

CHAPTER 1

Intellectual Property Overview: Some Issues to Keep in Mind

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§ 1.1 Introduction

This paper summarizes some common issues that can arise in transactions involving a software company (“Company”), such as:

- licensing of Company’s software or other technology;
- an outright sale of Company’s rights in software or other technology, or of Company itself;
- a loan, an equity investment, or similar transactions, where software or other technology is involved.

§ 1.2 Outsiders Might Try to Claim Ownership Rights

Company will naturally want to ensure that it owns its software or other technology to the greatest extent possible. Challenges to Company’s ownership can come from several directions.

[a] Former Employers Might Try to Assert Rights

Former employers might try to assert outright ownership of Company’s proprietary technology, either in its present form or in an earlier version. (See also the discussion of ownership below.) They might assert patent rights, copyrights, or trade secret rights. Some circumstances to watch out for:

- An inventor came up with an idea for a product or service while working for a former employer.
- An employee took documents or other materials from a former job.
- Company will compete with a former employer of one or more of its employees.
- Two or more employees worked for the same former employer — that might get the former employer upset and looking for a reason to sue.
- An employee has an invention-assignment agreement with a former employer.

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In any of the above cases, Company could be hit with a patent, copyright or trade-secret lawsuit by the former employer.

Example: In the *Computer Associates* case, Altai, Inc. hired a programmer to help work on a new software product. Unbeknownst to Altai, the programmer allegedly brought with him some source code from his days at Computer Associates. He supposedly incorporated that code into the new Altai software. CA sued for copyright infringement and misappropriation of trade secrets. Altai was forced (1) to rewrite that portion of its code, (2) to pay a substantial damage award, and (2) to spend years in litigation. *See Computer Associates. Int'l, Inc., v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992) (affirming holding of noninfringement of rewritten software) (discussed in Chapter 2).

Even if the former employer does not have ownership rights, it may still have provided funding or work time for development of the technology in question. If so, it may have shop rights, i.e., a nonexclusive, royalty-free right to use the technology, and might be able to compete with Company without restriction.

When hiring a contractor or employee, Company can ask the new hire about prior work experience. It might also be possible to ask the new hire to sign a written representation that s/he will not be bringing any work product from previous employment except as expressly approved in advance, preferably in writing, by Company.

[b] Employees and Contractors Might Personally Own Their Patent Rights

In the patent arena, a nonemployee who does not have a written invention-assignment agreement — or an employee who does not have such an agreement and was not “hired to invent” or “set to experimenting” — might be the owner, or an independent joint owner, of part of Company’s software or other technology. See Chapter 3.

If Company collaborated with another company in developing a patented invention, the other company could have the right to use or license the technology without Company’s consent, and without accounting to Company. See Chapter 3.

[c] Free-Lancers Might Personally Own Their Copyrights

In the copyright arena, an outside contractor who writes computer software without a work-for-hire or assignment agreement may own the copyright in the software. Such a contractor could have the right to limit Company's use of the software that Company paid to have developed. See Chapter 2.

Even an outside contractor is not the sole owner of a copyright, it could still be a "joint author" and thus a co-owner of the copyright. Such a joint author/co-owner might be free to go into competition with Company. Joint authors of a copyrighted work must account to one another for their respective uses of the copyrighted work, i.e., share the proceeds of their uses. See Chapter 2.

Documentation for Company-developed computer software can be subject to the same copyright ownership issues as the software itself.

[d] The Golden Rule: Funding Sources May Try to Claim Rights

Research and development joint venture agreements, or development contracts with other companies, can affect ownership of Company's software or other proprietary technology (either in its present form or in an earlier version).

R & D funding by state or federal agencies (e.g., universities, DOD, DOE) can have ownership strings attached. For example, the federal Bayh-Dole Act sets forth specific requirements that must be met by certain federally funded entities to be able to retain title to technology they develop with that funding. *See 35 U.S.C. §§ 200-212; Rights to inventions made by nonprofit organizations and small business firms under government grants, contracts, and co-operative agreements, 37 C.F.R. Part 401.*

[e] Nailing Down Ownership Rights in Writing

When using outsiders for technology development, an important rule of thumb is to try to nail down ownership and/or licensing rights in writing with an assignment clause in a contract. Such a clause can be useful in an employment agreement with

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employees, too — keeping in mind that state law may regulate the extent to which an employer can require employees to assign their rights in inventions and the like. See Chapters 2, 3.

§ 1.3 Patent Issues

Software patents are a fact of life, and are becoming more important than they were in years past. See Chapter 3. Software companies are paying increasing attention to obtaining their own patents and, of necessity, to defending against third-party patents.

[a] The Clock May Be Ticking on the Right to Apply for a Patent

In the U.S., the *nonextendable* deadline for filing a patent application is *one year* after the first barring event, e.g., the first offer for sale, public use (including commercial use even if in secret) or publication of the invention.

No such “grace period” exists in most other industrialized countries, which have “absolute novelty” deadlines for filing patent applications. Most countries, however — not all — as members of the Paris Convention, will give credit for a U.S. filing date for up to one year after that date (i.e., foreign counterpart applications can be filed for up to one year after the U.S. filing date).

[b] Ways of Checking for Infringement of Third-Party Patents

Company may be using, or about to use, a product, method, or process that is covered by a patent belonging to a competitor or other third party. Likewise, a competitor of a customer or supplier may have patent coverage that could affect Company’s business. If so, Company may be vulnerable to a patent-infringement lawsuit.

Infringement searches are one way Company can look for potential third-party patent problems, but searches are not foolproof. Other indications of potential problems:

- Company’s competitors’ products may have patent-number markings, which can give some idea whether a problem might exist.

- Another indication is if others in the industry are being sued (or threatened with suit) for patent infringement.
- If Company receives an “invitation” to take a license under a patent, or just a plain “notification” of the existence of a patent, that could be a prelude to a charge of infringement — or perhaps to a lawsuit.

[c] Possible Damages – Including Treble Damages – for Patent Infringement

If found to be an infringer, Company could be forced to pay patent infringement damages -- potentially the patent owner's lost profits, and in any event not less than a reasonable royalty.

Example: In the famous *Polaroid Corp. v. Eastman Kodak Co.*, case, the total damage award against Kodak was in excess of \$900 million. *See Polaroid Corp. v. Eastman Kodak Co.*, 16 USPQ (BNA) 1481 (D. Mass 1990).

The courts have held that if a company is aware of another's patent rights, it has a duty to use due care to ensure that it is not infringing. If infringement is proved, then proof of the company's failure to use due care can lead to a finding of *willful* infringement, which in turn can lead to an increase in the damage award — up to treble damages in the discretion of the trial judge — and possibly an award of attorneys' fees.

If Company relies in good faith on what it reasonably believe to be a competent opinion of counsel that Company are not infringing any valid claim of a patent, that can help Company avoid being held a willful infringer. Even if Company loses on the infringement issue, its reasonable reliance on the opinion can still negate willfulness.

[d] Injunctions Against Patent Infringement

If Company is held liable for patent infringement, it could be subjected to an injunction against further infringement. “It is the general rule that an injunction will issue when infringement has been adjudged, absent a sound reason for denying it.” *Richardson v. Suzuki Motor Co., Ltd.*, 868 F.2d 1226 (Fed. Cir. 1989).

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A preliminary injunction may be entered if the patent owner proves, among other things, that it is likely to succeed on the merits of an infringement lawsuit.

[e] Personal Liability for Patent Infringement

Individuals who direct or actively take part in patent-infringing activities by a corporation could be personally liable for the infringement.

§ 1.4 Someone Else's Copyrights in Software or Data Compilations Might Be Infringed

If Company will be distributing software intended to be a work-alike competitor to another product, a copyright lawsuit alleging infringement of the “look and feel” or the “structure, sequence, and organization” of the target software may be a possibility. See Chapter 2.

If Company’s product/service involves the use of a proprietary data base of facts (e.g., names, addresses, catalog part numbers, and so forth), the source of the facts should be investigated. Facts *per se* are not copyrightable. However, copying of others’ data bases (e.g., yellow-page telephone books, maps) can lead to liability for copyright infringement if the selection or arrangement of the data is sufficiently “original,” i.e., if it is the result of at least minimal creative effort.

§ 1.5 Trademark Issues Might Exist

Trademark rights in the U.S. are based on use of the mark (although a federal registration application can be filed on the basis of bona fide intent to use the mark). See Chapter 4; 15 U.S.C. § 1051. Consider checking whether Company has filed any registration applications.

Infringement of another’s trademark rights, through the use of a “confusingly similar” mark, can lead to a preliminary injunction, a permanent injunction, destruction of infringing articles, and up to treble damages in some circumstances. *See* 15 USC 1114.

A trademark search for similar marks (registered and unregistered) is usually advisable if a significant investment will be made in promoting a new mark. It is not enough to check corporate-name records, state trademark records, or county DBA filings. Consider looking into whether Company has had a search done.

If Company has chosen a highly “descriptive” trademark, the mark may be difficult or impossible to protect legally. *See* 15 USC 1052.

Assignments or other transfers of a mark cannot be accomplished independently of the goodwill symbolized by the mark. Any such transfer *without* goodwill could be deemed an “assignment in gross” that destroys the trademark rights. *See, e.g., Berni v. Int'l Gourmet Restaurants of America, Inc.*, 838 F.2d 642 (2d Cir. 1988).

§ 1.6 The Export-Control Laws Could Pose Problems

A U.S. export license is necessary for all exports of commodities and “technical data” (including software) unless a License Exception applies. *See* Chapter 11. Restriction of exports of encryption software is a particular bone of contention in the software industry. Failure to comply with export licensing requirements can result in criminal penalties.

§ 1.7 Defamation and On-Line Providers

A not-untypical problem is that of the Internet user who posts defamatory material in an email, newsgroup message, or chat room message. One court held that the on-line service provider that made Internet access available to the defamatory poster could be liable for the defamation. *See Stratton-Oakmont, Inc. v. Prodigy Services Co.*, 1995 WL 323710 (N.Y. Sup. 1995) (granting partial summary judgment for defamation plaintiff).

In response, Congress expressly overruled *Stratton-Oakmont* as part of the Communications Decency Act (CDA). That statute states that “[n]o provider or user of an interactive computer service [defined as including ISPs as well as internal corporate systems] shall be treated as the publisher or speaker of any information provided by another information content provider [defined as

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creators or developers or information provided through the Internet or other interactive computer system].” 47 U.S.C. § 230(c).

That portion of the CDA preempts contrary state law. *Id.* § 230(d)(2); *see Blumenthal v. Drudge*, 992 F. Supp. 44 (D.D.C. 1998) (dismissing America OnLine as defendant in defamation action relating to on-line commentator Matt Drudge’s reporting of rumor that White House aide Sidney Blumenthal had a history of spousal abuse); *Zeran v. America OnLine, Inc.*, 958 F. Supp. 1124, 1129-37 (E.D. Va.) (dismissing action against AOL by victim of hoax perpetrated via AOL), *aff’d*, 129 F.3d 327 (4th Cir. 1997).

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CHAPTER 2

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§ 2.1 Basic Copyright Doctrines

The legislative history of and subsequent amendments to the Copyright Act of 1976, including specific computer program-related provisions, make it clear that Congress intended software and data collections to be eligible for at least some protection under copyright. Moreover, the courts have uniformly held that software and data collections are protectable by copyright at least to some extent.

[a] Copyright Protection is Automatic for "Original Works of Authorship"

The Copyright Act provides that:

Copyright protection subsists, in accordance with this title, in *original works of authorship fixed in any tangible medium of expression*, now known or later developed, from which [it] can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.

17 U.S.C. § 102(a) (emphasis supplied). Copyright thus arises automatically upon fixation of the work, e.g., by writing it down, saving it to a computer disk, and perhaps even typing it into a computer's temporary memory.

[1] What Constitutes "Authorship" of Software

In some software companies, some programmers are what might be regarded as product architects; they conceive a design for a computer program and may write much of the code. Other programmers play less of a creative role, instead translating others' programming ideas into working computer program code (such programmers are sometimes referred to as "coders").

The work of a programmer in the latter category may not qualify as "authorship" for copyright purposes, as the Second Circuit held in the *Medforms* case. That case involved software for generating bills for doctors' offices. A programmer had formerly worked for one company in that market space; he left the company and co-founded a new company in the same space. In the meantime, his former employer went out of business, and its software was

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licensed to a third party. The programmer's new company filed a copyright infringement suit against the third party. At trial, the programmer's former supervisor testified that he, the supervisor, had told the programmer "specifically what to do and how to do it" in writing the program code. The jury found for the defendants, and the trial court denied a motion for new trial. Affirming, the Second Circuit held that:

The limits on copyright ... make it clear that both *tangibility* and *originality* are necessary aspects of authorship. A person is not an author if he has an original idea that is not expressed in tangible form, and a person is not an author if he expresses another's idea in tangible form without any original contribution. * * * [T]he jury could reasonably conclude that Gold [the programmer's former supervisor] authorized Modlin [the programmer] to embody his ideas for revising [the software] in a copy, but that Modlin's work was insufficiently original for authorship. The district court thus emphasized originality in its ruling because originality was the criterion of authorship that, based on the evidence, the jury could have reasonably found Modlin lacked. * * * Based on the evidence in this case, the jury could have reasonably concluded that the copyright registrations were invalid because Modlin was not an author

MedForms, Inc. v. Healthcare Management Solutions, Inc., __ F.3d __, 2002 WL 966251 (2d Cir. May 7, 2002) (affirming denial of motion for new trial). See also § 2.1[b] (how much incremental creativity is required for protection for new versions); § 2.6[h][2] (requirements for joint authorship).

[2] Copyright Formalities

No particular formalities are required to obtain copyright protection. Complying with certain formalities can still give rise to litigation advantages, however:

- A **copyright notice** is desirable — because it can cut off certain innocent-infringer defenses — but it is not a prerequisite to protection. *See* § 2.3.

• **Registration** of a copyright is a jurisdictional prerequisite to a suit for infringement. *See infra* § 2.4; *see generally* 17 U.S.C. § 411. The statute makes an exception for works whose country of origin is a Berne Convention country other than the United States. *See id.*

Registration is not a prerequisite to protection, however. *See* 17 U.S.C. § 408(a). A copyright owner can thus wait to obtain a registration until it desires to file suit against an infringer of the copyright.

But he who waits to obtain a registration might forfeit two statutory benefits, namely “statutory damages” and attorneys’ fees. *See* 17 U.S.C. §§ 504 (statutory damages), 505 (attorney’s fees); *see also* § 2.10. Moreover, a copyright owner who fails to register a work either prior to the commencement of an infringement, or within three months after first publication in the case of published works, is precluded seeking either statutory damages or attorneys’ fees. *See* 17 U.S.C. § 412.

**[b] Copyright Protection for New Versions:
How Much *Incremental* Creativity is Required?**

Especially in the software industry, copyrightable works often take the form of incremental creative advances built on a pre-existing foundation. For example, a new release of a computer program will often be an improved version of an old program. As another example, this and other chapters of this book have been repeatedly revised over the years.

If a new work reflects sufficient new creative effort to rise to the level of a “derivative work,” then by statute the new work is protectable, whether or not the preexisting material is protectable. The statute provides that

(a) The subject matter of copyright as specified by section 102 [17 U.S.C. § 102] includes compilations and derivative works, but protection for a work employing preexisting material in which copyright subsists does not extend to any part of the work in which such material has been used unlawfully.

(b) The copyright in a compilation or derivative work extends only to the material contributed by the

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author of such work, as distinguished from the preexisting material employed in the work, and does not imply any exclusive right in the preexisting material. The copyright in such work is independent of, and does not affect or enlarge the scope, duration, ownership, or subsistence of, any copyright protection in the preexisting material.

17 U.S.C. § 103.

A derivative work is defined in the statute as

a work based upon one or more preexisting works, such as a translation, ... abridgement, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship

17 U.S.C. § 101.

The question then becomes, When is the amount of incremental creativity sufficient for copyright protection of such works? In its *Feist* decision discussed in § 2.2[b], the Supreme Court held that a copyrightable work (in that case a compilation) need only possess "some minimal degree of creativity." *Feist Publications, Inc., v. Rural Telephone Service Co.*, 499 U.S. 340, 345, 111 S. Ct. 1282, 1287 (1991) (citation omitted). The Court described that minimal degree as "some creative spark, 'no matter how crude, humble or obvious' it might be." *Id.* (citation omitted).

So, how much creativity will suffice to meet the *Feist* test? One benchmark is provided in *Montgomery v. Noga*, 168 F.3d 1282 (11th Cir. 1999) (affirming judgment of infringement). The plaintiff, Montgomery, was the author of a "shareware" graphics-viewer program that enabled users to view pictures on a computer screen. The defendants were the producers of CD-ROMs that, according to the court, were "largely pornographic in nature," *id.* at 1287; they reproduced Montgomery's graphics-viewer software on their CD-ROMs without permission.

The *Montgomery* defendants argued that version 2.9a of the software — the only registered version at the time the lawsuit was brought — was not protectable by copyright. They pointed out that

before March 1, 1989, Montgomery had distributed version 1.3 without a copyright notice, thus forfeiting his copyright and putting the software into the public domain. They argued that versions 1.4 through 2.9a were not sufficiently different enough from version 1.3 to be independently protectable.

The Eleventh Circuit disagreed. The court assumed for the sake of argument that Montgomery had forfeited his copyright in version 1.3 of his software because of his distribution of copies without a copyright notice. *Id.* at 1289-90 & n.11. But, the court held, registered version 2.9a was indeed different enough from the now-public-domain version 1.3 to be entitled to protection of its own. The court noted that Montgomery had modified his software to correct problems, add functionality, and improve the performance of the software. *See id.* at 1290 (describing modifications). The court concluded that the modifications were sufficiently original to support a valid copyright in version 2.9a as a derivative work, and affirmed judgment including \$80,000 in damages and over \$142,000 in attorneys' fees. *See id.* (citation omitted).

See also the discussion of the *MedForms* case in § 2.1[a][1], concerning how much creative contribution is required to make a programmer an "author" of a computer program.

[c] Exclusive Rights of the Copyright Owner

Section 106 of the Copyright Act provides in part that the owner of a copyright has the exclusive right, among other things:

- to **reproduce** the copyrighted work in copies or, in the case of sound recordings, phonorecords;
- to prepare **derivative works** based on the copyrighted work; and
- to **distribute** copies to the public by sale or other transfer of ownership or by **rental**, lease, or lending. The distribution right is separate from the right to make copies (or phonorecords). A person who has a license to make copies of a copyrighted work is not necessarily authorized to distribute those copies.

17 U.S.C. § 106.

[d] The “First Sale” Doctrine; Software Rentals and Redistribution

The copyright owner’s right of exclusive distribution of copies (or phonorecords) is limited by the “first sale” doctrine. That doctrine provides that the owner of a particular copy or phonorecord lawfully made is entitled, without permission of the copyright owner, to sell or otherwise dispose of possession of that copy or phonorecord. *See* 17 U.S.C. § 109(a).

