Shrink-wrap license restrictions—Preempted?

Software publishers are fond of shrink-wrap licenses. These notices accompany copies of computer programs and state that by using the program you agree not to do various things that the publisher does not want you to do. Typically, for example, the publisher does not want you to disassemble the object code or otherwise reverse-engineer the computer program.

How to agree to a shrink-wrap license

Classically, tearing open the package’s plastic wrapping manifested your consent to the agreement, but variations are now common. For example, the restrictive terms are long and complicated, and you find out about them only by reading the small print on a leaflet inside the box. Therefore, the leaflet states that you manifest consent to the restrictive terms by keeping the product after opening the package instead of taking it back to the retailer for a refund.

Or a notice pops up on the screen when you install the program, and installation continues only if you click on a box or icon stating “I agree to the terms.” Publishers consider this approach (sometimes termed click-wrap licensing) a necessity with software marketed via the Internet, because the user downloads the program electronically and never opens a shrink-wrapped package.

Advantages for sellers

These various forms of shrink-wrap licenses appeal to software publishers because they arguably give publishers greater rights over software, in the name of contract law, than copyright or patent law provides or even allows. Under copyright and patent law alike, a publisher’s sale of a copy of a computer program to a customer exhausts the intellectual property rights of the publisher/seller. It is not copyright or patent infringement for customers to disregard restrictions on the use or disposition of a purchased product. Arguably, however, if customers promise to obey a restriction, then different rules may apply; the customers may be obliged to keep their promise. Thus, if a shrink-wrap license effects an agreement (a contract) between a publisher and end users, the end users must do as they promised.

Moreover, copyright and patent law give purchasers rights to adapt and modify products that they buy. Copyright law expressly allows owners of a copyrighted computer program to modify the program to port it to another platform and to add necessary new features. Patent law allows owners of patented products to soup them up—to improve their throughput and speed. Arguably, however, if the customer promises not to do that, a court may enforce the promise. The contract trumps customer rights otherwise granted by copyright or patent law.

Further, purchasers of copyrighted and patented products ordinarily can choose any service organization to perform repairs and other service work. For example, car purchasers can ordinarily choose anyone to repair their cars’ engines. But courts have upheld the enforcement of computer program licenses that limit booting up (for purposes of maintenance and repair) to the end user. This prohibits independent service organizations from doing so. In principle, therefore, General Motors could require owners of GM cars to have only authorized GM dealers repair their programmed, microprocessor-operated braking or ignition systems. This license could, apparently, simply be a notice (shrink-wrap license) in the user’s manual that accompanies the car.

Courts have also interpreted copyright and patent laws to give purchasers the right to reverse-engineer products. This allows purchasers to learn how a product operates and what it would take to make another product...
GM could require owners of its cars to have only authorized GM dealers repair their programmed, microprocessor-operated systems.

operate or interface with it. Software publishers argue that an anti-reverse-engineering clause in a shrink-wrap license trumps a product owner’s right of reverse-engineering.

**Previous federal precedents**

Until recently, most courts took a dim view of software publishers’ use of shrink-wrap licensing to trump users’ rights. For example, in the 1991 Step-Saver case, the Philadelphia federal appeals court held that a shrink-wrap license was not effective because purchasers were not adequately apprised of the terms before they ordered the software. (In that court case, the purchaser challenged the seller’s shrink-wrap statements that it was not responsible for software-caused problems and that the purchaser’s remedies were limited to a refund for defective software.)

In the 1988 Vault case, a federal appeals court in New Orleans held that a shrink-wrap license’s prohibition of reverse-engineering was legally ineffective because it conflicted with the purchaser’s rights under federal copyright law. As a result, federal copyright law “preempted” application of state contract law.

