulas, and the like are not patentable.

Patent protection extends beyond preventing reproduction of the invention. Something designed and sold completely independently of the protected invention, even without knowledge that the patented invention exists, is considered an infringement if it comes within the definition of the claims.

### Copyrights

A copyright is an exclusive right to reproduce, publish, and sell certain categories of works. The chief categories, are literary works, dramatic and musical works, and audio-visual

works. The copyright includes some supplementary exclusive rights as well, such the right to perform publicly and the right to make derivative works (e.g., to make a movie from a copyrighted novel).

A copyright is effective for 50 years after the death of the author if the author owns the copyright. Otherwise the term is 75 years.

Unlike patents, copyrights are obtainable without the requirement for novelty. All that is required is that the work be original, i.e., that it originate with the individual claiming to be its author. Thus one cannot obtain copyright protection for a work taken from the public domain.

There is also no requirement that the work be "useful," nor even, more appropriately, that it have any literary merit. Totally incoherent nonsense can be protected by copyright, as can works expressed entirely in code.

Because there are few requirements, it is quite simple, fast, and inexpensive to obtain copyright protection. In fact a copyright legally comes into being automatically as the work is created in a fixed form. For the protection to be maintained when the work is published, or put on public view, it must contain a copyright notice: the word "copyright" or an approved abbreviation, the year of publication, and the name of the owner of the copyright. The copyright can be registered by sending the work, ten dollars, and a simple application form to the Copyright Office. Registration is not required, but it serves as evidence of the copyright's validity, and it becomes mandatory if the

copyright owner wishes to sue for infringement of the copyright.

As is the case with patents, copyrights can not be used to protect ideas. Copyrights are said to protect the "expression of an idea," rather than the idea itself. Unlike patents, copyrights offer protection only from actual copying. If another individual comes up with the same, or a very similar work independently, it is not an infringement. Substantial similarity, however, is often used in court as evidence of actual copying.

### Trade Secrets

Although the details of trade-secret law vary from state to state, it might be generalized like this: when a person takes reasonable precautions to keep secret some information that is not generally known and that is useful in the person's trade or business, and when someone else wrongly takes that information for his or her own use, or wrongfully discloses the information to others, then the courts will provide remedies including awards of damages, injunctions, and criminal penalties.[7]

Reasonable precautions to keep the secret usually include withholding the information from those who have no need to know it, identifying it as proprietary to those to whom it must be disclosed, and disclosing it to them only under an understanding of confidentiality, preferably by explicit contract.

Taking or disclosing a trade secret is considered wrongful most typically when it involves a breach of contract or of a confidence or of the duty of fidelity owed to an employer, or

when it involves unlawful actions like trespass or fraud.

Trade secret protection lasts as long as the secret can be kept; once it becomes generally known, even if by foul play, the protection ceases. (The formula for Coca-Cola, probably the world's most famous trade secret, is about 100 years old.)

The breadth of trade-secret protection is also variable. It depends on what level of generality can, in fact, be kept secret. Even ideas, which cannot be protected by patents or by copyrights, can be protected as trade secrets if all of the criteria are met.

#### Protecting Computer Software

Patents, copyrights, and trade secret can all be used to protect aspects of computer software.

Copyrights and trade secrets are the most popular forms of protection, probably because they are easier, cheaper, and faster to obtain than are patents, especially software patents. The courts have consistently upheld the applicability of copyright and trade-secret law to software. Programs have been held copyrightable as literary works and, to the extent they generate screen images, as audio-visual works. Because copyright protection (if it is to be enforced through the courts) requires disclosure, and trade-secret protection requires secrecy, they are incompatible; one cannot have both protections of the same software at the same time. The choice between the two often involves knowing (or guessing) whether disclosure or secrecy would yield a higher competitive advantage. One composite

approach is to treat software as a trade secret, but to include a (pre-publication) copyright notice as a contingency. Should the secret ever be lost to the public, the copyright notice would probably sustain a claim to copyright protection.

Patent protection is problematic, but not impossible. On top of the high costs, long delays, and requirement for novelty that accompany all patent applications, however, there is a special problem that has plagued applications for software patents. The courts have had difficulty deciding whether software is proper subject matter for patent protection at all. Or, whether some kinds of software may be proper subject matter, whereas other kinds may not. There are two Supreme Court cases from which one can infer a window of patentability for software: In 1972 the court held that algorithms, like formulas, were not patentable, and that a program that did nothing more than effectuate an algorithm for transforming one numerical code into another was not a "process" under the statute, and was not patentable as such.[8] In 1981 the court upheld the patentability of a process for heating rubber, whose only new component was a computer program that reiterated a well-known, but until then manual, formula for stopping the heating as a function of the temperature in the oven.[9] Since then, the Patent Office has issued numerous patents for systems in which computer programs were substantial components. Interest in such patents apparently is on the rise.[10]

Why is there any interest at all in patent protection, when copyrights and trade secrets are so easy, cheap, and fast?

Patents offer superior breadth of coverage. The protected "invention," you will recall is a generalized embodiment of the idea, not just the particular embodiment described in the patent application. It is probably much broader than the "expression of the idea," which is protected by copyright, or than those aspects of a computer program that can effectively be kept secret from the user public.

All three modes of protection are available for software, but each provides a different kind of protection.



NOTES

[1] Samuel Warren and Louis Brandeis, "The Right to Privacy," 4 Harvard Law Review 193 (1890).

[2] Pavesich v. New England Life Insurance Co., 22 Ga. 190, 50 S.E. 68 (1905).

[3] William Prosser, "Privacy" 48 California Law Review 383, 389 (1960).

[4] 381 U.S. 479.

[5] Roe v. Wade, 410 U.S. 113, 153.

[6] The patent statute is Title 35 of the U.S. Code; the copyright statute is Title 17.

[7] For a more detailed summary, see 55 American Jurisprudence 2d, Monopolies, secs. 704-707.

[8] Gottschalk v. Benson, 409 U.S. 63.

[9] Diamond V. Diehr, 450 U.S. 175.

[10] Mitch Betts, "Patenting the MIS Strategic Edge," Computerworld, May 30, 1988, P. 1.