Many and perhaps the majority of software transactions, however, are licenses, not sales, and so the first-sale doctrine may not apply. And even if the first-sale doctrine applies, it is limited by statute where software is concerned: the anti-rental provisions of the statute give the owner of the copyright in a computer program the exclusive right (subject to certain exceptions) to dispose of, or authorize the disposal of, possession of any copy by rental, lease, or lending. *See* 17 U.S.C. § 109(b).

Selected cases:

Adobe Systems Inc. v. One Stop Micro, Inc., 84 F. Supp.2d 1086 (N.D. Cal. 2000): The court granted partial summary judgment in favor of copyright owner Adobe. The court held that Adobe’s software distribution agreement with an educational distributor was a licensing agreement, not a sales agreement, despite usage of sales terminology such as “purchase” and “own.” Consequently, the first sale doctrine did not apply, and the defendant did not have the right to redistribute copies of the software. The court held that One Stop Micro had thus infringed Adobe’s copyright by purchasing Adobe software packages from the educational distributor, peeling off “academic use only” stickers, re-shrink-wrapping the packages, and distributing the adulterated packages in violation of distribution agreement).

Softman Products Co., LLC v. Adobe Systems Inc., 171 F. Supp. 2d 1075 (C.D. Cal. 2001) (vacating preliminary injunction): The U.S. district court for the Central District of California refused to adopt the Northern District’s *One Stop Micro* analysis. The *Softman* court found that “the circumstances surrounding the transaction strongly suggests that the [shrinkwrap or click-wrap license] transaction is in fact a sale rather than a license. For example, the purchaser commonly obtains a single copy of the software, with documentation, for a single price, which the purchaser pays at the time of the

transaction, and which constitutes the entire payment for the ‘license.’ The license runs for an indefinite term without provisions for renewal. In light of these indicia, many courts and commentators conclude that a ‘shrinkwrap license’ transaction is a sale of goods rather than a license.” *Id.* at 1085. And because the distributor-plaintiff did not agree to the terms of the click-wrap or shrinkwrap end-user license agreement (EULA), the court held that the distributor was entitled under the first-sale doctrine to

Microsoft Corp. v. Harmony Computers & Electronics, Inc., 846 F. Supp. 208 (E.D.N.Y. 1994): The court granted a preliminary injunction after an ex parte seizure of software. It held that Microsoft’s distribution of its software under license was not a “first sale,” and so the defendant infringed Microsoft’s copyright by its unauthorized distribution of copies..

Central Point Software Inc. v. Global Software & Accessories, Inc., 880 F. Supp. 957 (E.D.N.Y. 1995): The court held that the defendant’s “deferred billing plan,” which permitted the defendant’s customers to return software for up to five days subject to a “restocking fee,” was a prohibited software rental arrangement.

Adobe Systems, Inc. v. Brenengen, 928 F. Supp. 616 (E.D.N.C. 1996): The court granted a preliminary injunction against the defendant’s software-rental business.

[e] Copyrights Last a Long Time

Ordinarily, the term of a copyright is the life of the author of the work plus 70 years (or, in the case of joint authors, the life of the last-surviving author plus 70 years). *See* 17 U.S.C. § 302(a), (b). Different rules apply to works that were created prior to January 1, 1978. *See id.* §§ 303, 304. Unless the Copyright Office’s records indicate otherwise, an author is presumed to be dead 95 years after the year of the first publication of a work or 120 years after the year of creation of the work. *Id.* § 302(e).

If, however, the work is (i) an anonymous work that remains anonymous in the Copyright Office’s records, (ii) a pseudonymous work that remains pseudonymous in the Copyright Office’s records, or (iii) a work made for hire, then the copyright term is 95 years from the date of first publication or 120 years from the date of creation, whichever expires first. *Id.* § 302(c).

§ 2.2 Copyright in Data Collections

A compilation of preexisting materials, or of data – such as an off- or on-line database, or perhaps a Web “link farm” (see § 2.8[g]) – can be protected by copyright in some circumstances. The availability of such protection depends on the creativity used in selecting or arranging the preexisting materials or data.

[a] Statutory Provisions

The Copyright Act of 1976 makes explicit provision for copyright protection for compilations:

§ 103 Subject matter of copyright:
Compilations and derivative works

(a) The subject matter of copyright as specified by section 102 includes compilations and derivative works, but protection for a work employing preexisting material in which copyright subsists does not extend to any part of the work in which such material has been used unlawfully.

(b) The copyright in a compilation or derivative work extends only to the material contributed by the author of such work, as distinguished from the preexisting material employed in the work, and does not imply any exclusive right in the preexisting material. The copyright in such work is independent of, and does not affect or enlarge the scope, duration, ownership, or subsistence of, any copyright protection in the original material.

17 U.S.C. § 103. The term “compilation” is defined in the statute:

A “compilation” is a work formed by the collection and assembling of *preexisting materials* or of *data* that are *selected, coordinated or arranged* in such a way that the resulting work as a whole constitutes an original work of authorship. The term “compilation” includes collective works.

Id. § 101. The term “collective work” is likewise defined in the statute:

A “collective work” is a work, such as a periodical issue, anthology, or encyclopedia, in which a number of contributions, constituting separate and independent works in themselves, are assembled into a collective whole.

Id.

[b] The *Feist* Decision Imposes a Creativity Requirement

In its 1991 *Feist* decision, the Supreme Court held that to be protectable by copyright, databases and other compilations must exhibit at least some minimal degree of creativity in the selection and/or arrangement of the data or preexisting materials contained therein. *Feist Publications, Inc., v. Rural Telephone Service Co.*, 499 U.S. 340, 111 S. Ct. 1282 (1991).

For a time, the circuits had been split on this point, with the “sweat of the brow” line of cases indicating that the compiler’s effort alone was sufficient to give rise to protection. In an opinion by Justice O’Connor joined by seven other justices (Justice Blackmun concurred in the judgment without joining in the opinion), the Court reversed a Tenth Circuit decision along those lines, holding that the white pages of the telephone directory in suit were insufficiently original and therefore were uncopyrightable.

The *Feist* Court used an originality test to resolve the tension between the uncopyrightability of facts and the copyrightability of compilations. “Original, as the term is used in copyright, means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity.” *Feist*, 499 U.S. at 345, 111 S. Ct. at 1287 (citation omitted).

The Court limited copyright protection in fact-intensive works to those aspects that possess “some creative spark, ‘no matter how crude, humble or obvious’ it might be.” *Id.* (citation omitted). The Court expressly rejected the “sweat of the brow” theory of copyright as being unreconcilable with the constitutional limitations and

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statutory framework of copyright protection. It accused the lower courts that developed the theory of having “handed out proprietary interests in facts and declared that authors are absolutely precluded from saving time and effort by relying upon the facts contained in prior works.” *Id.*, 499 U.S. at 354, 111 S. Ct. at 1292.

As to white-pages telephone directories, the Court said that an alphabetical arrangement of names, addresses, and phone numbers “is not only unoriginal, it is practically inevitable. This time-honored tradition does not possess the minimal creative spark required by the Copyright Act and the Constitution.” *Id.*, 499 U.S. at 363, 111 S. Ct. at 1296-97.

[c] Some Illustrative Post-*Feist* Decisions

In the years since the *Feist* decision, several opinions by federal appeals courts and district courts have attempted to apply that case’s principles in deciding whether specific compilations of data were protectable by copyright. The decisions tend to be quite fact-dependent; moreover, even if a court holds that a particular compilation is copyrightable, the court might also hold that there is no substantial similarity in the defendant’s work and thus no infringement. A few illustrative cases are described below.

[1] West Publishing Fights to Protect Its Star Pagination

Matthew Bender & Co., Inc. v. West Publishing Co., 158 F.3d 674, 682-83 (2d Cir. 1998) (affirming summary judgment in favor of Matthew Bender): The Second Circuit rejected West’s attempt to protect the pagination of the published judicial opinions in its case reports. (West Publishing is a part of West Group, the publisher of this treatise.) The court set out a fact-dependent test for creativity in selection and arrangement of preexisting materials: “[C]reativity in selection and arrangement therefore is a function of (i) the total number of options available, (ii) external factors that limit the viability of certain options and render others non-creative, and (iii) prior uses that render certain selections ‘garden variety.’”

The court held that “when it comes to the selection or arrangement of information, creativity inheres in making non-obvious choices from among more than a few options.” *Id.*, 158 F.3d at 622. However, “selection from two or three options, or of options that have been selected countless times before and have

become typical, is insufficient." *Id.* According to the court, this is because "[p]rotection of such choices would enable a copyright holder to monopolize widely-used expression and upset the balance of copyright law." *Id.* The court suggested that in cases where originality had been found in *selection*, the facts showed that "the compiler selected from among numerous choices, exercising subjective judgments relating to taste and value that were not obvious and were not dictated by industry convention." *Id.* at 689.

Previously, West had enjoyed better luck on its home turf of Minnesota and the Eighth Circuit:

West Publishing Co. v. Mead Data Central, Inc., 799 F.2d 1219 (8th Cir.1986): The Eighth Circuit affirmed a preliminary injunction prohibiting Mead from using West's internal "pinpoint cites" or "star pagination" citations in Mead's proposed LEXIS star pagination computer research product.

Oasis Publishing Co. v. West Publishing Co., 924 F. Supp. 918, 920-21, 925 (D. Minn. 1996): Oasis sued for a declaratory judgment that West's compilation copyright did not extend to the "star pagination" of West's published opinions, but only to the physical compilation itself. The court granted West's motion for summary judgment.

[2] Copyright Protection of Compilations of Codes, etc., in Computer-Based Systems

Other courts have had to address claims of copyright protection in data stored on, or used in, computer-based systems. For example:

Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1373-74 (10th Cir. 1997): The Tenth Circuit affirmed a denial of a preliminary injunction against the defendant's use of the plaintiff's telephone call controller commands in competing telephone equipment. The court held that the plaintiff had used such minimal effort and judgment in selecting its command codes that the codes were unoriginal and thus unprotectable.

Compaq Computer Corp. v. Procom Technology, Inc., 908 F. Supp. 1409, 1415-16, 1418 (S.D. Tex. 1995): The district court held that Compaq's selection of a specific set of hard-disk operational parameter values, used to trigger display of on-screen message suggesting replacement of the disk, was sufficiently original to be protectable. The court also held, however, that the order in which

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the values were stored on the disk was necessary to the proper functioning of the display program and therefore was not protectable.

Atari Games Corp. v. Nintendo of America Inc., 30 USPQ2d 1401, 1404-05 (N.D. Cal. 1993), *prior proceedings*, 18 USPQ2d (BNA) 1935 (N.D. Cal. 1991) (granting preliminary injunction; *see* § 2.7[e]), *affirmed*, 975 F.2d 832 (Fed. Cir. 1992): The court held that a signal stream transmitted between a game cartridge and a game machine was not the result of specific “choices as to selection and arrangement” of data and therefore did not meet *Feist*’s originality requirement for protection.

[3] Selected Other Data-Compilation Cases

County of Suffolk, New York v. First American Real Estate Solutions, 261 F.3d 179 (2nd Cir. 2001): The Second Circuit held that a series of original “tax maps” created by Suffolk County, New York was copyrightable, and therefore reversed dismissal of a copyright-infringement complaint. (Note the difference with the statutory provision that works created by the U.S. Government are not copyrightable, as discussed in § 2.3[c].)

Veeck v. Southern Building Code Congress Int’l, Inc., 241 F.3d 398 (5th Cir. 2001), *overruled*, _ F.3d _, 2002 WL 1270117 (5th Cir. June 7, 2002) (*en banc*): A non-profit organization developed a series of model building codes, some of which were enacted into law by municipalities. A Web site operator purchased a disk copy of the model building codes from the non-profit organization. The license agreement accompanying the disk copy stated that the codes could not be copied and distributed. The Web site operator, however, copied and pasted the text of the building codes into his Web site, and accurately identified them as the building codes of two small towns in Texas.

The Web site operator sought a declaratory judgment that he had not infringed the copyright in the building codes. The non-profit organization counterclaimed for copyright and breach of contract. The district court granted summary judgment for the organization, including a permanent injunction and an award of damages against the Web site operator.

In *Veeck*, the judgment against the Web site operator was affirmed by the Fifth Circuit panel, but the *en banc* court reversed. The *en banc* court held that, when the building codes were enacted into law, the *law* passed into the public domain, but that as model

codes, the organization's works retained their protected status. The court distinguished the situation in which the law referred to, but did not incorporate, external standards such as the American Medical Association's CPT coding system (citing among other cases the Ninth Circuit's *Practice Management* opinion and the Second Circuit's *CCC Information Services* holding, both discussed below).

(The non-profit organization's claim against the Web site operator for breach of the license agreement was not before the *Veeck* court. Under the Seventh Circuit's *ProCD* holding, discussed in detail in Chapter 13, the contract claim would seem to remain viable even for uncopyrighted material. *See ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 39 USPQ2d (BNA) 1161 (7th Cir. 1996) (reversing summary judgment in favor of copyright infringement defendants; shrinkwrap license agreement was effective to preclude copying of collection of telephone listings).

Practice Mgt. Info. Corp. v. American Med. Ass'n ("*Practice Management*"), 121 F.3d 516 (9th Cir.), cert. denied, 522 U.S. 933 (1997), *opinion amended by* 133 F.3d 1140 (9th Cir. 1998): The Ninth Circuit held that the American Medical Association did not lose the right to enforce its copyright when the use of its promulgated CPT coding system was required by government regulations.

CCC Information Services, Inc. v. MacLean Hunter Market Reports, Inc., 44 F.3d 61 (2d Cir. 1994): The Second Circuit reversed a summary judgment that a computerized database of used-car values was uncopyrightable. The court also held that the database did not lose its copyright protection by virtue of the fact that various states had mandated its use by insurance companies.

Bellsouth Advertising & Publishing Corp. v. Donnelley Info. Publishing, Inc., 999 F.2d 1436, 1442-46 (11th Cir. 1993): The en banc Eleventh Circuit held that the classification categories of a business yellow-pages telephone directory were one of limited number of ways of classifying businesses and thus were insufficiently original to warrant protection.

Victor Lalli Enterprises, Inc., v. Big Red Apple, Inc., 936 F.2d 671 (2d Cir. 1991): The Second Circuit held that a compilation of information gleaned from horse racing statistics was not entitled to copyright protection. According to the court, the copyright claimant had arranged factual data in conventional format according to "purely functional grids that offer no opportunity for variation," exercising neither selectivity in what was reported nor creativity in how it was reported.

Kregos v. Associated Press, 937 F.2d 700 (2d Cir. 1991), *after remand*, 3 F.3d 656, 663-64 (2d Cir. 1993): The Second Circuit vacated a summary judgment that a baseball pitching form was uncopyrightable. After remand, the court affirmed the lower-court judgment that the defendant's pitching form was not substantially similar to the plaintiff's form, especially in view of the limited number of ways of expressing the idea.

§ 2.3 Copyright Notices: Not Strictly Required, But Still a Very Good Idea

Contrary to a widely held misconception, a copyright notice is not required to *establish* the copyright in a computer program. By law, the copyright subsists from the time the program is fixed in a tangible medium of expression. *See* 17 U.S.C. § 102(a).

For "pre-Berne" works, however, display of a copyright notice can be vital insurance against inadvertent forfeiture of a copyright. The term "pre-Berne" work is used here to refer to published works, copies of which were distributed to the public before March 1, 1989. That date marked the U.S.'s formal implementation of the Berne Convention. *See* Berne Convention Implementation Act of 1988, Pub. L. No. 100-568 (1988). If a pre-Berne work becomes "published," for example, a copyright notice must be displayed on all "publicly distributed" copies to prevent the copyright from being invalidated. *See* 17 U.S.C. §§ 401, 405.

Even for post-Berne works, display of a notice gives the copyright owner some procedural and psychological advantages in litigation, namely that an infringer who had access to a copy bearing the notice cannot claim innocence as a defense. *See* 17 U.S.C. § 401(d).

Display of a copyright notice, in and of itself, should not preclude assertion of other proprietary rights such as trade secret rights. This is of course true under the 1976 Copyright Act, which granted federal copyright protection to unpublished works. *See* § 2.1[a]. In addition, under the old 1909 Act, one case expressly so held. *Technicon Medical Information Systems Corp. v. Green Bay Packaging Inc.*, 687 F.2d 1032, 1035, 1037 (7th Cir. 1982) (ruling that plaintiff was not estopped from denying that a general publication had taken place, which

at that time, under section 10 of the 1909 Act, was a prerequisite to copyright protection).

[a] When is a Copyright Notice Required?**[1] No Notice Required on Post-Berne Works**

Under U.S. copyright law, a copyright notice is no longer required on copies distributed to the public after March 1, 1989. *See* 17 U.S.C. § 401(a). Certain exceptions exist, however, relating to cure of previous no-notice distributions, as discussed in § 2.3[f]. In addition, a notice may be required to preserve copyright in some non-U.S. countries.

To preserve a claim to copyright in a “published” pre-Berne program or other copyrightable work, the Copyright Act requires that a legend giving reasonable notice of the claim be placed on all copies of the program that were publicly distributed before March 1, 1989. *See* 17 U.S.C. § 401(a); *see also* § 2.3[f] (rescuing a copyright after no-legend publication). “Publication” is defined in the Act as “the distribution of copies . . . of a work to the public by sale or other transfer of ownership, or by rental, lease, or lending.” 17 U.S.C. § 101. The Act also provides that “[t]he offering to distribute copies . . . to a group of persons for purposes of further distribution . . . constitutes publication.” *Id.*

The term “copies” includes floppy disks, hard-copy printouts, and other “tangible medi[a] of expression from which the work can be perceived, either directly or with the aid of a machine or device.” *Id.* (definition of “copies”).

The term “copies,” for purposes of the copyright-notice requirements, arguably may also include copies in RAM, at least under the rationale of the cases discussed in § 2.7[c], holding that making copies of a computer program in RAM (e.g., for purposes of running the program) constitutes infringement.

[2] What Constitutes “Publication,” Triggering the Copyright Notice Requirements for Pre-Berne Works?

The legislative history of the Copyright Act seemingly indicates that “publication” – which triggered the copyright-notice requirements for pre-Berne works – does not include distribution of copies under an obligation of confidence. *See* H.R. REP. NO. 94-1476,

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94th Cong., 2d Sess. 138 (1976), *reprinted in* 4 NIMMER ON COPYRIGHTS App. 4-108 (1989). That arguably implies that such copies need not bear a copyright notice.

The cases are mixed on that point, however. Some federal district courts have ruled that software whose pre-Berne distribution was restricted in this manner was not subject to the copyright notice requirement. In each case, however, the courts emphasized the limited nature of the no-notice distribution that had occurred. For example:

Gates Rubber Co. v. Bando American, Inc., 798 F. Supp. 1499 (D. Colo. 1992), *reversed on other grounds*, 9 F.3d 823 (10th Cir. 1993): The court held that the copyright in the plaintiff's computer program had not been forfeited through no-notice use of the program by the owner's sales force to help customers determine which specific products to order. The court said that "if any publication occurred, it was a limited publication, which communicated the content of the program to a definitely selected group for a limited purpose, without the right of diffusion, reproduction, distribution, or sale." *Id.* at 1506.