**ProCD case**

Matt Zeidenberg was a computer science PhD candidate at the University of Wisconsin. In 1994, he uploaded ProCD’s Select Phone CD-ROM database of telephone numbers to his Internet Web site. ProCD had spent millions of dollars creating a comprehensive, national directory of residential and business listings. It had compiled over 95 million residential and commercial listings from approximately 3,000 publicly available telephone books. The Select Phone listings included full names, street addresses, telephone numbers, zip codes, and industrial classification codes.

ProCD sold its CD-ROMs at retail outlets such as Egghead Software. The user guide that ProCD included in the package contained a user license agreement that began with these words:

> Please read this license carefully before using the software or accessing the listings contained on the discs. By using the discs and the [data] listings licensed to you, you agree to be bound by the terms of this License. If you do not agree to the terms of this License, promptly return all copies of the software, listings that may have been exported, the discs and the User Guide to the place where you obtained it.

In addition, the license provided that

> You will not make the Software or the Listings in whole or in part available to any other user in any networked or time-shared environment, or transfer the Listings in whole or in part to any other computer other than the computer used to access the Listings.

Once the product was installed on a user’s computer, screens appeared to remind users about the user license agreement and, in particular, that the agreement prohibited network use. Zeidenberg’s motives are unclear. He may have been engaged in a Robin Hood or electronic-vigilante project. (Telephone numbers want to be free!) According to a June 24, 1996, Associated Press wire report, Zeidenberg published the numbers free on his site in hopes of attracting advertising money (which appears not to have materialized). In any event, he completely bent ProCD out of shape. It sued him in Wisconsin federal district court for copyright infringement, violation of the Wisconsin Computer Crimes Act, torts, and breach of contract.

The district court ruled for Zeidenberg on all counts. There was no copyright infringement because the telephone listings were not copyrightable. There was no breach of contract because Zeidenberg never assented to the shrink-wrap license and therefore was not bound to obey it. Even if there had been a valid contract, federal copyright law would preempt its enforcement. Federal law similarly preempted the other claims. The district court viewed these claims as an attempt to avoid the policies and objectives of federal copyright law, which, for example, holds that white-page listings cannot be protected under copyright law and should be freely available to the public.

ProCD appealed to the Chicago federal appeals court, which reversed the judgment. First, the appeals court held that the shrink-wrap use restriction was a binding contract. It also held that federal copyright law did not preempt enforcement of the use restriction under state contract law. The court of appeals thus breathed new life into shrink-wrap licensing. The decision rests, however, on questionable reasoning.

**Critique of ProCD ruling**

The court of appeals says there is no preemption of state contract law here because the contract has nothing to do with what copyright is about:

> Copyright law forbids duplication, public performance, and so on, unless the person wishing to copy or perform the work gets permission; silence means a ban on copying. A copyright is a right against the world. Contracts, by contrast, generally affect only their parties; strangers may do as they please, so contracts do not create “exclusive rights.”

Here, the contract (the shrink-wrap restriction on use) accomplishes by an alleged agreement the same thing that
copyright law accomplishes by stating a general principle defining copyright infringement. But the rub is that copyright law, as the Supreme Court has interpreted it in the Feist case, says that white-page telephone listings are too unoriginal to be protected by copyright. They therefore belong in the public domain, to be freely copied by everyone. Suppose that the telephone company copyright proprietor in the Feist case had put a notice in its white-page directory to the effect that users must not copy and distribute the listings. Would the Supreme Court have then ruled the other way? Or would it have said that the notice was legally ineffective because it attempted to produce a result opposite to that of federal copyright law?

The ProCD court of appeals likened telephone listings to customer lists, which may be protectable trade secrets. Supreme Court precedent, the court of appeals correctly observes, holds that federal patent law does not preempt state trade secret law. But how can a white-page telephone book (or the 3,000 of them compiled here) be a trade secret? These shrink-wrap restrictions cannot be upheld on a trade secret theory.