Williams v. Arndt, 626 F. Supp. 571 (D. Mass 1985): The court held that the copyright in a manual was not forfeited by no-notice distribution of eleven copies, where the distribution had been "limited to a definite, very selective group for a limited purpose on the condition that the contents not be disclosed or further disseminated" *Id.* at 578.

In other cases, courts held that the no-notice distributions in question were not "limited," and that failure to utilize the Copyright Act's cure provisions resulted in forfeiture of the copyrights:

D.C.I. Computer Systems, Inc. v. Pardini, 978 F.2d 1265 (table; unpublished), 1992 *Copr. L. Dec.* ¶ 27,005 (9th Cir. 1992): The Ninth Circuit affirmed a trial-court holding of copyright forfeiture. It held that widespread, pre-Berne, no-notice distribution of copies of a computer program under a trade-secret licensing program, for pecuniary gain, to any automobile or recreational vehicle dealership in the country that would agree to enter into the license agreement, constituted "general publication," triggering the notice requirements.

Unix System Laboratories, Inc., v. Berkeley Software Design, Inc., slip op. at 32-34, Civ. No. 92-1667 (D.N.J. March 3, 1993),

reprinted in COMP. INDUSTRY LIT. RPTR. (Andrews) 16704 (Apr. 15, 1993) (designated “not for publication”): The court denied a motion for preliminary injunction, holding that the plaintiff was unlikely to succeed on the merits of its copyright-infringement claim. The court held that AT&T’s no-notice distribution of the source code of UNIX, under license, to virtually any qualified licensee, was not made a “limited publication” by AT&T’s screening of potential licensees; such screening was merely to confirm that licensees would pay the required license fees and protect AT&T’s intellectual property.

**[b] Elements of a Proper Copyright Notice
for “Published” Programs**

Sections 401 and 403 of the U.S. copyright statute state that, if a copyright notice is required for a “published” pre-Berne computer program, the following elements must be included in the copyright notice:

- The word “Copyright,” the abbreviation “Copr.,” or the c-in-a-circle symbol ©. The c-and-parentheses symbol can be used *in addition* to either of the first two, but to be safe, *only* the c-in-a-circle © should be used *in place* of them. *See* § 2.3[b][1] immediately below;
- The year the work was first “published”;
- The name of the owner or owners of the copyright—this will be affected by whether the software was a “work made for hire” and whether it was a joint work. *See* § 2.6 et seq.;
- If the work consists preponderantly of one or more “works of the U.S. Government” – which are uncopyrightable under 17 U.S.C. § 105—a statement identifying, either affirmatively or negatively, those portions embodying any work or works that *are* protected by copyright. (See also the discussions in § 2.2[c][3] concerning copyright in privately-developed materials incorporated into statutes and regulations, and in § 2.8[g] concerning additional legends to be used in distributing software to the U.S. Government, and in.)

EXAMPLE: “Copyright © 1595 William Shakespeare.”

EXAMPLE: A privately-edited collection of government reports might be eligible for copyright protection as a compilation. An appropriate notice

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might read “Copyright © 20XX John Doe; no copyright claimed in works of the U.S. Government.”

Failure to include any of these elements, or including the wrong information as to date and ownership, can be the same as omitting the notice entirely. For pre-Berne works, this can invalidate the copyright or at least make it difficult to take any kind of effective legal action against unauthorized copiers. *See* 17 U.S.C. § 405.

The phrase “All Rights Reserved” should also appear to maximize protection in certain South American countries that are members of the Buenos Aires Convention, but not of the Universal Copyright Convention or the Berne Convention.

To help preserve trade secret rights, a slightly different notice, discussed below, can be used for an “unpublished” program, e.g., secret source code.

[1] Use of the © Symbol

For on-screen displays, the c-and-parentheses or “(c)” symbol should be used in addition to, and not in place of, the word “Copyright.” By statute, the c-in-a-circle symbol may be used in place of the word “Copyright.”

Because there is no ASCII symbol for the c-in-a-circle symbol ©, the character sequence “(c)” is often used on terminal-screen displays. The U.S. Copyright Office will accept registration applications in which the accompanying deposit contains the c-in-parentheses notice. U.S. COPYRIGHT OFFICE, COMPENDIUM OF COPYRIGHT OFFICE PRACTICES [“COMPENDIUM II”] § 1005.01(c) (1984). There is a possibility, however, that in U.S. infringement litigation a court might rule that “(c),” by itself, is not a proper substitute for the word “Copyright.”

Selected cases:

Videotronics, Inc., v. Bend Electronics [Corp.], 586 F. Supp. 478, 481 (D. Nev. 1984): The Nevada district court ruled that the on-screen letter “c” within a hexagonal figure was an acceptable substitute for © because letter “c” was completely surrounded by a hexagon.

Forry, Inc., v. Neundorfer, Inc., 837 F.2d 259 (6th Cir. 1988): The Sixth Circuit acknowledged, but did not finally answer, the

question whether a (C) notice is a proper substitute for the c-in-a-circle symbol ©. The case was an appeal from the grant of a preliminary injunction, in which the trial court had ruled that a "(C)" notice on a microprocessor chip "substantially complied with the statute and ... was adequate to give notice that the Plaintiff owned a copyright on the program in the chip." *Id.* at 266. The *Forry* court noted the similar result in *Videotronics*; it observed that "[t]he trial of this action may provide a better record" on which to finally decide whether a "(C)" would suffice. 837 F.2d at 266.

It thus is unclear whether anything less than substantial compliance with the c-in-a-circle requirement will preserve the U.S. copyright, if a notice is needed at all. To be safe, therefore, the word "Copyright" or "Copr." should appear on all on-screen copyright notices.

Furthermore, the Universal Copyright Convention might not give a safe harbor in its member states to anything other than a c-in-a-circle symbol ©. Part of that convention is directed to member states that require copyright notices. The convention requires such states to give full faith and credit, so to speak, to notices on works published by nationals of other countries if those notices include the c-in-a-circle symbol © (plus the year of first publication and the name of the copyright owner). It is not clear whether anything less will suffice in countries that are not members of the Berne Convention but are members of the UCC (as was the U.S. until March, 1989).

On printed matter, the c-in-a-circle symbol ©, as opposed to "(c)", should definitely appear in addition to the word "Copyright" on matter, e.g., program listings, diskette labels, and documentation.

[2] Citing the Proper Owner in the Copyright Notice

The copyright notice should bear the name of the owner of the copyright, *see* § 2.6, although an error in the name does not affect the validity or enforceability of the copyright. *See* 17 U.S.C. § 406(a). If the name is erroneous, an infringement defendant who proves good-faith reliance on the erroneous name (e.g., by taking a license from the named owner) has a complete defense to the infringement action unless the name of the true owner is of record in the Copyright Office. *See id.*

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The copyright in any original work can be assigned by a written instrument. *See generally* 17 U.S.C. §§ 204-205; *see also* 0 (sample copyright-assignment form). The copyright notice for a software package written by an outside contractor but assigned over to the hiring party will thus normally bear the hiring party's name as owner.

[3] Proper Use of Copyright-Notice Dates

The "year of first publication" is the year the work was first "published" and not the year it was created or completed. If an updated version of a software package is published, it is desirable to include the year of first publication for the original as well as the updated version. This may not be essential, because by statute "in the case of compilations or derivative works incorporating previously published material, the year date of first publication of the compilation is sufficient." 17 U.S.C. § 401(b)(2). On the other hand, an updated version might not contain *enough* change to qualify it as a distinct work of authorship and thus as a derivative work. *See* § 2.1[b]. If this were found to be the case, including only the update year might be insufficient.

A prudent compromise might be to include all years of first publication. An example of a legend for updated works might be: "Copyright © 1982, 1983 XYZ, Inc." If the package has been updated many times, an alternative might be: "Copyrights © 1980-1986 ABC, Inc." (note the plural).

Use of the correct publication year is important. The Copyright Act provides that the lifetime of the copyright in "works for hire," among others, runs from the year of first publication; the work passes into the public domain after the end of the copyright term. *See* 17 U.S.C. § 302.

Use of a year more than one year after the actual first publication year is the same as omitting the year entirely. This in turn is the same as omitting the notice itself, *see* 17 U.S.C. § 406, which has the consequences discussed above.

[c] Disclaiming Copyright in Government Works

Some copyrighted works consist in large part of one or more works of the U.S. Government, for which copyright is not available by statute. *See* 17 U.S.C. § 105. Copyright notices for works that consist

“predominantly” of U.S. Government works must identify, either affirmatively or negatively, the copyrightable portions. *See id.* § 403.

EXAMPLE: Copyright 20xx XYZ Inc. No copyright claimed in works of the U.S. Government.

[d] Copyright Notices for Unpublished Trade-Secret Programs

As discussed above in § 2.3[a], strictly speaking a copyright notice *may* not be needed to preserve the copyright in licensed, trade-secret software (under circumstances amounting to “limited” publication), even if the software is a pre-Berne work. However, as the cases discussed above make clear, a licensor that distributed such software without a copyright notice may well have put its copyright at risk. A software proprietor mindful of that risk might hedge its bets by displaying a modified notice reading something like the following:

Copyright © XYZ, Inc., as an unpublished work first licensed in 1986. This program is a confidential, unpublished work of authorship created in 1985. It is a trade secret which is the property of XYZ, Inc. All use, disclosure, and/or reproduction not specifically authorized by XYZ, Inc., is prohibited. This program may also be protected under the copyright and/or trade secret laws of non-U.S. countries. All rights reserved.

[e] Placement of the Copyright Notice

The Copyright Act requires that the copyright notice, if required, be placed where it will give reasonable notice that the program is copyrighted. *See* 17 U.S.C. § 401(c); Methods of Affixation and Positions of Copyright Notice on Various Types of Works, 37 C.F.R. § 201.20.

It never hurts to put the notice in several locations, as long as they all contain the same, correct information. Common locations include:

- on the floppy-disk label, if the program is mass-marketed;
- on the user’s terminal screen upon start-up of the program;

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- if practical, continuously on the screen (e.g., in a status line);
- if source code is publicly distributed, in comment fields at the beginning of each separate copyrighted module;
- at the beginning of any publicly distributed hard-copy listings.

[f] Rescuing the Copyright After No-Notice Publication

In some circumstances the Copyright Act permits a copyright to be “rescued” even if the required copyright notice is totally absent from publicly distributed copies. Perhaps the safest way to preserve the copyright is the following two-step procedure:

- 1) register the work no later than five years after the no-notice publication, *and*
- 2) make “a reasonable effort” to add the notice “to all copies . . . that are distributed to the public in the United States after the omission has been discovered.” 17 U.S.C. § 405(a)(2). This has been held to require a notice even on copies distributed after March 1, 1989 if a *pre*-Berne omission occurs, even if the omission is discovered after that date. *See Charles Garnier, Paris v. Andin Int'l, Inc.*, 844 F. Supp. 89, 94 (D.R.I. 1994) (denying motion for preliminary injunction on grounds that plaintiff had forfeited copyright), *citing Encore Shoe Corp. v. Bennett Indus., Inc.*, 18 USPQ2d (BNA) 1874 (D. Mass. 1991) .

[1] What Constitutes a “Reasonable” Curative Effort

Under section 405(a)(2) of the Copyright Act, an effort to cure an omission of the copyright notice from pre-Berne copies need not be exhaustive, only “reasonable.” *See Shapiro & Son Bedspread Corp. v. Royal Mills Associates*, 764 F.2d 69, 73-74 (2d Cir. 1985). However, a certain display of contrition and penance may be required to make an effort appear reasonable in the eyes of a court. In *Videotronics, supra*, the court ruled that “[i]mplicit in the concept of a ‘reasonable effort’ under § 405(a) is the expectation that an expenditure of time and money over and above that required in the normal course of business.” 586 F. Supp. at 483 (D. Nev. 1984).

Courts may look for *prompt* action by a copyright proprietor to cure an omission of a notice from pre-Berne copies. In *NEC Corp. v.*

Intel Corp., the court enumerated four factors to be examined in determining the reasonableness of a curative effort:

1. When discovery of the failure to add the notice occurred;
2. The time that elapsed between such discovery and the commencement of corrective action;
3. The reasonable sufficiency of the corrective action;
4. The extent of any follow-up to determine implementation by licensees; and
5. The quantity of copies distributed to the public between discovery and corrective action.

NEC Corp. v. Intel Corp., 10 USPQ2d (BNA) 1177, 1180 (N.D. Cal. 1989).

The *NEC* court held, in effect, that Intel's efforts were too little too late. For example, Intel was found to have allowed a licensee to ship some 240,000 no-notice copies in the seven months between the date on which Intel claimed to have discovered the omission (and the court gave Intel the benefit of the doubt in this regard) and the date on which the first copies *with* a notice were shipped by the licensee. Intel also failed to offer to defray the cost of adding the notice. The court summarized Intel's efforts as to that licensee:

Intel's efforts with respect to Fujitsu were substantially less than reasonably could have been expected. . . . This situation required of Intel a frank acknowledgement to Fujitsu as to the nature of the problem, a request for full assistance in causing the copyright notice to be affixed on all products before final sale to the consumer, and an offer to help defray the cost of marking.

Instead, Intel did substantially nothing for two months and then waited an additional three months for an equivocal reply from Fujitsu. Its only other action was to send stickers without a reasonable expectation that they would be affixed, and it never did make inquiry to ascertain whether or not the stickers had been used. In the meantime, several hundred thousand unmarked copies of Intel's micro-code had been scattered among the public.

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Id. at 1182 (paragraphing supplied). On the basis of this and similar circumstances, the court ruled that Intel had forfeited its copyrights in the microcode. *Id.* at 1182-83; *see also Valve & Primer Corp. v. Val-Matic Valve & Mfg. Corp.*, 730 F. Supp. 141, 143-44 (N.D. Ill. 1990) (copyrights in customer bulletins forfeited where omission of legend not cured until reprinting of bulletins, months after omission discovered).

The reasonableness of a curative effort may be judged in light of the equities perceived by a court in an infringement lawsuit. In *Manufacturers Technology, Inc., v. CAMS, Inc.*, the copyright plaintiff had left off the notice from a brochure containing reproductions of program screen displays. The defendant asserted that the copyright in those screen displays had been forfeited. The court, reviewing the limited evidence concerning the plaintiff's curative efforts, noted that the defendants "were on notice of plaintiff's proprietary interest in its programs . . ." Based in part on defendants' actual knowledge of the copyright claim, the court found that the plaintiff's curative efforts had been reasonable. *Manufacturers Technology, Inc., v. CAMS, Inc.*, 706 F. Supp. 984, 999-1000 (D. Conn. 1989),

[2] Add the Copyright Notice to Which Copies?

A question may exist whether the copyright notice must be applied to no-notice copies *already* in the hands of the public. The courts seem to be split on this question. *See M. Kramer Mfg. Co. v. Andrews*, 783 F.2d 421, 444-45 (4th Cir. 1986); *Donald Frederick Evans & Associates, Inc. v. Continental Homes, Inc.*, 785 F.2d 897, 910-12, 911 & n.22 (11th Cir. 1986).

As the Eleventh Circuit noted, "[t]he statutory language is ambiguous and could support either interpretation," but "[t]he legislative history lends support to the latter [no such requirement] interpretation." *Id.* On the other hand, the Second Circuit has ruled that no-notice copies in the hands of *distributors* have not yet been "distributed to the public," and so the "reasonable effort" must encompass those copies. *Shapiro*, 764 F.2d at 74; *see also NEC*, 10 USPQ2d at 1180-83.

It may be prudent not to take a chance: many companies go ahead and mail copyright stickers to dealers *and* end-users, together with letters asking that the stickers be affixed to the no-notice copies. *See, e.g., Williams v. Arndt*, 626 F. Supp. at 576 (D. Mass.

1985). The letters often include a premium offer or something else that can be introduced as indirect evidence of the likelihood that the stickers were in fact affixed. The *NEC* case, of course, indicates that even more aggressive measures may be required to ensure that the stickers are applied to copies that remain in the hands of dealers. *See NEC*, 10 USPQ2d at 1180-82.

[3] Can Intentional Omissions Be Cured?

It is not completely clear whether intentional omissions of copyright notices can be cured in the same manner as unintentional omissions.

Selected cases:

Hasbro Bradley, Inc., v. Sparkle Toys, Inc., 780 F.2d 189, (2d Cir. 1985): The Second Circuit held that both intentional and unintentional omissions could be cured. *Id.* at 195-96; *see also Flag Fables, Inc., v. Jean Ann's Country Flags and Crafts, Inc.*, 730 F. Supp. 1165, 1183 (D. Mass. 1989) (citing *Hasbro Bradley* and denying defendant's motion for summary judgment that plaintiff had forfeited copyrights by intentional omission).

Innovative Concepts in Entertainment, Inc., v. Entertainment Enterprises Ltd., 576 F. Supp. 457, 461-62 (E.D.N.Y. 1983): The district court held that a manufacturer/distributor of coin-operated miniature hockey games was not barred from curing an omission because he did not know that copyright protection was available..

Beacon Looms, Inc. v. Lichtenberg & Co., 552 F. Supp. 1305, 1310-11 (S.D.N.Y. 1982): The district court ruled that an intentional omission could not be cured, given that the copyright owner in question "copyrighted" some of his designs but not others, thus presumably knowing about the availability of copyright protection.

Data Cash Systems, Inc., v. JS&A Group, Inc., 628 F.2d 1038, 1043-44 (7th Cir. 1980): In a ROM-chip case arising under the 1909 Copyright Act, the Seventh Circuit ruled against a copyright owner who omitted a notice in the mistaken belief that the ROM chips physically could not be copied.

The potential penalty for wrong guessing is severe — forfeiture of the copyright. The prudent rule would thus seem to be: when in doubt about pre-Berne copies, assume that a copyright notice was required.

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[4] Even if an Earlier Version's Copyright is Forfeited, Later Versions Can Still Be Protectable

Forfeiture of the copyright in an earlier version of a computer program does not mean that later versions will be unprotected. So said the Eleventh Circuit in its 1999 *Montgomery* opinion, discussed in § 2.1[b].

[g] Special Notices Appropriate for Licensing of "Noncommercial" Software to the U.S. Government

Vendors of "noncommercial" computer software should be aware of special notice requirements when dealing with the U.S. Government. The applicable regulations are the Federal Acquisition Regulations (FARs), 48 C.F.R. §§ 27.401 *et seq.*, which include detailed provisions specific to the Department of Defense, commonly referred to as the DFARs. *See* 48 C.F.R. §§ 227.401 *et seq.*

(The FARs and DFARs are available on the World Wide Web at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html>. At this writing, some sections of the latest version of the CFR do not seem to be available at this site, e.g., 48 C.F.R. §§ 27.401; if that happens, try searching the previous year's CFR.)

Companies that provide "commercial computer software" and "commercial computer software documentation" to the Government are deemed to grant the Government "only those rights specified in the license contained in any addendum to the contract." Computer software, 48 C.F.R. § 12.212. But vendors of "noncommercial computer software" whose software might be purchased or licensed by Government agencies may inadvertently jeopardize their proprietary rights (at least vis à vis the Government) if they do not comply with the legend requirements of the FARs. (Extracts from the FARs and DFARs are included in Appendix F.)

The term "commercial computer software" is defined relatively liberally in the FARs as "(a)...(1)...software developed or regularly used for nongovernmental purposes which-- (i) [h]as been sold, leased, or licensed to the public; (ii) [h]as been offered for sale, lease, or license to the public; (iii) [h]as not been offered, sold, leased, or licensed to the public but will be available for commercial sale, lease, or license in time to satisfy the delivery requirements of this contract; or (iv) [s]atisfies a criterion expressed in paragraph (a)(1)

(i), (ii), or (iii) of this clause and would require only minor modification to meet the requirements of this contract.” Rights in noncommercial computer software and noncommercial computer software documentation, 48 C.F.R. § 252.227-7014.

A detailed discussion of how to license software to the Government is beyond the scope of this paper. As a general proposition, however, any vendor of “noncommercial computer software” that is developed “at private expense” and that is not in the public domain should probably mark its software and documentation with a legend meeting the standards prescribed by the FARs and/or the DFARs, as applicable.

§ 2.4 Copyright Registration

The other formality associated with copyrights in the United States is registration in the U.S. Copyright Office, which serves as constructive notice of the owner’s copyright claim. *See* 17 U.S.C. § 205(c).

Registration of a claim to copyright in a program is cheap and easy. One caveat: a would-be registrant should take care about exposing trade secrets embodied in the software, e.g., by complying with the Copyright Office’s deposit regulations (see § 2.4[b]). Otherwise, however, registration entails filling out a form and paying a modest filing fee. Some details are discussed below; see also the Copyright Office’s Circular 61, available on-line at the Copyright Office Web site at <http://www.loc.gov/copyright/circs/circ61.pdf>.

[a] Why Register Copyrights Early?

[1] Statutory Prerequisite to Suit

Early registration of a software copyright is ordinarily desirable and carries distinct benefits. As the most obvious example, at this writing registration is a prerequisite to the filing of a copyright infringement suit by U.S. residents and by nationals of non-Berne Convention states. *See* 17 U.S.C. § 411. When clients discover that infringement is taking place, they usually want a lawsuit filed yesterday and will not be pleased at having to take the time to generate “identifying portions” of the software, *see* § 2.4[b][3], and then to wait for a belated registration application to be processed by the Copyright Office.

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[2] Preserving Rights to Statutory Damages and Attorneys' Fees

A copyright owner who fails timely to register its copyright may forfeit two important rights, namely statutory damages and prevailing-party attorneys' fees in the discretion of the court. Under the Copyright Act, a copyright owner may elect, at any time before final judgment, to receive an award of statutory damages in lieu of having to "prove up" its actual damages or the infringer's profits arising from the infringement. Statutory damages is a monetary award made by the court; the award can be in an amount up to \$100,000 in cases where the infringement is found to be willful. *See* 17 U.S.C. § 504(c).

To be eligible for either of these remedies, the copyright owner must timely register the copyright in the work. Timely registration means either (i) before a particular infringer begins his illegal activities or (ii) for published works only, within three months of publication of the work. *See* 17 U.S.C. § 412. A copyright owner's failure to register timely carries a two-pronged disadvantage: *it* is ineligible for a fee award even if it is the prevailing party, *see id.*, but the accused infringer *could* recover fees if *it* is the prevailing party.

Selected cases:

Aerospace Services Int'l v. LPA Group Inc., 57 F.3d 1002 (11th Cir. 1995): The court affirmed a denial of statutory damages and attorneys' fees. The court held that a limited distribution of airport security system performance specification was not "publication" under § 412; thus, the copyright owner did not qualify for the statutory three-month grace period in which to register copyright. Since the registration had not been obtained before the infringement began, the copyright owner therefore was not eligible for an award of attorneys' fees.

Getaped.com, Inc. v. Cangemi, 188 F. Supp. 2d 398 (S.D.N.Y. 2002) (awarding statutory damages and attorneys' fees to copyright owner): The court held that a copyright owner's posting of a Web page to its Web site constituted "publication" of the page and therefore made the copyright owner eligible for the three-month, post-publication grace period in which to register the copyright. The plaintiff had created a Web site to sell Go-Ped ® brand motorized scooters. The defendants copied the Web site source code for their own site – *after* the plaintiff registered its copyright, but before three

months after the plaintiff's Web site first went "live." The magistrate judge held that the Web site had been displayed, not published, and therefore was not eligible for the three-month grace period. The district judge overruled the magistrate judge on this point, noting that the source code of the Web site could be readily viewed and saved to a permanent file by Web surfers.

[Compare *Getaped with Kelly v. Arriba Soft Corp.*, 280 F.3d 934 (9th Cir. 2002) (reversing, in pertinent part, summary judgment of fair use). In *Kelly*, the defendant's search engine linked and "framed" the plaintiff's copyrighted photographs, that is, the search engine caused the photographs to be imported directly to the end-user's browser from the plaintiff's Web site. The Ninth Circuit held that this did *not* constitute copyright infringement based on the reproduction of copyrighted works, but that it did infringe the plaintiff's exclusive right of public display of the works.]

Data General Corp. v. Grumman Systems Support Corp., 795 F. Supp. 501 (D. Mass. 1992), *subsequent proceeding*, 825 F. Supp. 340 (D. Mass. 1993) (upholding jury verdict of \$27.4 million), *affirmed in pertinent part, remanded on other grounds*, 36 F.3d 1147 (1st Cir. 1994): Data General had obtained registrations for later versions of its software before the infringement of the later versions began. It had failed, however, to register earlier versions before infringement of *those* versions began. The court granted partial summary judgment that Data General would not be entitled to statutory damages in respect of infringement of later versions of software. *See* 795 F. Supp. at 503-04. The court held that Data General *would* be entitled to attorneys' fees in respect of infringement of the later versions of software.

[3] Registration as Part of Rescuing a No-Notice Copyright

Registration is all but required if a program or other work of authorship was published without a proper copyright notice before the U.S. implementation of Berne: one of the best methods of "rescuing" the copyright in such a work entails obtaining a registration no later than five years after the no-notice publication (in addition to making a reasonable effort to add the notice to all copies that are distributed to the public in the United States after the omission has been discovered). *See* § 2.3[f].

[b] Trade Secrets and Registration Deposits

Registering a software copyright means making at least a partial copy of the software, in source-or object code, available for public inspection. The registrant therefore should take precautions to avoid disclosing any trade secrets that may be embodied in the software.

[1] Only Limited Public Access to Registration Deposits

Disclosure of trade secrets can happen because when any copyright is registered, copies of the “original work of authorship” in question (i.e., the program), or copies of “identifying portions” of the work in some circumstances, must be deposited with the Copyright Office when the registration application is filed. That allows Copyright Office personnel to verify that the material appears to be a work of authorship and is entitled to registration. *See generally* U.S. COPYRIGHT OFFICE, COMPENDIUM OF COPYRIGHT OFFICE PRACTICES [“COMPENDIUM II”], §§ 108.01, 324.04 (1984).

The public has access to deposited materials, thus creating the danger to trade-secret information. *See* Information Given by the Copyright Office, 37 C.F.R. § 201.2. If source code is deposited, anyone who can understand the language in which the software is written could theoretically analyze the program’s structure and logic while studying the code in the Copyright Office. (“Object code,” i.e., machine-readable executable code, presumably would be more difficult to analyze in this way; *see* § 2.7[e] concerning reverse engineering.)

Copyright Office regulations, however, prohibit deposited materials from being copied except with the permission of the copyright owner, unless the copy is made for use in litigation or pursuant to a court order. *See* Information Given by the Copyright Office, 37 C.F.R. § 201.2(d)(4).

Falsely representing to the Copyright Office that litigation is pending, in order to obtain a copy of a registration deposit, can lead to trouble. In *Atari Games Corp. v. Nintendo of America Inc.*, 18 USPQ2d (BNA) 1935 (N.D. Cal. 1991), *affirmed*, 975 F.2d 832 (Fed. Cir. 1992), Atari, as part of its reverse-engineering of the software embedded in Nintendo’s Game Boy system, obtained a copy of Nintendo’s object-code deposit from the Copyright Office. The court found that Atari had lied to the Copyright Office in stating that it needed to obtain the copy for use in defending against a pending infringement suit, when in fact no such suit had been brought at

that point. The court granted a preliminary injunction against Atari.

[2] Does Registration Automatically
Destroy Trade Secrecy?

It is unclear whether registration of a copyright automatically destroys secrecy in the registered work, and with it any possibility of asserting trade-secret rights.

Selected cases:

Compuware Corp. v. Serena Software Int'l, Inc., 77 F. Supp.2d 816 (E.D. Mich. 1999): The district court denied a motion for summary judgment that the plaintiff's software had lost its trade-secret status. In registering the copyrights for its software, the plaintiff apparently filed the entire source code, largely unredacted, with the Copyright Office (the court's opinion is not entirely clear as to exactly what was filed). The defendant contended that this action had destroyed the secrecy of the software. The court rejected that argument, on grounds that "there is no evidence that the products or their contents were known to persons inside or outside of the industry or among the general public during any of the times at issue. There is no evidence that anyone outside of the Compuware corporate structure, its customers, or the Copyright Office viewed the material prior to the commencement of this litigation." *Id.* at 818.

Tedder Boat Ramp Systems, Inc. v. Hillsborough County, 54 F. Supp.2d 1300 (M.D. Fla. 1999): The plaintiff was in the business of designing boat ramps. It registered a copyright in one such design; it also submitted the design to a county agency for consideration for possible use in two public-park boat ramps. The court granted judgment on the pleadings that by registering the copyright (and by submitting the plan to the county agency), the plaintiff had negated secrecy: "It is difficult to reconcile the conflict between the Copyright Office making the copyrighted material available to the public, versus the holder's right to keep his works secret. ... [S]ince it is always possible, even if not certain, that copyrighted materials are available to the public, the element of secrecy is not established." *Id.* at 1303.

Warrington Associates, Inc., v. Real-Time Engineering Systems, Inc., 522 F. Supp. 367 (N.D. Ill. 1981): The district court denied the

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accused infringer's motion for summary judgment that the copyright owner had forfeited its trade-secret rights through registration. The court observed that "the fact that [the copyright owner] registered its User's Manual for a copyright [sic] might well affect the continued secrecy of the ideas in that manual for which Warrington seeks trade secret protection. However, on the basis of the record before the court, no final determination on this issue can be made at this time." *Id.* at 369.

[3] Optional Selective-Deposit Procedures for Secret Source Code

If source code is being deposited, it may be possible to obtain a registration without depositing the entire source code. The Copyright Office has promulgated special procedures for depositing computer software to allow software developers to avoid revealing their trade secrets.

If a software package is distributed only in machine-readable form (e.g., on a floppy disk), the Copyright Office will permit a single hard copy, e.g., a printed listing, of "identifying portions" of the software to be deposited instead of the entire package. *See Deposit of Copies and Phonorecords for Copyright Registration*, 37 C.F.R. § 202.20(c)(2)(vii), reproduced in Appendix A. If a program is very short, however, it may not be possible under these special provisions to deposit anything less than a complete source-code listing.

In the 1997 *Fonar* case, the practice of filing only identifying portions of source code was implicitly approved by the Second Circuit. *Fonar Corp. v. Magnetic Resonance Plus Inc.*, 105 F.3d 99 (2d Cir. 1997), reversing and remanding 920 F. Supp. 508 (S.D.N.Y. 1996). The copyright owner had filed only the first 29 pages and the last 34 pages of the 2,000-page source code of its program, which comprised a large number of code modules. The district court granted summary judgment for the defendants, holding that

plaintiff's mass filing of the source code as a single collection without sufficient identifying materials failed to identify the works that are the subject of the copyright. Because plaintiff's copyright registration fails to identify the material covered by the copyright, sufficient doubt has been cast on the

validity of the copyright registration, and thus “validity will not be assumed.”

920 F. Supp. at 516 (citation omitted). The Second Circuit reversed and remanded for trial, holding that:

Whether Fonar had to submit source code for each of the many subprograms (and possibly sub-subprograms) is a question we are content to leave to the judgment, expertise, and practices of the Copyright Office. ... The alternative—requiring Fonar to submit 50 pages of code (and an additional filing fee) for each of the programs that compose the maintenance software—would impose burdens on Fonar and on the resources of the Copyright Office that the Copyright Office may deem unnecessary or excessive.

Id., 105 F.3d at 105.

A work of authorship must be distributed in machine-readable format only to qualify for such a partial deposit. A printed manual or a program published in a magazine does not qualify; two copies of the entire work must be deposited if the work is to be registered. *See* 37 C.F.R. § 202.20(c)(2)(vii); COMPENDIUM II at § 324 (“NOTE”).

[4] The Doubtful Wisdom of Depositing Object Code Only

If a software package is distributed only in object-code form, it may be desirable — but it may also affect subsequent infringement litigation — to deposit “identifying portions” of the object code instead of source code. The basic advantage of an object-code deposit is the reduced risk of disclosing trade secrets, as discussed in § 2.4[b][1]. The Copyright Office, however, encourages deposits of *source* code. COMPENDIUM II, *supra* note at § 324.03. If object code is deposited, the Copyright Office will usually require that the registration application include a separate letter stating that the program is an original work of authorship. *Id.* at § 324.04. The Office has taken the position that its personnel will not attempt to determine whether object code, which is normally unreadable for all practical purposes, is a protectable work. *See id.* The Office therefore accepts *object* code deposits only under the rule of doubt. *See* 37 C.F.R. § 202.20(c)(2)(vii)(B).

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Selected cases:

Apple Computer, Inc., v. Franklin Computer Corp., 714 F.2d 1240, 1255 & n.9 (3rd Cir. 1983): The Third Circuit refused to decide whether registration under the rule of doubt affects the validity of a copyright.

Compaq Computer Corp. v. Procom Technology, Inc., 908 F.Supp. 1409, 1417-18 (S.D. Tex. 1995): The court held that Compaq's rule-of-doubt registration, of its copyright in a compilation of a specific set of hard-disk operational parameter values, placed the burden of proof of validity on Compaq.

[c] Registering Claims to Software Screen Displays

Claims to copyright in computer screen displays may be a significant competitive tool against look-and-feel "cloners." As a preliminary matter, it should be noted that not all screen displays will be copyrightable or (even if copyrightable) registerable. The Copyright Office has taken the position that "in general, menu screens and similar functional interfaces consisting of words or brief phrases in a particular format are not registerable." Letter from Phill L. Gill, head of Literary Section II, Examining Division, Copyright Office, to Allen H. Harrison, Jr. (Aug. 25, 1989), *quoted in* 38 PAT. TRADEMARK & COPR. J. (BNA) 501-02 (Sept. 14, 1989).

In *Atari Games Corp. v. Oman*, 979 F.2d 242 (1992), however, the D.C. Circuit reversed a summary judgment approving the Copyright Office's refusal to register the well-known video game BREAKOUT and remanded it with instructions to remand to the Register of Copyrights for further proceedings. The appellate court noted that even assuming that the game's basic visual elements of a brick wall and a square ball were uncopyrightable—a matter on which the court displayed some skepticism—the imaginative arrangement of those elements, especially in a sequence of audiovisual images, could easily rise above the low threshold level of creativity required for copyright protection. *Id.*, 979 F.2d at 243, 245-47, *citing Feist Publications, Inc., v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345, 111 S.Ct. 1282, 1287 (1991).

[1] No Separate Screen-Display Registration

Software screen displays ordinarily will not be registered apart from the computer program that generates them. In June, 1988, the

Copyright Office published a policy decision to that effect. *See* Notice of Registration Decision, 53 Fed. Reg. 12817 (Jun. 10, 1988), *reprinted in* 36 PAT, TRADEMARK, & COPR. J. (BNA) 152 (Jun. 9, 1988). “The Office determined that all copyrightable expression *owned by the same claimant* and embodied in a computer program, or first published as a unit with a computer program, including computer screen displays, is considered a single work and should be registered on a single application form.” *See* 54 Fed. Reg. 13173, 13175 (Mar. 22, 1989), *reprinted in* 37 PAT, TRADEMARK, & COPR. J. (BNA) 609, 611 (Apr. 6, 1989) (emphasis supplied).

Interestingly, a district court had previously ruled in the *Softklone* case that a separate registration was necessary to claim the copyright in screen displays, because the same screen display can be created by a variety of different computer programs. *Digital Communications Assoc., Inc., v. Softklone Distributing Corp.*, 659 F. Supp. 449, 455-58 (N.D. Ga. 1987).

In response to the Copyright Office’s decision to issue only one registration notwithstanding *Softklone*, another court chose to treat such a single registration as performing the function of *two* registrations, one for the computer program, one for the screen displays. *Manufacturers Technology, Inc., v. CAMS, Inc.*, 706 F. Supp. 984, 993 (D. Conn. 1989). The latter court stated that “[t]his approach creates the legal fiction of two separate registrations. It recognizes that a computer program and its screen displays are, for copyright purposes, fundamentally different.” *Id.*

Subsequently, in *Lotus v. Borland*, the district court rejected the defendants’ assertion that the plaintiff’s copyright registration for its 1-2-3 program covered only the literal program code and not the screen displays. *See Lotus Development Corp. v. Borland Int’l, Inc.*, 740 F. Supp. at 79-82, *rev’d on other grounds*, 49 F.3d 807, 34 USPQ2d 1014 (1st Cir. 1995), *aff’d without opinion by an equally divided Court*, 516 U.S. 233, 116 S. Ct. 804, 133 L.Ed.2d 610 (1996).

In the *Harbor Software* case, the court held that a copyright registration of the code extends to the screen displays, and that the screen displays in question were sufficiently original to be protectable. *See Harbor Software, Inc. v. Applied Systems, Inc.*, 925 F. Supp. 1042, 1046, *subsequent proceeding*, 936 F. Supp. 167 (S.D.N.Y. 1996) (granting in part and denying in part defendant’s motion for summary judgment).

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If the copyright in a screen display is owned separately from that in a computer program which can generate the display (e.g., if the display was created first by one author and the program was written later by another as a means of implementing the display), then a separate registration should be available. This situation could arise where a sophisticated end-user creates a dummy prototype of a desired program, then hires an outsider to actually write the program.

[2] Why Register Screen Displays?

Registration of copyright claims in screen displays can be useful. In *Digital Communications Associates*, 659 F. Supp. 449 (N.D. Ga. 1987), a federal district court in Atlanta enjoined the sale of a communications program which used similar menu screens and command structure of CROSSTALK, a popular communications package. The court ruled that the selection and arrangement of command terms and status information on a computer screen was a protectable compilation. *Id.* at 457-62.