Indirectly, the court of appeals then suggests that perhaps ProCD’s use restriction against giving away its product is a reasonable restriction, an argument with considerably more merit. In principle, reasonable use restrictions ought to be upheld and unreasonable ones should not. The problem, however, of whether a use restriction is reasonable is an issue of contract law. This is a different problem than deciding whether federal copyright law has occupied the field so much that it should preempt state law because it prevents the accomplishment of federal objectives.

Suppose state law declares that X is reasonable and enforceable in litigation under state law. Suppose further that Congress has power to regulate as to X (say, if X affects interstate commerce). Congress then legislatively declares (wisely or unwisely) that it does not want X to occur. Surely state law cannot nullify federal law, even if the state is wise and reasonable and Congress is unwise and unreasonable, according to the wisdom of you, me, and a federal judge.

The point is that if federal copyright law puts white-page listings in the public domain, a state law allowing protection of white-page data conflicts with the policy of federal law and therefore must yield. Here, the state law is contract law. There are often legitimate policies that state contract law upholds. It may be said that states have a supervening interest in the sanctity of promise keeping, on which our entire private law of contracts and business dealings rests. Promises should be kept; the law is so set on this that it has a Latin maxim to make it more impressive as a binding principle: Pacta sunt servanda (promises should be obeyed). On the other hand, this “promise” is a shrink-wrap license, so that Zeidenberg might properly respond: “Shrink-wrap licenses sunt servanda? Give me a break.”

Perhaps the way to address this issue is by deciding whether enforcing the promise will deprive the public of something federal copyright law wants it to have. Does the public need Zeidenberg freed from state contract law requirements so that public policy will be served? Is Zeidenberg a surrogate for the public, its agent, so that muzzling him deprives the public of what federal law wants it to have? This is the basis on which the Supreme Court decided the Lear case. It held that state contract law should give way to federal patent policy on the issue of whether a licensee was obliged to obey a promise not to challenge the validity of a possibly spurious patent. This would protect the public from such patents. The Court thought that licensees were the most likely to do this and also have the necessary information.

What result that legal test would produce here is unclear. It may well be that the public does not need Zeidenberg as an Internet vigilante; other people and institutions can adequately advance the interests of public policy. Or, is Zeidenberg all that stands between the public and utter loss of access to needed, uncopyrightable information? (Probably not.) My only point is that this is a more sound principle for resolving the issue than the approach of the court of appeals.

If federal law puts listings in the public domain, state law protecting the data conflicts with federal law and must yield.

ProCD is one of those proverbial hard cases that produces bad law (does not foster good precedent). Zeidenberg’s activities appear unattractive, even if he had been a database Robin Hood (which is no more likely than for the real bow-and-arrow-toting bandits in Sherwood Forest). But hard cases force us to examine our principles, to determine how much courage we have in our convictions. Surely it makes no sense to have Feist refuse copyright protection to unoriginal databases and then turn around and let 50 different states experiment with database protection. Feist did not deny protection simply out of caprice; it denied protection for reasons of policy.

The law classifies unoriginal written matter as not being copyright-protectable writings of authors for the same kind of reason that Baker v. Selden (now codified in the copyright statute) places ideas, systems, and discoveries outside the statutory scheme of protection. To permit the states to do what federal law says federal copyright law should not do subverts that policy. If that kind of subversion occurs in suppressing Zeidenberg, federal law should preempt his suppression by the state law.

On the other hand, it is quite unwise to leave database proprietors at the mercy of self-styled Robin Hoods. Understandably, software proprietors are dissatisfied with waiting patiently until Congress occupies the field with a federal database protection law. That
is why this is a hard case.

Even worse, however, the reasoning of the Chicago court of appeals in the ProCD opinion suggests that states are free to enforce shrink-wrap agreements of any and all kinds: anti-enhancement restrictions, no-debugging restrictions, restrictions against independent service of car braking systems, and anti-reverse-engineering restrictions. (In fact, the court of appeals asserted that anti-reverse-engineering restrictions are desirable because they are "pro-competitive.")