The *Whelan* court held that similarity in screen displays can constitute evidence supporting a finding of "substantial similarity" between the underlying programs, although the defendant is free to show that the similarity is not probative for some reason). See *Whelan Associates, Inc., v. Jaslow Dental Laboratories*, 797 F.2d 1222, 1243-44 (3d Cir. 1986).

In an interesting screen-display ruling, the Fourth Circuit held that an audiovisual work generated by a computer program can be said to be "fixed" in the program code itself. *M. Kramer Mfg. Co. v. Andrews*, 783 F.2d 421, 441 (4th Cir. 1986). A registered copyright in the audiovisual display might thus "protect the computer program which implements the audiovisuals" because the program is a "copy" of the audiovisual displays. *Id.*

In a later case, another court ruled that the converse is not true. The *Digital Communications Associates* court noted that a given screen display could be generated by a wide variety of computer programs; it held that, consequently, a screen cannot be a "copy" of many different programs, and a computer program's copyright protection thus does not extend to the program's screen displays. *Digital Communications Associates*, 659 F. Supp. at 455-56. This holding should be compared, however, with more recent cases (e.g., *Manufacturers Technology* and *Lotus*, discussed above) in which similarity of screen displays helped copyright plaintiffs prevail.

[3] Deposit Materials for Registration of Screen Displays

If the screen displays of a computer program are being claimed in a copyright registration application for the program, the application form must include a statement to that effect. This statement is usually written in Block 2 of the application form, where the description of the nature of authorship can be along the lines of "Computer program statements and associated screen displays."

In such a case, the deposit materials must include (in addition to the identifying portions required for the hard-copy visual reproductions of the copyrightable expression in the screen displays, in the form of "printouts, photographs, or drawings no smaller than 3x3 inches and no larger than 9x12 inches." *See Deposit of Copies and Phonorecords for Copyright Registration*, 37 C.F.R. § 202.20(c)(2)(vii)(C)(1).

If the authorship in the screen displays is predominantly audiovisual (e.g., a computer game), the deposit material should be "a one-half inch VHS format videotape reproducing the copyrightable expression." However, if the computer screen material "simply consists of a demonstration of the functioning of the computer program," then hard-copy visual reproductions, as discussed above, must be submitted instead. *Id.* § 202.20(c)(2)(vii)(C)(2).

[d] Advantages of Registering Documentation

Software licensors often register the copyright in the software's documentation as well as the copyright in the software itself. A claim of infringement concerning documentation can be of significant value in litigation against copiers if other aspects of the software turn out to be unprotectable. *See, e.g., Engineering Dynamics, Inc., v. Structural Software, Inc.*, 785 F. Supp. 576, 582 (E.D. La. 1991), *vacated and remanded on other grounds*, 26 F.3d 1335 (5th Cir. 1994); *Synercom Technology, Inc., v. University Computing Co.*, 462 F. Supp. 1003, 1014 (N.D. Tex. 1978).

If the documentation to be registered is distributed in hard-copy form, either one or two complete copies of the "best edition" must be deposited with the registration application. *See Deposit of Copies and Phonorecords for Copyright Registration*, 37 C.F.R. § 202.20(c).

If the documentation itself includes trade-secret information, however, it may be possible, by filing a petition for special relief, to deposit less than a complete copy. *See generally id.* § 202.20(d). This may help preserve the confidentiality of the trade-secret portions of the documentation.

[e] Some Noteworthy Registration Details

The Copyright Office's Compendium II gives additional pointers on the mechanics of registering a software copyright:

- “When identifying material is deposited, it should bear a title clearly identifying the work for which registration is sought.” COMPENDIUM II at § 324.01.
- “The identifying material should include the page or equivalent unit containing the copyright notice if copies of the computer program were published with the notice.” *Id.*
- “If the copyright notice is encoded within the object code so that its presence and content are not readily discernible, the notice should be underlined or highlighted and its contents decoded.” *Id.*

[f] Challenges to the Validity of a Copyright Registration

In several reported cases, an infringement defendant has alleged that the plaintiff's failure to advise the Copyright Office about supposedly material facts should make the copyright unenforceable. Most courts, but not all, have given such assertions short shrift, focusing chiefly on the defendant's failure to prove 1) intentional deception on the part of the plaintiff, 2) that the Copyright Office would have rejected the registration application as invalid but for the omission, and/or 3) that the defendant suffered any injury as a result of the alleged misconduct. As one court summarized the law:

While the original registration incorrectly labeled the 1998 Image as a “work made for hire,” such misstatements generally will not affect the validity of a copyright or bar an action for its infringement. Inaccuracies in a certificate are of significance only in situations involving allegations of an intent to defraud or prejudice, which is not the case here.

Otherwise, a certificate of registration will raise the presumption of valid copyright ownership.

Tiffany Design, Inc. v. Reno-Tahoe Specialty, Inc., 55 F. Supp.2d 1113, 1117-18 (D. Nev. 1999) (granting in part copyright owner's motion for partial summary judgment).

Selected cases:

Ashton-Tate Corp. v. Fox Software, Inc., 760 F. Supp. 831 (C.D. Cal. 1990), *rescinded*, 1991 U.S. Dist. LEXIS 6577 (C.D. Cal. 1991): The district court issued a two-page summary judgment order declaring Ashton-Tate's copyrights in its well-known dBase II and III software to be unenforceable for inequitable conduct. The court stated that Ashton-Tate failed to disclose in its copyright registration applications, with intent to deceive, that dBase III was based on dBase II, which in turn was based on JPLDIS, a public domain computer program developed by the Jet Propulsion Laboratory. The Fox decision caused great surprise in the industry and among practitioners because of its unusual and unexplained borrowing of inequitable-conduct concepts from patent law. The case settled in conjunction with the acquisition of Ashton-Tate by Borland International, and so no appellate review of the decision ever occurred.

qad Inc. v. ALN Associates, Inc., 770 F. Supp. 1261 (N.D. Ill. 1991), *affirmed*, 974 F.2d 834 (7th Cir. 1992): The court dissolved a preliminary injunction because the copyright plaintiff had represented to the court that the copyrighted software was wholly original. It had failed, however, to advise the court of the derivative nature of the software, and the similarities between the copyrighted software and the defendant's software could be attributable to common ancestry and not to infringement. The court expressly declined to address whether fraud in the Copyright Office had occurred.

Apple Computer, Inc. v. Microsoft Corp., 759 F. Supp. 1444, 1454-55 (N.D. Cal. 1991) (rejecting allegation of fraud on Copyright Office), *subsequent proceedings*, e.g., 799 F. Supp. 1006 (N.D. Cal. 1992) (granting in part, denying in part motion for summary judgment of noninfringement), *final judgment aff'd*, 35 F.3d 1435 (9th Cir. 1994) (affirming summary judgment of noninfringement): The district court rejected Microsoft's defense that Apple's copyright in its Macintosh operating system software was unenforceable for fraud on the Copyright Office. The court characterized the design influence of prior Xerox software on the Macintosh software as having been a

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“borrowing of ideas,” and described the *Ashton-Tate v. Fox* decision as “unhelpful.”

S.O.S., Inc., v. Payday, Inc., 886 F.2d 1081 (9th Cir. 1989) (affirming summary judgment against accused infringer): The Ninth Circuit rejected as unsupported an accused infringer’s contention that the copyright plaintiff had intentionally omitted its program’s derivative-work nature from its copyright registration application; the court noted as well that the infringer had not claimed any injury resulting from the omission. *See id.* at 1086 & n.5; *see also*, e.g., *Datastorm Technologies, Inc. v. Excalibur Communications, Inc.*, 888 F. Supp. 112 (N.D. Cal. 1995) (denying accused infringer’s motion to dismiss for fraud on the Copyright Office).

Service & Training, Inc., v. Data General Corp., 963 F.2d 680, 688-89 (4th Cir. 1992), *affirming* 737 F. Supp. 334 (D. Md. 1990): The Fourth Circuit rejected still another copyright invalidity challenge of this kind. According to the appellate court, even if the software had been derivative, the defendant did not show that the plaintiff’s failure to advise the Copyright Office of that fact was intentional.

Gates Rubber Co. v. Bando American, Inc., 798 F. Supp. 1499, 1507 (D. Colo. 1992), *reversed on other grounds and remanded*, 9 F.3d 823 (10th Cir. 1993): The district court rejected a fraud on the Copyright Office defense on grounds that any “duty of candor” to the Copyright Office “is far too undeveloped and speculative and would likely not be appropriate in light of the facts of this case.”

Autoskill, Inc., v. National Educational Support Systems, Inc., 793 F. Supp. 1557, 1562-63 (D.N.M. 1992), *aff’d*, 994 F.2d 1476 (10th Cir. 1993): The copyright owner stated in its copyright-registration application that its software was a work made for hire. Under the Supreme Court’s subsequent *CCNV v. Reid* decision, however (see § 2.6[b][1]), the software was not a work made for hire. The district court held that the work-for-hire statement in the registration application would not be used to invalidate the plaintiff’s copyright retroactively in the absence of a showing that the copyright owner had knowingly misled the Copyright Office.

Engineering Dynamics, Inc., v. Structural Software, Inc., 785 F. Supp. 576, 582 (E.D. La. 1991), *vacated and remanded on other grounds*, 26 F.3d 1335 (5th Cir. 1994): The copyright owner had previously been the *defendant* in the factually very similar *Synercom* litigation. *See Synercom Technology, Inc. v. University*

Computing Co., 462 F. Supp. 1003 (N.D. Tex. 1978). In that earlier litigation, the *Engineering Dynamics* copyright owner had argued that data-input formats were uncopyrightable, and had won the case on that ground. But then when it registered its own copyright claims, it failed to disclose its prior position, and the result of the prior litigation, to the Copyright Office. The *Engineering Dynamics* court held that this omission did not amount to deliberate misrepresentations, but instead were innocent misstatements. *See* 785 F. Supp. at 582.

[g] One Registration or Several?

A single registration for an entire large software system may be advantageous. One registration gives the owner the right to sue for infringement of any part of the system.

For example, in the famous *Computer Associates v. Altai* case, the district court held that the copyright registration, for the plaintiff's CA-SCHEDULER systems program, covered the copyright in the ADAPTOR program as component part of CA-SCHEDULER. *See Computer Associates International, Inc. v. Altai, Inc.*, No. CV-89-0811, slip op., reprinted in COMP. INDUSTRY LIT. RPTR. 10360 (E.D.N.Y. 1989) (denying defendant's motion to dismiss); *subsequent proceedings*, 775 F. Supp. 544 (E.D.N.Y. 1991) (holding that *protectable* elements of plaintiff's program were not copied in rewritten version of defendant's software), *affirmed*, 982 F.2d 693 (2d Cir. 1992).

A single registration may be *disadvantageous* if the system was created as a group of identifiable subsystems (which is very often the case). *Cf.* Registration of copyright, 37 C.F.R. § 202.3 (defining eligibility for registration as a "single work" with a single application and payment of a single fee).

On the other hand, multiple registrations can make it easier to protect independently-valuable portions of a complex software package. The copyright owner might market various subsystems or modules independently as well as the entire system as a whole — or the subsystems or modules might be independently worth "stealing." A single registration would require the copyright owner to drag the entire software system into an infringement suit, when the infringement might be only of a particular subsystem or module.

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Multiple registrations may also increase a plaintiff's chances of recovering at least some money, in attorneys' fees if not in statutory damages. If the statutory conditions are met, a successful plaintiff can be awarded statutory damages (see § 2.10[b]) for "all infringements involved in the action, *with respect to any one work . . .*" 17 U.S.C. § 504(c) (emphasis supplied). In determining whether a single registration covers one work or several works for purposes of computing statutory damages, the courts may look at whether the putatively-separate works would have independent economic value, but they might also consider whether the copyright owner registered the works as independent works or as a single compilation. See generally *CoStar Group Inc. v. LoopNet, Inc.*, 164 F. Supp. 2d 688 (D. Md. 2001) (reviewing cases; granting defendant's motion for partial summary judgment that, if successful in proving liability, plaintiff would be entitled to statutory damages for a maximum of 13 compilations of real-estate photographs and not for the 348 individual photographs comprising the compilations).

Section 504© includes a qualifier: "For purposes of this subsection, all the parts of a compilation or *derivative work* constitute one work." 17 U.S.C. § 504(c)(1) (emphasis supplied). In *Data General v. Grumman Systems Support*, the court held that because of that qualifier, the plaintiff could not recover statutory damages in respect of infringement of a later version of the software in question, even though the plaintiff registered the later version prior to commencement of that infringement, where the plaintiff had *not* registered the original version prior to commencement of infringement of *that* version. On the other hand, the court held that because no such qualifier was contained in the Copyright Act's attorneys-fees provision, the plaintiff would indeed be entitled to recover attorneys' fees if it proved that the defendant infringed the copyright in the later version of the software. *Data General Corp. v. Grumman Systems Support Corp.*, 795 F. Supp. 501, 503-05 (D. Mass. 1992); *subsequent proceeding*, 825 F. Supp. 340 (D. Mass. 1993) (upholding jury verdict of \$27.4 million), *affirmed in pertinent part, remanded on other grounds*, 36 F.3d 1147 (1st Cir. 1994).

[h] Which Version to Register After the Infringement Starts?

Frequently, copyright registrations are not sought until an infringement is detected; the version registered, however, may be a later

version than the version allegedly infringed. On the other hand, it may be the later version that is alleged to have been infringed, but only the earlier version is registered.

[1] Early Version Infringed, Later Version Registered

The *Streetwise Maps* case is an illustration of the first situation. The Second Circuit held that a copyright registration for a later-version street map, which was a derivative work of an earlier version, would support a claim for infringement of the earlier version. *Streetwise Maps Inc. v. Van Dam, Inc.*, 159 F.3d 739 (2d Cir. 1998).

The district court had dismissed the copyright infringement suit because the allegedly infringed earlier version had not been registered. *Id.* at 746. The appellate court reversed, saying that “because Streetwise is the owner of the copyright of both the derivative and pre-existing work, the registration certificate relating to the derivative work in this circumstance will suffice to permit it to maintain an action for infringement based on defendants’ infringement of the pre-existing work.” *Id.* at 747 (citations omitted).

(Unfortunately for the *Streetwise Maps* plaintiff, the Second Circuit compared the plaintiff’s map with the defendant’s map and concluded that “because the total concept and overall feel created by the two works may not be said to be substantially similar, the district court’s dismissal of Streetwise’s copyright infringement claim must be affirmed.” *Id.* at 747-48.)

Similarly, in *Bishop v. Wick*, the district court rejected the defendant’s contention that the plaintiff’s copyright registration was supposedly invalid for that reason:

The Program registered with the Copyright Office was substantially identical to the Program taken from the plaintiffs in 1987, in terms of function, operation, and purpose. Further, the relatively minor modifications and corrections incorporated in plaintiffs’ registered Program “could not have affected the action of the Copyright Office [and] will not invalidate the copyright nor deprive the registrant of the right to bring an infringement action.” Finally, defendants have, in essence, *admitted* copyright infringement and thus come before the Court with unclean hands; they therefore

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may not contest the effectiveness of plaintiffs' copyright registration procedures.

Bishop v. Wick, 11 USPQ2d (BNA) 1360, 1362 (N.D. Ill. 1988) (citations omitted).

[2] Later Version Infringed, Early Version Registered

The second situation, in which the version infringed is later than the version registered, is the subject of a seeming split among the circuits.

In the 1999 *Montgomery* case, discussed in § 2.1[b], the plaintiff filed suit based on a registered early version, but it was a later version that was allegedly infringed. *Montgomery v. Noga*, 168 F.3d 1282, 1292 (11th Cir. 1999) (affirming denial of JMOL and judgment of infringement). The Eleventh Circuit noted that the evidence at trial showed that the later version incorporated over seventy percent of the original source code from the registered earlier version. After reviewing statutory provisions and legislative history, the court concluded that, by making unauthorized copies of the later version, the defendants infringed the copyright in the earlier version, which had indeed been registered prior to the commencement of the lawsuit. *Id.*, at 1292-93 & n.17, citing *inter alia* *Central Point Software, Inc. v. Nugent*, 903 F. Supp. 1057, 1060 & n.5 (E.D. Tex. 1995) (granting summary judgment on plaintiffs' copyright infringement claim).

In another, non-software case with colorful facts, the Sixth Circuit took the opposite view. In *Murray Hill Productions, Inc. v. ABC Communications, Inc.*, 264 F.3d 622 (6th Cir. 2001), the copyrighted work in question was a brief jingle composed by a friend of a radio morning-show host and used by the host for over five years, with the composer's permission, as his theme song. After the host's sudden death, his radio station compiled and marketed a "best of" CD that included the jingle, with the proceeds going to charity. The composer's company sued the radio station's parent company for infringement, among other claims. The district court granted summary judgment in favor of the defendant and awarded attorneys' fees. The Sixth Circuit, while reversing the fee award, affirmed the dismissal; it held that "before an infringement suit can be sustained based on the derivative work, that derivative work must be registered. . . . Because a derivative work is cumulative of the earlier work, it is

logical that the registration of the derivative work would relate back to include the original work, while registration of the original material would not carry forward to new, derivative material.” *Id.* at 630-31.

[i] Special Considerations for Database Registrations

The Copyright Office has promulgated special deposit regulations for electronic databases (reproduced in Appendix A) which provide for the deposit of “identifying portions” in lieu of the entire database. Deposit of copies and phonorecords for copyright registration, 37 C.F.R. § 202.20(c)(2)(vii)(B) When a revised version is registered, the deposited portions must contain representative data records that have been added or modified, which must be marked to show the new material added on one representative date. The Copyright Office will permit quarterly “group” registrations of database updates if, among other things, the copyrights in the updates or revisions are commonly owned and any required copyright legends in the updates or revisions as a whole show the same person or entity as the owner. Registration of copyright, 37 C.F.R. § 202.3(b)(4).

§ 2.5 Mandatory Deposit of Copies for the Library of Congress Collection

The copyright statute apparently requires software publishers to deposit copies of at least their published documentation, and in some cases copies of their software itself, with the Library of Congress for the purpose of building the Library’s collection. Section 407 of the statute requires that “the owner of copyright or of the exclusive right of publication in a work published in the United States shall deposit, within three months after the date of such publication, — (1) two complete copies of the *best edition*” 17 U.S.C. § 407(a) (emphasis supplied); *see also* Appendix B to [37 C.F.R.] Part 202—“Best Edition” of Published Copyrighted Works for the Collection of the Library of Congress, part VIII (defining “best edition” for machine-readable copies). While compliance is not a condition of copyright protection, 17 U.S.C. § 407(a), anyone not complying with a written demand by the Register of Copyrights for such a deposit is subject to fines. 17 U.S.C. § 407(d).

The statute gives the Register authority to exempt categories of material from the mandatory deposit requirement. *See* 17 U.S.C. § 407(c). Pursuant to that section, the Register has exempted “computer programs and automated data bases published in the United States only in the form of machine-readable copies (such as magnetic tape or disk, punched cards, or the like) from which the work cannot ordinarily be visually perceived except with the aid of a machine or device.” *See* Deposit of Published Copies or Phonorecords for the Library of Congress, 37 C.F.R. § 202.19(c)(5). (Note that program documentation is not exempt even from the existing mandatory deposit requirement.) The exemption regulations also state that the Register may grant “special relief” and exempt published works not otherwise exempt. *See* 37 C.F.R. § 202.19(e).

§ 2.6 Ownership of Copyrights

[a] The Basic Rules

Ownership of copyright is governed by federal law, with a dollop of the general common law of agency sometimes mixed in as discussed below. Some of the principal features of that law can be summarized as follows:

- Under the 1976 Copyright Act, copyright in any original work of authorship initially vests in the “author” or authors of the work. *See* 17 U.S.C. § 201(a).
- The bundle of rights comprising a copyright are severable in that (i) an undivided interest in the copyright may be assigned; furthermore, (ii) any of the exclusive rights themselves (or an undivided interest in any of them) can be assigned and owned separately from the other rights. *See* 17 U.S.C. § 201(d); see also the sample copyright assignment form at the end of this chapter.
- The “author” of some works, and thus the initial owner, may be the employer or hiring party of the actual human creator(s). *See infra* § 2.6[b] (ownership of works created within the scope of employment), § 2.6[e] (ownership of specially commissioned works).
- A joint work is co-owned by its authors; each joint author or other co-owner has the right to do as he wishes with the work, subject to a duty to account to other co-owners. *Id.* § 201(a); *see also infra* § 2.6[h].

(This paper assumes that all works were created on or after January 1, 1978, at which time the 1976 Copyright Act took effect. The Copyright Act does not expressly state in so many words that computer programs are considered to be works of authorship, nor that they are subject to copyright protection. The legislative history of and subsequent amendments to the Act, however, including specific computer program-related provisions, indicate clearly that Congress believed that software should be eligible for at least some protection under copyright; moreover, the courts have uniformly held that software is protectable by copyright at least to some extent.)

[b] Copyright Ownership Claims by Employers

The Copyright Act provides that when an original work of authorship is “[1] prepared by an employee [2] within the scope of his or her employment,” the *employer* is deemed to be the author, and thus is the initial owner of the copyright unless the parties have agreed otherwise in writing. See 17 U.S.C. § 101 (definition of “work made for hire”) (bracketed numbering supplied), § 201(b) (employer is considered author of works created within the scope of employment and owns all rights comprised in the copyright unless the parties have expressly agreed otherwise in written instrument signed by them).

Scope of employment questions can sometimes arise in connection with the title to software. Sometimes the issue is whether software written by a *nonemployee* was nevertheless created “within the scope of employment” for copyright purposes, thus making the hiring party the initial owner of the copyright. A software author, nominally an independent contractor, may appear very much like an employee, or vice versa.

On the other side of the coin, software is frequently written by moonlighters or by individuals who are nominally employees but whose ties to their employers are special in some way (e.g., university faculty). Sometimes the software will relate in some manner to the employer’s business.

In these situations, will the individual programmer be regarded as an employee acting within the scope of his employment, in which case the employer owns the copyright? Or will the individual be deemed a nonemployee, an independent contractor, in which case he

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owns the copyright (unless the “specially commissioned work” statutory requirements are satisfied)?

[1] The Supreme Court’s *Reid* Decision: Focusing on the Right to Control the Means and Manner of the Work

In its unanimous 1989 *Reid* decision, the Supreme Court announced a relatively strict — but possibly unpredictable — test of ownership when copyrightable works are created by putative “employees.” *Community for Creative Non-Violence v. Reid*, 490 U.S. 730, 109 S. Ct. 2166 (1989), *affirming* 846 F.2d 1485 (D.C. Cir. 1988).

Reid involved a sculpture created by an independent-contractor sculptor; a dispute arose between the sculptor and the hiring party about ownership of the copyright, with the hiring party claiming that it was entitled to an employer’s title. The Court ruled that the copyright belonged to the sculptor and not the hiring party. After reviewing the legislative history, Justice Marshall concluded that the 1976 Copyright Act’s provisions governing works made for hire were the result of “an historic compromise” among competing economic interests, *id.*, 490 U.S. at 745, 109 S. Ct. at 2175, and that “[s]trict adherence to the language and structure of the Act is particularly appropriate where, as here, a statute is a result of a series of carefully crafted compromises.” *Id.*, 490 U.S. at 748 n.14, 109 S. Ct. at 2177 n.14.

The Court held that, if the statutory requirements for a specially commissioned work by an outside author are not met (as they had not been met in *Reid*), then the initial ownership of a copyright is determined solely by whether the individual author was an employee acting within the scope of his employment. *Id.*, 490 U.S. at 742, 109 S. Ct. at 2174. In turn, the Court said, the outcome of the scope-of-employment question was intended by Congress to depend on the hiring party’s right to control the *manner and means by which the work is created*, which the Court declared to be a matter governed by the general common law of agency (as opposed to the agency law of any particular state). *Id.*, 490 U.S. at 740, 109 S. Ct. at 2173.

Justice Marshall’s *Reid* opinion laid down a number of traditional factors to be considered in determining an “employer’s” right to means-and-manner control:

In determining whether a hired party is an employee under the general common law of agency, we consider the hiring party's right to control the manner and means by which the product is accomplished. Among the other factors relevant to this inquiry are

- 1) the skill required;
- 2) the source of the instrumentalities and tools;
- 3) the location of the work;
- 4) the duration of the relationship between the parties;
- 5) whether the hiring party has the right to assign additional projects to the hired party;
- 6) the extent of the hired party's discretion over when and how long to work;
- 7) the method of payment;
- 8) the hired party's role in hiring and paying assistants;
- 9) whether the work is part of the regular business of the hiring party;
- 10) whether the hiring party is in business;
- 11) the provision of employee benefits; and
- 12) the tax treatment of the hired party.

See Restatement [of Agency] § 220(2) (setting forth a nonexhaustive list of factors relevant to determining whether a hired party is an employee). No one of these factors is determinative.

Id., 490 U.S. at 751-52, 109 S. Ct. at 2178-29 (extensive footnotes omitted; numbering and paragraphing added).

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[2] The Second Circuit's *Aymes v. Bonelli*: The Crucial Role of Benefits and Tax Payments in Determining "Employee" Status

To some observers, *Reid* seemed to dash any hope that bright-line predictability might help define when an employer would own the copyright in employee-created works. In what seems likely to become a seminal case providing at least some of the bright lines *Reid* did not, the Second Circuit in *Aymes v. Bonelli* considered whether a computer program created for a company by an putative independent-contractor programmer was a work made for hire, and thus whether the company could be sued for infringement by the programmer for having expanded its use of the program. *Aymes v. Bonelli*, 980 F.2d 857 (2d Cir. 1992). Some of the most significant holdings in the opinion were:

- 1) that the *Reid* factors should be weighed according to their relative importance, not simply tallied;
- 2) the right to control the manner in which the work is conducted is not necessarily dispositive,
- 3) computer programming of the kind engaged in by the contractor is a highly skilled craft, and
- 4) perhaps most importantly, the company's failure to provide benefits to and and pay Social Security taxes for the contractor was all but fatal to its work-for-hire infringement defense.

As a preliminary matter, the Second Circuit criticized the trial court for giving equal weight to the twelve factors of the *Reid* test; the appellate court held that those factors "should not merely be tallied but should be weighed according to their significance in the case." *Aymes*, 980 F.2d at 861 (extensive citations omitted). The court also remarked that it seemed clear from the record that the company had the right to control the manner in which the program in question was created, and that this factor "weighs heavily in favor of finding that Aymes was an employee."

The court disagreed with the district court about the significance of the computer programmer's comparative youth and inexperience. The district court had held that this factor weighed in favor of an employment relationship. In contrast, the Second Circuit concluded that "Aymes's work required far more than merely

transcribing Bonelli's instructions. . . . In this case, Aymes was clearly a skilled craftsman. Consequently, this factor weighs heavily in his favor." *Aymes*, 908 F.2d at 861-62 (citations omitted).

It appears that in the Second Circuit's view, perhaps the most important factor weighing against the company's work-for-hire defense was that the company never paid payroll and Social Security taxes. The court asserted that the company "should not in [the tax] context be able to claim that [the programmer] was an independent contractor and ten years later deny him that status to avoid a copyright infringement suit." *Id.* at 862. Indeed, the court pointed out, "every case since *Reid* that has applied the test has found the hired party to be an independent contractor where the hiring party failed to extend benefits or pay social security taxes." *Id.* at 863 (extensive citations omitted).

The Second Circuit concluded that "on balance, application of the *Reid* test requires that we find Aymes to be an independent contractor when he was creating CSALIB for Island. Consequently, we hold that CSALIB is not a work for hire. Aymes therefore owns the copyright as author of the program." *Aymes*, 980 F.2d at 864.

[3] Some Other Software Work-for-Hire Decisions

Kirk v. Harter, 188 F.3d 1005, 1008 (8th Cir. 1999): The court reversed a judgment on jury verdict, holding that a copyright-infringement defendant who had developed a computer program for the plaintiff was in fact the owner of copyrighted program because he was an independent contractor. The plaintiff had paid the defendant as an outside contractor and had not withheld taxes or provided benefits for defendant.

Sasnett v. Convergent Media Systems, Inc., No. C.A. 95-12262-NG, 1997 WL 33142149 (D. Mass. Aug. 29, 1997): The court, while noting that the hiring party had not withhold taxes or pay benefits to the contract programmer, nevertheless concluded that the hiring party was likely to succeed in proving that the software in question had been developed as a work made for hire; the court granted a preliminary injunction in favor of the hiring party against the programmer's subsequent assignee.

Innovative Networks, Inc. v. Satellite Airlines Ticketing Centers, Inc., 871 F. Supp. 709 (S.D.N.Y. 1995): The court granted partial summary judgment that a copyrighted floor plan was a work made

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for hire owned by the plaintiff, notwithstanding nonpayment of withholding taxes and benefits.

MacLean Assocs., Inc. v. Wm. M. Mercer-Meidinger-Hansen, Inc., 952 F.2d 769 (3d Cir. 1991): In this pre-Aymes case, the court reversed a directed verdict that a company that had hired a programmer was the owner of the resulting software. It held that a computer programmer could be found to be an independent contractor without taking into account all of the *Reid* factors.

[c] Scope of Employment: The Problem of Copyright Ownership in Works Created “Off Duty”

A great deal of software is probably written by programmers who have other employment that may or may not be related to the software. If an employee-created work was prepared “within the scope of his or her employment,” it is deemed a work made for hire, 17 U.S.C. § 101, and the employer owns the copyright unless a written agreement signed by the parties expressly states that the employee owns all the rights comprised in the copyright. 17 U.S.C. § 201(b).

A key question is therefore: When is a work created “within the scope of [an employee’s] employment”? The cases offer little bright-line guidance. If an employee used his or her own time and his own computer for at least part of the work, he or she *may* be the owner. The courts seem to focus as much on perceived equities as on anything else.

Selected cases:

Cole v. Control Data Corp., 947 F.2d 313 (8th Cir. 1991): The court affirmed judgment on a jury verdict awarding a former employee \$2,215,000 in actual damages for a company’s breach of contract to market software. The software had been developed by the employee on his own time with his own computer. The company had ordered the employee to destroy the only remaining copies of the program, located on company’s premises. (The court vacated and remanded a punitive-damages award.)

Miller v. CP Chemicals, Inc. *Miller v. CP Chemicals, Inc.*, 808 F. Supp. 1238, (D.S.C. 1992): The court granted an infringement defendant’s motion for summary judgment of noninfringement and

for a declaration that it owned the copyright in question as a work for hire. The plaintiff, a former employee of the defendant who was paid by the hour, was the supervisor responsible for the operation of the defendant company's quality control laboratory. The plaintiff had written one computer program for making mathematical computations needed for in-process adjustments to one of company's commercial products, then wrote additional similar programs at behest of his supervisors, on his own time and without overtime pay. The court held that "development of the computer programs was at least incidental to his job responsibilities because it was 'within the ultimate objective of the principal and an act which it is not unlikely that such a servant might do'" and that "the ultimate purpose of the development of the computer programs was to benefit CP by maximizing the efficiency of the operation of the quality control lab." *Id.* at 1239-43.

Avtec Systems, Inc. v. Peiffer, 805 F. Supp. 1312 (E.D. Va. 1992), *vacated and remanded*, 21 F.3d 568 (4th Cir.), *on remand* 1994 U.S. Dist. LEXIS 16946 (E.D. Va. Sept. 12, 1994): The district court held that a computer program, created off-duty by the defendant former employee, had not been created within the scope of employment, was not a work made for hire, and thus was not owned by the plaintiff company. The computer program in question managed and presented satellite data. The former employee's job description "included 'implement[ing] computer simulation' and specifically, simulating 'satellite orbits.'" 21 F.3d at 569. The *Avtec* court looked to the three-factor test of the Restatement (Second) of Agency, which states that a servant's conduct is within the scope of employment:

- only if (a) it is of the kind he is employed to perform;
- (b) it occurs substantially within the authorized time and space limits; [and]
- (c) it is actuated, at least in part, by a purpose to serve the master.

See RESTATEMENT OF AGENCY (SECOND) § 228 (1985), *quoted in* *Avtec*, 21 F.3d at 571, *and cited in* *CCNV. v. Reid*, 490 U.S. at 739-40, 109 S. Ct. at 2172-73.

Marshall v. Miles Laboratories, Inc., Marshall v. Miles Laboratories, Inc., 647 F. Supp. 1326 (N.D. Ind. 1986): In this pre-*Reid* case, the court held that a journal article co-authored in his spare time by the plaintiff, a scientist employed by the defendant company, describing research conducted by the company, was a work made for hire owned by company. The court noted that the

plaintiff's job responsibilities had included developing, summarizing, and reporting of technological information in the field in question; moreover, the plaintiff admitted having complied with the company's policy requiring prepublication clearance of all outside writing by employees, meaning that the defendant "had and did exercise the right to control and supervise the preparation" of the work.

[d] The Uncertain Work-for-Hire Status of Works Created by University Scholars

A special instance of the work made for hire doctrine arises in the case of software created by university faculty or graduate students. Such software could fall in a gray area between academic works traditionally owned by the faculty members themselves, and other works to which the university might have a strong claim.

Faculty members apparently own the copyrights in their academic writings, even though they usually are required as part of their employment duties to "publish or perish." According to the Seventh Circuit's *Weinstein* case, this was a well-established custom, a recognized exception to the work made for hire rule, which the 1976 Copyright Act did not repeal or alter. *See Weinstein v. University of Illinois*, 811 F.2d 1091, 1094 (7th Cir. 1987) (Easterbrook, J., affirming dismissal on other grounds); *cf. Hays v. Sony Corp. of America*, 847 F.2d 412, 416 (7th Cir. 1988) (Posner, J.; word processing manual written by teachers for use in school was not work made for hire); *but see University of Colorado Foundation Inc. v. American Cyanamid*, 880 F. Supp. 1387 (D. Colo. 1995) (granting summary judgment of copyright infringement; scholarly article by university faculty, copied into company's patent application, was work made for hire owned by university).

Works created in the course of carrying out assigned university duties, such as serving on a university administrative committee, might belong to the university, however. *See Weinstein*, 811 F.2d at 1094 (dictum). In *Weinstein*, Judge Easterbrook speculated that if a university "form[ed] a committee to study the appropriate use of small computers and conscripts professors as members," and if "[t]he committee [publishes] a report," then the university might claim a copyright in the report. *Id.*

The status of proprietary rights in software developed in the course of research by university professors is unclear. Several different scenarios can be imagined in which both copyrights and patent rights could be the subject of controversy. The situation would be made more confusing by ambiguities in the written intellectual property policies that have been adopted by many universities. Many such policies state that the universities own any *patent* rights that may arise from inventions by faculty members and graduate students. Typically, however, many of those policies also specify that individual faculty members will own copyrights in their works where such works do not arise from assigned university duties. *See, e.g., Weinstein*, 811 F.2d at 1094 (quoting portions of University of Illinois policy); *but cf. Applied Innovations, Inc., v. Regents of the University of Minnesota*, 876 F.2d 626, 630-31 (8th Cir. 1989), *affirming* 685 F. Supp. 698, 703 (D. Minn. 1987) (university owned copyrights in various versions of Minnesota Multiphasic Personality Inventory, apparently by assignment from faculty-member authors).

[e] Establishing Work-for-Hire Status in Specially Commissioned Works Created by Outsiders

A hiring party need not always be an “employer” to qualify as the “author” and thus the initial owner of a work made for hire. The other way in which a hiring party can acquire author status is 1) for the work to come within the Copyright Act’s definition of a specially ordered or commissioned work, and 2) for the parties to comply with the “statute of frauds” provision for such works.

[1] The Statutory Compromise for Outside “Works for Hire”

Section 101 of the Copyright Act provides that the definition of “work made for hire” includes a work specially ordered or commissioned for use as any of the following, *if* the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire:

- a contribution to a collective work,
- a part of a motion picture or other audiovisual work,
- a translation,

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- a supplementary work,
- a compilation,
- an instructional text,
- a test,
- answer material for a test, or
- an atlas.

These statutory categories represent a conscious compromise by Congress as to when the rights of non-employee authors can be permanently appropriated in advance by hiring parties. *See Community for Creative Non-Violence v. Reid*, 490 U.S. 730, 745-46, 109 S. Ct. 2166, 2175 (1989); *see also infra* § 2.6[g] (rights assigned to a hiring party, as opposed to rights owned *ab initio* by virtue of hiring party's "authorship," can be reclaimed by author or heirs 35 years after assignment).

Section 101 of the statute further provides that a "supplementary work," as used in the above laundry list, is a work prepared for publication as a secondary adjunct to a work by another author for the purpose of introducing, concluding, illustrating, explaining, revising, commenting upon, or assisting in the use of the other work, such as forewords, afterwords, pictorial illustrations, maps, charts, tables, editorial notes, musical arrangements, answer material for tests, bibliographies, appendixes, and indexes, and an "instructional text" is a literary, pictorial, or graphic work prepared for publication and with the purpose of use in systematic instructional activities. *See* 17 U.S.C. § 101 (definition of "work made for hire").

The statute does not say *when* the written instrument must be executed. The Seventh Circuit expressly held that execution must take place in advance, but the Second Circuit held that execution could occur after the work is created if the parties intended a work-for-hire relationship before the work was created. *Compare Schiller & Schmidt, Inc., v. Nordisco Corp.*, 969 F.2d 410, 412-13, 23 USPQ2d (BNA) 1762 (1992) (holding that a signed statement that hiring party owned copyrights in previously taken photographs was ineffective to confer work-made-for-hire status on photographs) *with Playboy Enterprises, Inc. v. Dumas*, 53 F.3d 549 (2d. Cir. 1995) (holding that author's endorsement of a series of checks, each having a legend stating that payment was for a work made for hire, could be sufficient to establish intent), *vacating and remanding* 831 F.