Unfortunately, Zeidenberg won't seek a Supreme Court review in this case. ProCD made him an offer he couldn't refuse. It agreed to drop its claim for damages in return for Zeidenberg's agreement to stop uploading the ROMs and to not seek further appellate review.

Given the seeming conflict between the ProCD opinion on the one hand and prior opinions such as Step-Saver and Vault, another case will likely take this issue to the Supreme Court in the next few years, unless Congress acts first. Until then, given the encouragement that ProCD has provided, we may anticipate progressively more unreasonable and overreaching shrink-wrap license clauses.

References
7. 17 USC § 102(b).

Reader Interest Survey
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Micro Newsnn continued from p. 6

Currently, semiconductor energy dispersive spectrometer (or EDS) detectors are the most commonly used X-ray spectrometers for microanalysis; they typically count 3,000 X-ray photons per second and measure the energy of each X-ray to within 100 electron volts. Another commercial detector, the wavelength dispersive spectrometer (or WDS) has better energy resolution—between 10 and 20 electron volts. However, this device is difficult to use and records X rays within one narrow energy band at a time.

The new detector combines the energy resolution of a WDS with the operational ease of a semiconductor EDS. It fits onto a commercially available scanning electron microscope and achieves an X-ray energy resolution of 10 electron volts at a count rate of 100 photons per second. Researchers believe that the device eventually can exceed both these limits.

This ability is critical to materials analysis in the semiconductor industry, because such a high-resolution system can fully resolve the X-ray lines of silicon and tungsten, which nearly overlap. This would allow manufacturers to definitively identify the tungsten silicide they need to fabricate integrated circuits.

NIST is currently seeking industrial partners to share microcalorimeter's commercial development. For more information, contact John Martinis, Div. 814.03, NIST, Boulder, CO 80303-3323; (303) 497-3597; john.martinis@nist.gov.

New process battles warpage

When printed circuit boards warp after components have already been added, it can be very expensive to the manufacturer.

Thermoiré, an experimental technique developed at the Georgia Institute of Technology and licensed by Electronic Packaging Services Ltd., Co., provides a new defense against this problem.

The patented process provides real-time data about PCB warpage. "Electronic packaging companies can use the information to make changes in their PCB design early," said Charles Ume, Thermoiré's developer and an associate professor in Georgia Tech's School of Mechanical Engineering. "That way, there's no mass production of a product that has a problem."

Ume developed a special oven with a glass grating top, through which the PCB placed inside is visible. The flat glass grating, placed above and parallel to the PCB, is etched with equally spaced parallel lines.

A beam of white light, directed onto the glass at a specific angle, causes the etched lines to create a shadow on the PCB surface. When the PCB surface warps, the geometric interference between the lines etched on the glass and their shadows on the PCB surface creates a moiré pattern. The more the PCB warps, the greater the number of moiré fringes.

Ume counts the fringes, puts the number in an equation, and a computer determines how much warpage has occurred. A charge-coupled device camera captures the warpage digitally, displays it on a television screen, and records it on a computer.

The automated system can reproduce any soldering temperature history used in producing a board, while measuring PCB warpage at any specified time interval or temperature. It can simulate the three major kinds of soldering processes: infrared reflow, convector reflow, and wave.

Companies can use the results to make preproduction design or process changes: changing soldering temperature profiles, reducing or extending processing times, relocating components, and changing the types of materials.

The ability to measure thermally induced warpage also lets manufacturers validate their warpage predictions.

Support for 533-MHz processor

In October, San Jose-based start-up Exponential Technology (www.exp.com) unveiled its first product, a 533-MHz, BiCMOS microprocessor compatible with PowerPC technology.

The company announced January 7 that it had closed a $13.2-million round of financing in 4Q96, bringing its total backing to more than $27 million of equity funds. Apple Computer is Exponential's largest investor.