Supp. 295 (S.D.N.Y. 1993), *on remand*, 960 F. Supp. 710 (S.D.N.Y. 1997) (holding that illustrations paid for by checks containing work-for-hire language were works made for hire if checks were endorsed by illustrator, but not if checks were endorsed by painter's agent).

[2] Computer Software as Specially Ordered or Commissioned Works

Most computer programs normally do not fit within any of the nine statutory work-made-for-hire categories. Thus, they cannot qualify as works made for hire even if they're specially ordered or commissioned from an outside software developer. (Many software development contracts and similar documents inappropriately state that the software in question, being developed by an independent programmer or firm, is to be deemed a work made for hire. Except in the circumstances set out in the statute, however, merely saying so will not make it so, no matter what the parties recite in their agreement.) Some exceptions may exist, however:

- A section of computer code, commissioned to form part of a larger program might qualify as a contribution to a collective work. *But see* § 2.6[h], concerning whether such a larger program might be a joint work jointly owned by the authors.
- A routine commissioned for a computer program that involves pictorial images might constitute a part of an audiovisual work.
- Software documentation written by outside technical writers (e.g., on-line help screens or printed user manuals) may qualify as a supplementary work or instructional text.
- A “porting” of an existing program (roughly, a translation), to another language or for use on a different computer, might arguably qualify as a specially commissioned translation.
- Contributions to a data compilation, e.g., one used by a computer program, could qualify for copyright protection as a compilation under the statute. *See* 17 U.S.C. § 101 (definition of “compilation”), § 102 (extent of copyright in compilations). *See also* § 2.2 for a discussion of the scope of copyright protection in data bases; *cf. Digital Communications Assocs., Inc., v. Softclone Distr. Corp.*, 659 F. Supp. 449, 457-62 (N.D. Ga. 1987) (concluding that status screen of plaintiff's CROSSTALK program was a protectable compilation of commands and status information).

[f] Establishing Ownership by Assignment

An assignment is another way for a hiring party to acquire title; software development agreements often require the (outside-contractor) developer to assign all right, title, and interest in the software copyright to the hiring party.

[1] Conveyancing Basics

A written instrument is required to assign a copyright. 17 U.S.C. § 204(a). If the instrument is properly acknowledged, it serves as *prima facie* evidence of the transfer. 17 U.S.C. § 204(b). If an assignment is to include the right to sue for past infringement, that fact should be expressly recited in the instrument. A sample copyright assignment is set out below in 0.

Selected cases:

Tiffany Design, Inc. v. Reno-Tahoe Specialty, Inc., 55 F. Supp.2d 1113, 1117-18 (D. Nev. 1999): The court held that a signed letter which stated that a photographer “release[d] all copyrights attached to the Las Vegas poster to Grant Gresser of Tiffany Design” was sufficient to convey the copyright.

Effects Assocs., Inc. v. Cohen, 908 F.2d 555, 557 (9th Cir.1990), discussed in § 2.6[j]: Judge Kozinski’s opinion noted in passing that “[i]f the copyright holder agrees to transfer ownership to another party, that party must get the copyright holder to sign a piece of paper saying so. It doesn’t have to be the Magna Charta; a one-line pro forma statement will do.”

Konigsberg Int’l, Inc. v. Rice, 16 F.3d 355, 356-57 (9th Cir. 1994): The court affirmed a judgment that a letter by the defendant licensor, confirming the existence of a two-year oral exclusive license agreement, written after the two-year term, was ineffective as transfer of rights to the plaintiff licensee.

Eden Toys, Inc. v. Florelee Undergarment Co., 697 F.2d 27, 36 (2d Cir.1982): The court held that a memorandum of transfer made within a year of an oral agreement and during the term of an exclusive license validated the agreement *ab initio*.

Arthur Rutenberg Homes Inc. v. Drew Homes Inc., 29 F.3d 1521, 1533 (11th Cir. 1994): The court reversed a holding that the plaintiff did not own valid copyright at time of alleged infringement and that

the registration was invalid because it incorrectly recited that registered work was a work made for hire. A third-party author's oral agreement that the plaintiff would own title to the work, subsequently followed up by written assignments, gave the plaintiff sufficient ownership interest to obtain a registration and to sue the defendant for infringement.

Friedman v. Stacey Data Processing Services, Inc., 17 USPQ2d (BNA) 1858 (N.D. Ill. 1990): The court held that extrinsic evidence may be considered in determining whether ambiguous particular language in software development agreement constituted assignment of copyright.

In an interesting but seemingly isolated ruling, a Louisiana federal court held that transfers of copyrights must comply with the formalities requirements of state *contract* law, possibly including the Louisiana law governing "donations of incorporeal movables." According to the court, "[t]he material question is whether the transfer [of the copyrights] was a donation or a transfer for consideration"; in the former case, notarization and witnessing would be required. In response to the defendants' motion for summary judgment, the court held that a genuine issue of material fact existed whether the plaintiff had a valid chain of title to the copyrighted posters in question. *N & D E Co. Inc. v. Gustings*, 23 USPQ2d (BNA) 1049, 1051-52 (E.D. La. 1992) (denying, in pertinent part, defendant's motion for summary judgment).

[2] Copyright-Assignment Recordation Formalities

As with most forms of property, assignments of copyrights must be recorded in order to be valid against subsequent good faith purchasers or mortgagees for value (BFPs). Recordation of a copyright transfer serves as constructive notice against subsequent BFPs if :

- (a) the transfer is recorded within one month of its execution in the U.S., or within two months of its execution outside the U.S., or before recordation of the subsequent transfer; and
- (b) if the recorded instrument specifically identifies the work to which it pertains so that, after it is indexed by the Copyright Office, it would be revealed by a

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reasonable search under the title or registration number of the work; and

- (c) a copyright registration has been obtained for the work itself.

17 U.S.C. § 205.

Any document relating to copyright will be recorded by the Copyright Office, as permitted by section 205 of the copyright statute. *See Recordation of transfers and certain other documents*, 37 C.F.R. § 201.4(a)(2). A note or memorandum of a transfer may be recorded as well as the instrument of conveyance itself. *Id.* § 201.4(c). The term “relating to a copyright” is broadly construed. *See id.* (providing in part that “[a]ny transfer of copyright ownership . . . or any other document pertaining to a copyright, may be recorded in the Copyright Office” if it is accompanied by the required fee).

To be recordable, a document must either (i) bear the actual signature of the person or persons who executed it, or (ii) be a legible photocopy or other legible facsimile reproduction, accompanied by a sworn certification signed by at least one of the parties to the signed document or by an authorized representative of that person. *Id.* § 201.4(c)(1).

Documents to be recorded can identify other documents or incorporate them by reference, but they cannot refer to exhibits, appendixes, or attachments that are not included for recordation. *Id.* § 201.4(c)(2).

[g] Consequences of Ownership by Assignment vs. Authorship

Some consequences occur when a hiring party obtains ownership of a copyright by assignment, instead of owning it from the outset as the “author” of a specially commissioned work:

If the software is created by an individual or individuals who are not in a work-made-for-hire relationship (and who assign their rights to the hiring party), then the copyright term lasts for the life of the last-surviving author plus 50 years. The term is not affected by whether the copyright is assigned to the hiring party. Furthermore, all assignments and licenses of non-“work for hire” copyrights are terminable during a five-year period beginning 35 years after the date of the assignment or license (and the termina-

tion right cannot be waived in advance). *Id.* § 203.; *cf. Stewart v. Abend*, 110 S. Ct. 1750 (1990) (the “Rear Window” case) (holding that under 1909 Copyright Act, license to distribute derivative work must be renegotiated if the owner of the underlying work elects to terminate the license during the 35-year window).

If the software is created as a work made for hire, then as noted above the hiring party is the “author” ab initio. The copyright term lasts for 75 years from the year of first publication or 100 years from the year of creation, whichever comes first. 17 U.S.C. § 302.

As a practical matter, however, these consequences may not have much commercial significance. Most if not all computer software can be expected to be obsolete long before the expiration of the copyright or the opening of the termination window.

[h] Ownership of Copyright in Jointly Developed Software

Jointly developed software may become increasingly important in the industry. The last few years have seen an increase in “strategic partnering” between software companies.

In most such “partnerships,” the question of copyright ownership of any resulting software is usually (and preferably) expressly addressed in a written agreement, along with other matters such as use rights, royalty obligations, and the like. Absent an agreement, however — as is frequently the case when small companies are involved — the copyright statute’s joint-work rules could govern by default.

[1] Co-Authors Who Intend a “Unitary Whole” Work are Deemed Co-Owners of a Joint Work

The copyright statute provides that “[t]he authors of a joint work are coowners of copyright in the work.” 17 U.S.C. § 201(a). The statute defines a joint work as “a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole.” *Id.* § 101.

The authors’ intention to create a joint work apparently must exist at the time that they do their respective work. Moreover, the authors’ intentions apparently must be judged by whether they intend to collaborate to produce one work. If the intent of either

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putative joint author is to produce his or her own separate work, independently of the other author, then the end product probably will not be a joint work.

Selected cases:

Weissmann v. Freeman, 868 F.2d 1313 (2d Cir. 1989): The Second Circuit approved of its 1944 holding to that effect, which in the court's view was still consistent with the language and legislative history of the 1976 Copyright Act. “[A]s Judge Hand stated it, ‘when both [authors] plan an undivided whole . . . , their separate interests will be as inextricably involved, as are the threads out of which they have woven the seamless fabric of the work.’” *Id.* at 1318-19, citing *Edward B. Marks Music Corp. v. Jerry Vogel Music Co.*, 140 F.2d 266 (2d Cir. 1944) (L. Hand, J.) and H.R. Rep. No. 1476, 94th Cong., 2d Sess. 1, 120, reprinted in 1976 U.S. CODE CONG. & ADMIN. NEWS 5659, 5736.

The *Weissman* court viewed the critical fact governing the authors' intentions as having been that “both [authors] were equally aware that their individual authorship efforts would have to be combined in order to create the final integrated product—a commercially viable song.” *Id.*

Childress v. Taylor, 945 F.2d 500, 507 (2d Cir. 1991): In an infringement case brought by the author of a play about the life of “Moms” Mabley, the defendant, an actress accused of infringing the copyright in the play, claimed that she was as joint author of the play. She apparently had suggested that the play be written, contributed facts and ideas, and played the title role in the initial production. Affirming a summary judgment of infringement, the Second Circuit held that there was no evidence from which a trier of fact could infer that the playwright had the requisite state of mind that is required for joint authorship.

Avtec Systems, Inc. v. Peiffer, 805 F. Supp. 1312 (E.D. Va. 1992), *vacated and remanded*, 21 F.3d 568 (4th Cir.), *on remand* 1994 U.S. Dist. LEXIS 16946 (E.D. Va. Sept. 12, 1994): The district court held that a company was not a joint author of a computer program that had been developed by a former employee largely on his own time with his own computer. “There is slight evidence of collaboration and less evidence of intent to merge separate efforts into a unitary whole.” 805 F. Supp. at 1319.

Whelan Associates, Inc., v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307, 1319 (E.D. Pa. 1985), *aff'd*, 797 F.2d 1222 (3d Cir. 1986): The court held that “[t]here is not a scintilla of evidence that the parties ever intended that Rand Jaslow's contributions, whatever they may have been, should merge into the final computer system and design.”

[2] A Would-Be Joint Author's Contribution
Must Itself be Copyrightable

Not just any contribution to the development of a copyrightable work will give rise to a co-ownership interest. The courts have held that such a contribution must itself rise to the level of copyrightability. See also § 2.1[a][1] (authorship requirements).

Selected cases:

Childress v. Taylor, 945 F.2d 500, 507 (2d Cir. 1991), summarized on page 62: The Second Circuit adopted what it characterized as the prevailing view, endorsed by Copyright Office, which requires contributions by putative joint authors to rise to the level of copyrightability. The court observed that insistence on copyrightable contributions by putative joint authors might serve to prevent some spurious claims by those who might otherwise try to share the fruits of the efforts of a sole author of a copyrightable work. It pointed out that a person with noncopyrightable material who proposes to join forces with a skilled writer to produce a copyrightable work is free to make a contract to disclose his or her material in return for an assignment of part ownership of the resulting copyright. See *id.* at 507; see also *Erickson v. Trinity Theatre, Inc.*, 13 F.3d 1061, 1070-71 (7th Cir. 1994) (same).

Whelan Associates, Inc., v. Jaslow Dental Laboratories, 609 F. Supp. 1307 (E.D. Pa. 1985), *aff'd*, 797 F.2d 1222 (3d Cir. 1986): The copyright infringement defendants claimed at trial that defendant Rand Jaslow was a joint author and co-owner of the plaintiff's dental laboratory management software. They alleged that Jaslow "originated the concept" of developing the software, that he "disclosed to Elaine Whelan in detail the operation and method of Jaslow Laboratory in conducting its business, [and] that he explained to Elaine Whelan the functions to be performed by the computer and helped design the language and format of some of the screens that would appear on the computer's visual displays." *Id.* at 1318. The *Whelan* court rejected the defendants' contentions,

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finding that “Rand Jaslow did little more than explain the operations of the dental laboratory business and define the information he wanted to be able to obtain from the computer. . . . Such general assistance and contributions to the fund of knowledge of the author did not make Rand Jaslow a creator of any original work, nor even the co-author.” *Id.* The court’s perception of the nature of Rand Jaslow’s work was the final blow to the defendants’ joint-authorship contention: “The only suggested merger into the whole might be the wording and the abbreviations contained on some of the visual screens. His contributions were not of sufficient significance to constitute him a co-author of the system.” *Id.*

S.O.S., Inc. v. Payday, Inc., 886 F.2d 1081 (9th Cir. 1989): The software in question had been custom-developed, apparently as part of a hardware-software procurement contract. The developer had licensed only the executable version (not the source code) to the customer, and for use only on hardware provided by the developer. *Id.* at 1082-83. Two of the developer’s employees – who had been the principal authors of the software in question – left to set up their own competing company, offering to write an improved version of the software for use on the customer’s own hardware. The customer agreed; the ex-employees then obtained unauthorized “back door” access to their former employer’s computer (by circumventing the password system) and took a copy of the source code of the software. The next week, the former employees installed the purloined software on the customer’s newly purchased in-house hardware. *Id.* at 1084. In the Ninth Circuit, a joint-authorship claim was rejected as an alternative ground for affirming a summary judgment in favor of the customer. The trial court had granted summary judgment in favor of the customer on the developer’s copyright-infringement claims; on appeal, the customer made a joint-authorship argument as an alternative ground for affirming summary judgment. *See id.* at 1084, 1086. The customer argued that its own employee had been a joint author and thus that it was a co-owner. *Id.* at 1086. The Ninth Circuit disagreed; citing *Whelan*, it said that the customer’s employee “did nothing more than describe the sort of programs Payday wanted S.O.S. to write. A person who merely describes to an author what the commissioned work should do or look like is not an author for purposes of the Copyright Act.” *Id.* at 1087, *citing Whelan*, 609 F. Supp. at 1318-19.

Ashton-Tate Corp. v. Ross, 728 F. Supp. 597 (C.D. Cal. 1989), *affirmed*, 916 F.2d 516 (9th Cir. 1990): The court gave short shrift

to allegations of joint authorship and co-ownership. The alleged joint author had worked on a spreadsheet program with a third party; he developed a list of user commands that he felt a spreadsheet program should implement. The third party disclosed parts of the spreadsheet program to the alleged infringer (and declaratory-judgment plaintiff), which went on to built a working spreadsheet program in collaboration with the third party. The *Ross* court treated the alleged joint author's contribution to the spreadsheet program as an unprotectable idea, not as a part of the protectable expression in the program. The court said that a contribution of only "ideas" to the development of a work, without reducing those ideas to an expression is insufficient to acquire an interest in the work. *Id.*, 916 F.2d at 521-22. After acknowledging the difficulty of drawing lines between ideas and expressions, the court held that "Ross merely told Wigginton what tasks he believed the [spreadsheet] interface should allow the user to perform. This list of commands is only an idea that is not protected under federal law." *Id.*, 728 F. Supp. at 599.

Holtzbrinck Publishing Holdings, L.P. v. Vyne Communications, Inc., No. 97 CIV. 1082 (KTD), 2000 WL 502860 at *26-27 (S.D.N.Y., Apr 26, 2000): The parent company of *Scientific American* magazine hired a consultant to develop a Web site. The court held, in denying a motion for partial summary judgment, that the company likely was a joint author and thus co-owner of the Web site, but fact issues remained as to whether the company's contributions were copyrightable.

Query: Are judicial notions of equity offsetting the result that might otherwise obtain under copyright law? The courts seem to be dismissing the quality of the work contributed by the asserted joint-author. Under the copyright statute, however, a joint author's contribution need rise only to the level of "authorship," *See* 17 U.S.C. § 101 (defining joint work as work prepared by two or more "authors"). and that level is quite low in copyright law. *See, e.g., NEC Corp. v. Intel Corp.*, 10 USPQ (BNA) 1177, 1178-79 (C.D. Cal. 1982); *see also* § 2.1[b].

The *Ashton-Tate v. Ross* decision in particular is puzzling in view of the copyright protection given to compilations of commands in *Digital Communications Associates, Inc., v. Softklone Distr. Corp.* 659 F. Supp. 449 (N.D. Ga. 1987). Ross's list of commands resembles, at least superficially, DCA's compilation of commands and

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status information that was held to be copyrightable in *Softklone*. If it was infringement for Softklone to copy DCA's compilation, it seems as though it might well have been infringement for Ashton-Tate to build a spreadsheet program on Ross's compilation. This of course assumes, however, that Ross's compilation had the requisite originality; the *Ross* court may have regarded that compilation as having come from the "prior art" and therefore not copyrightable to Ross. Cf. *Computer Associates International, Inc., v. Altai, Inc.*, 982 F.2d 693, 706 (2d Cir. 1992) (affirming holding of noninfringement, setting out "successive filtration" test to separate unprotectable elements from protectable ones; *see also* § 2.7[g]).

The *Whelan* and *Ross* decisions may indeed be explainable in equitable terms. It seems that when one party does the lion's share of what is perceived as the "real work" in developing a finished software product, courts are prone to find that a purported joint author's contribution fails to rise to the requisite level of originality.

Selected other cases:

Forward v. Thorogood, 985 F.2d 604, 607 (1st Cir. 1993): A band recorded some tapes in a studio. It sued the owner of the physical tapes for copyright infringement; the tape owner claimed that he had the right to make commercial use of the tapes on grounds that he had been a "joint author." The First Circuit affirmed an injunction against such use, holding that the tape owner had made no musical or artistic contribution to the recording and thus was not a joint author.

M.G.B. Homes, Inc., v. Ameron Homes, Inc., 903 F.2d 1486, 1492-93 (11th Cir. 1990): An architect's client made a thumbnail sketch of a desired floor plan, and subsequently had approval authority over the architect's final plan. The court held that this did not make the client a joint author.

Rubloff Inc. v. Donahue, 31 USPQ2d (BNA) 1046 (N.D. Ill. 1994): A company hired a contractor to write a real-estate training manual, then later sued the contractor, claiming in part that the company had been a joint author with the contractor. The court granted summary judgment against the company, holding that the company's editorial corrections, suggestions for changes, formatting, and contribution of a foreword did not make the company a joint author.

Aitken, Hazen, Hoffman, Miller, P.C., v. Empire Construction Co., 542 F. Supp. 252, 259 (D. Neb. 1982): The court held that contribution of design ideas and directions to an architectural firm did not give rise to joint authorship in the resulting architectural plans.

[3] Copyright Co-Owners Must Account to One Another for any Uses of the Work

While co-owners of a copyright in a work can each make any use they desire of the work, they must account to one another for the proceeds of such uses. This is true not just of joint *authors*, but of co-owners who acquire their rights by other means. See *Oddo v. Ries*, 743 F.2d 630, 632-33 (9th Cir. 1984) (under California law, partners were co-owners of partnership copyright assets; copyright law thus required partners to account to each other for their uses of those assets).

How will proceeds be divided among co-owners absent an agreement on the issue? One court held that, absent evidence of a contrary intent, the ownership interest, and thus the right to share in proceeds, will be presumed to be divided equally among the co-owners. *Sweet Music, Inc., v. Melrose Music Corp.*, 189 F. Supp. 655, 659 (S.D. Cal. 1960). The *Sweet* case apparently has been cited only once, and then not on the point noted above. In *Korman v. Iglesias*, 736 F. Supp. 261 (S.D. Fla. 1990), the court noted that if parties were joint authors of a song, they would stand in a relationship akin to tenants in common. Absent an agreement specifying otherwise, any profits earned would be divided equally, "even where it is clear that [the] respective contributions to the joint work are not equal," quoting *Community for Creative Non-Violence v. Reid*, 846 F.2d 1485, 1498 (D.C. Cir. 1988) (dictum), *aff'd*, 490 U.S. 730, 109 S. Ct. 2166 (1989) (see § 2.6[b][1]).

Another court, however, ruled that a plaintiff-joint author must establish what a proper pro rata share of profits would be; the court expressed considerable skepticism whether the plaintiff, who had taken one photograph which constituted "only one element" of a promotional insert used by the defendant (and the insert in turn constituted "probably only a small portion" of the defendant's total advertising), would be able to prove more than nominal damages of \$1.00. *Strauss v. Hearst Corp.*, 8 USPQ2d (BNA) 1832, 1838, (S.D.N.Y. 1988).

[i] Some Software-Related Joint Work Issues

Some common practices in the software industry can give rise to joint-authorship issues, and thus to the possibility of unexpected co-ownership of copyright.

[1] Software Documentation as Joint Work

For example, software developers will sometimes engage an outside technical writer or firm to write user instructions or other documentation for a new software package. Such documentation may be eligible for work-for-hire treatment as a specially-commissioned work (see § 2.6[e]); but absent a work-for-hire agreement or a covenant to assign by the outside writer, the copyright law's provisions regarding ownership will control.

Very commonly, such documentation will be a joint work that is coauthored by the outsider and the software developer. An outside author who collaborates with a hiring party's employee to develop software or documentation may be a joint author and co-owner with the hiring party, not with the employee. The two parties will co-own the copyright. The outsider thus would have the right to make any use desired of the work, subject to the duty to account to the software developer.

The absence of a written agreement could also tempt an outside documentation writer to demand an accounting of profits arising from the use of the documentation with the software. Such a claim might conceivably be dismissed on grounds of an implied agreement for royalty-free use of the documentation by the software developer (*cf.* the discussion of implied *licenses* in § 2.6[j]). Frequently, however, the facts in cases like this will be messy and are likely to preclude a summary judgment; trial of such a case would of course be inconvenient and the outcome always at least somewhat uncertain. The outside author of a "one-off" user manual might have little to lose professionally by making such a demand.

**[2] Joint Authorship Claims through
"Canned" Program Modules?**

Another potential ownership concern for software developers: Could the authors of prewritten ("canned") program modules for screen management, communications, etc., incorporated by design into other software, assert a co-ownership claim as joint authors of

the other software? The question may not be an idle one, inasmuch as a great deal of software is developed using such prewritten, reusable libraries, which are widely advertised in trade journals. In fact, virtually any software written in a high-level language and compiled and linked into executable form will include substantial portions of prewritten programming from the compiler program package.

Software developed using such libraries appears at first glance to qualify as a “joint work” under the copyright statute. The authors of the prewritten portions definitely intended that their contributions be merged into *some* unitary whole (for that matter, the prewritten portions will often have little if any standalone value); likewise, the authors of the end-product software intended *their* contributions to be similarly merged. This may be enough to satisfy the joint-authorship requirement.

Somewhat similar circumstances led to a holding to this effect (under the 1909 Copyright Act) in *Donna v. Dodd, Mead & Co.* 374 F. Supp. 429 (S.D.N.Y. 1974). In that case, a children’s book, *Boy of the Masai*, included photographs by one person and text by another; when the photographer used the same text format for subsequent children’s books, the text author sued for infringement. The court found that the photographer had taken his photographs with the intent that they become part of a joint work with text from another source, even though the text author had not yet been selected. The photographer was thus a joint owner of the complete book, and was entitled to use substantially the same text format in subsequent books (e.g., *Boy of Nepal*). *Id.* at 430-31.

So, would end-product software be a joint work under the *Donna* rationale, and the library-software author a co-owner of the end product? Arguably not. In *Donna*, the photographer seems to have had a much more specific notion of what the end-product would look like than do the authors of software libraries. This difference could provide a basis for distinguishing *Donna*.

Moreover, the more recent decisions under the 1976 Copyright Act appear to focus on whether the putative joint authors intended to collaborate in the creation of the end product, not merely on whether they intended their individual contributions to be combined. *See supra* § 2.6[h][1].

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Finally, as a practical matter the problem is probably academic. While co-owners of a copyright in a work must account to one another for any proceeds of their uses of the work, the licenses for many if not most prewritten libraries expressly state that the licensee can use the prewritten programming on a royalty-free basis. Such a statement would seem to take care of the licensee's duty to account.

Technically, of course, if the author of a prewritten library were indeed a co-owner, he would have the right to make and distribute copies of the joint work, i.e., of the end-product software. Thus, theoretically the library author could go into competition with the end-product developer. This is unlikely to happen for purely business reasons, however:

- First, the library author would have to account to the other co-owner, namely the developer of the end-product software.
- Second, the library author probably would have no rights in the end-product documentation, without which the end-product software could be useless.
- Third, the library author could be certain that the end-product developer would make use of someone else's library routines for the next version of the end-product software (assuming he discovered the library author's competing activities). Eventually the new version would drive the joint work out of the marketplace.
- Finally, the word would probably get around the notoriously active software industry grapevine about the library author's activities (e.g., in outraged letters to trade journals and on various computerized "bulletin boards"); his library-software business would be likely to suffer as a result.

[j] Implied License Notwithstanding Lack of Ownership

A hiring party may not be in a hopeless position simply because its software is not a work made for hire or a joint work and it cannot obtain an assignment. The hiring party can probably assert at least a use right in the software, and possibly even more than that.

Selected cases:

Graham v. James, 144 F.3d 229, 235, 238 (2d Cir.1998): The appellate court vacated and remanded a copyright infringement award, on grounds that the infringement defendant was an implied licensee.

Effects Associates, Inc., v. Cohen, 908 F.2d 555, 558-59 (9th Cir. 1990): A movie producer commissioned special-effects footage for a horror movie but did not pay for it. In an opinion by Judge Kozinski, the court rejected a claim that the producer was a copyright infringer, holding that the movie producer had orally been granted an implied non-exclusive license (and thus the copyright owner's action would have to be in contract, not copyright). The court noted pointedly that the dispute over copyright would not have arisen had the parties reduced their agreement even to a one-line writing.

Ondo v. Ries, 743 F.2d 630, 634 (9th Cir. 1984): An author prepared a manuscript as part of his partnership duties. The court held that the author had implicitly given the partnership a license to use the articles, "for without a license, [the author's] contribution to the partnership venture would have been of minimal value."

Holtzbrinck Publishing Holdings, L.P. v. Vyne Communications, Inc., No. 97 CIV. 1082 (KTD), 2000 WL 502860 at *10 (S.D.N.Y., Apr 26, 2000): The parent company of *Scientific American* magazine commissioned a consultant to develop programming for the magazine's Web site. The court granted partial summary judgment that the company had an irrevocable non-exclusive license to the programming.

Yojna, Inc., v. American Medical Data Systems, Inc., 667 F. Supp. 446 (E.D. Mich. 1987): An outside software contractor, at the request of a hospital corporation and its subsidiary, developed a computer program for hospital information management. The court held that the outside contractor was the owner of the software, but the subsidiary had a perpetual, royalty-free license to use and sublicense the program, including the right to unrestricted access to source code for purposes of developing new versions and enhancements. The court also held that the license was an exclusive license within the health-care industry. *See id.* at 446.

Some courts, however, have declined to hold that *employers* have such rights in works created by their employees. Selected cases:

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Avtec Systems, Inc. v. Peiffer, 21 F.3d 568 (4th Cir. 1994), *vacating and remanding* 805 F. Supp. 1312 (E.D. Va. 1992), *on remand* 1994 U.S. Dist. LEXIS 16946 (E.D. Va. Sept. 12, 1994): Peiffer, a former employee of Avtec, had written a computer program in part on company time and in part on his own time. The Fourth Circuit held that if Peiffer was the owner of the copyright in the computer program, then Avtec would have had only a nonexclusive license to use the program, which would be revocable absent consideration. The court disapproved a holding below that Avtec had a “shop right” in the software; it noted that Congress had expressly declined to import the shop right doctrine from patent law into copyright law. See *id.* at 575 n.16 (citation omitted).

Kovar v. Southeastern Michigan Transportation Authority, slip op., No. 101761 (Mich. App. Oct. 4, 1989), *reprinted in* COMP. INDUSTRY LIT. RPTR. 10,317 (Oct. 23, 1989): A former employee of the transit authority, who worked as a schedule writer, had developed scheduling software “in his spare time on the job and at home” [emphasis supplied] but had kept the source code and passwords as secrets from his employer. The employee resigned to take another job and offered the transit authority a use license for an annual fee; his supervisor “fired” him, unsuccessfully demanded that he turn over his source code and passwords, called in the district attorney to have him arrested for “extortion” and “destruction of computer programs,” and advised his new employer that the former employee was under investigation for extortion. *Id.*, slip op. at 2. The court implicitly held that the transit authority did not have a license to use the scheduling software.

[k] Perfecting a Security Interest in a Copyright

A “security interest” in a copyright is something in the nature of a contingent ownership interest, granted to a secured party by the copyright owner under Article 9 of the Uniform Commercial Code, to secure a debt or other obligation. A security interest in a copyright, as with most general intangibles, can be acquired via a written instrument executed by the copyright owner. To be valid against (and constitute notice to) a subsequent creditor or purchaser, however – and more importantly, to preserve the secured party’s interest if the copyright owner files a petition in bankruptcy – the security interest must be “perfected” by filing identifying information about it, often in the form of the well-known UCC-1 financing statement, in an ap-

propriate recordation system – which for most general intangibles is a state agency, e.g., the Secretary of State's office in Texas.

Article 9 states that a financing statement filing is “not necessary *or effective* to perfect a security interest in property subject to (a) a statute . . . of the United States which provides for a national registration . . . or which specifies a place of filing different from that specified in this Article.” U.C.C. § 9-302(3)(a) (emphasis supplied). Moreover, Article 9 does not even apply to security interests to the extent that the rights of the parties respecting such property are governed by federal statutes. U.C.C. § 9-106.

That raises the question: where must the filing be made to perfect a security interest in a copyright? Two federal bankruptcy court decisions have held that the filing must be in the Copyright Office under that agency's recordation procedures, and that a U.C.C.-type filing will not perfect the security interest. *See Official Unsecured Creditors' Committee v. Zenith Productions Ltd. (In re AEC Acquisition Corp.)*, 127 B.R. 34 (Bankr. C.D. Cal. 1991); *National Peregrine Inc. v. Capitol Fed. S&L*, 116 B.R. 194 (Bankr. C.D. Cal. 1990). Cf. *In re C TEX Software, Inc.*, 127 B.R. 501 (Bankr. D.N.H. 1991) (holding that security interest in copyright in software did not encompass subsequently created and independently copyrightable updates to software and thus did not take priority over exclusive license to distribute the updates).

§ 2.7 Infringement of Software Copyrights

Theoretically, analysis of software copyright-infringement claims is straightforward. In the abstract, claims of computer program copyright infringement are judged by the same principles as are applied to other copyrighted works: any ““copying” of protectable expression’ beyond the scope of a license” constitutes copyright infringement. *E.g., MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511, 26 USPQ2d (BNA) 1458 (9th Cir. 1993) (affirming summary judgment and injunction against third party maintenance provider's unauthorized use of plaintiff's software on customer's computer system for maintenance and diagnostic purposes), quoting *S.O.S., Inc. v. Payday, Inc.*, 886 F.2d 1081, 1085 (9th Cir. 1989) (reversing summary judgment granted in favor of customer/copyright infringement defendant).

[a] Basic Infringement Analysis

As explained in the famous *Computer Associates v. Altai* case, *Computer Assocs. Int'l, Inc., v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992) (affirming holding of noninfringement), the basic analytical approach is well-established and entails proof of “substantial similarity” between the copyrighted work and the accused work:

[The copyright] plaintiff must establish its ownership of a valid copyright, and that the defendant copied the copyrighted work. The plaintiff may prove defendant's copying either

- by direct evidence or,
- as is most often the case, by showing that
 - (1) the defendant had *access* to the plaintiff's copyrighted work and
 - (2) that defendant's work is *substantially similar* to the plaintiff's *copyrightable* material.”

Altai, 982 F.2d at 701 (emphasis and bulleted paragraphing added, citations omitted). The *Altai* court noted that “[s]ubstantial similarity,’ in the copyright context, refers to appropriation by the putative infringer of the ‘fundamental essence or structure’ of a protected work.” *Id.* (citation omitted).

Proof of substantial similarity to protectable aspects of a work is required because copying alone, in and of itself, does not necessarily lead to liability. “Not all copying, however is copyright infringement copying as a factual matter is insufficient, if improper appropriation is lacking.” MELVILLE NIMMER & DAVID NIMMER, 4 NIMMER ON COPYRIGHT, § 13.01[B] at 13-9, 13-10, *quoted in Berkla v. Corel Corp.*, 66 F.Supp.2d 1129 (E.D. Cal. 1999) (granting in part and denying in part Corel's motion for summary judgment of noninfringement) (internal quotation marks omitted).

Substantial similarity can be proved by showing similarity in a variety of factors. For example, in one case, the copyright owner convinced the court to grant a preliminary injunction on the basis of

- “several sections of the programs where code similarities are uncanny, including the color

code map for plaintiff's screens, which is identical in both programs;

- "identical coding of the so-called "intensity" function, which governs intensity of colors and is used to make objects on the screen distinguishable from one another;
- "the appearance of empty source code modules or files in exactly the same location in both programs;
- "the same or similar bug fixes in both programs.
* * *
- "remarkable instances of similarities to plaintiff's software in the programmer's comments, which are non-executable appendages to lines of executable code. ...
- "comments identical to the point of repeated spelling errors. In one notable instance, the line "Dont do anyting" appears as a programmer's comment in both Tradescape and Bulldog, with identical misspellings in both."

Tradescape.com v. Shivaram, 77 F. Supp.2d 408, 417, 418 (S.D.N.Y. 1999) (granting preliminary injunction) (bulleted paragraphing added, footnotes omitted).

Several different "flavors" of copyright infringement in the context of computer software are discussed below.

[b] Unauthorized Copying or Distribution as Infringement

Perhaps the most straightforward variety of copyright infringement is that of naked piracy, e.g., unauthorized copying and/or distribution of executable program code. Such action has been held in numerous cases to constitute copyright infringement.

Selected cases:

Microsoft Corp. v. Grey Computer, Inc., 910 F. Supp. 1077 (D. Md. 1995): The court "threw the book" at corporate and individual defendants who were accused of counterfeiting Microsoft software. It

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granted summary judgment in favor of Microsoft, awarding maximum statutory damages for copyright infringement and treble the defendants' profits for trademark infringement. It also held the individual defendants jointly and severally liable with the corporate defendants.

Microsoft Corp. v. Harmony Computers & Electronics, Inc., 846 F. Supp. 208 (E.D.N.Y. 1994): The court granted a preliminary injunction after ex parte seizure of software.

Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983): The court affirmed a infringement, holding that the defendant had copied Apple's operating system software for use in its "clone" computers.

Micro-Sparc, Inc. v. Amtype Corp., 592 F. Supp. 33, 34-35 (D. Mass. 1984) (rejecting section-117 defense): A hobbyist magazine published computer programs in source-code form. It sued a "keyboarding service" which had input programs onto disk and sold the disks to purchasers of the magazine. The court held that this infringed the copyright in programs.

[c] Use by an "Unauthorized" Person (e.g., a Third-Party Maintenance Provider) as "Infringement"

Use of software by an unauthorized person can constitute infringement. This is shown by a number of now-outdated cases involving third-party maintenance providers (commonly referred to as independent service organizations or ISOs) who use their customers' licensed copies of software, e.g., for running diagnostic tests on a customer's computer. Prior to a 1998 statutory change, such unauthorized use typically became an issue where the ISO competes with the computer manufacturer in post-sale servicing of the computer. At least some of the cases seemed to turn on the precise language used in the customer's license agreement.

[1] Pre-Amendment Cases

Data General Corp. v. Grumman Systems Support Corp., 825 F. Supp. 340 (D. Mass. 1993), *affirmed in pertinent part but remanded for redetermination of possibly-duplicative damage award*, 36 F.3d 1147 (1st Cir. 1994): The First Circuit affirmed a holding that an ISO's use of Data General's diagnostic software constituted copyright infringement. It upheld judgment on a verdict for \$27.4 for copyright infringement and an equal amount for trade-secret

misappropriation, which the trial judge increased by \$9 million because of willful misappropriation.

Service & Training Inc. v. Data General Corp., 963 F.2d 680, 688-89 (4th Cir. 1992) (affirming holding of copyright infringement), *affirming* 737 F. Supp. 334 (D. Md. 1990): Data General was likewise successful in obtaining a nearly \$64 million judgment against an ISO that apparently was using over 200 unlicensed copies of Data General's software.

MAI Systems Corp. v. Peak Computer Inc., 991 F.2d 511 (9th Cir. 1993): The Ninth Circuit similarly held that use by a nonlicensee ISO of a copy of diagnostic computer software, licensed to a customer on terms excluding third-party use, on the customer's computer in the course of maintaining the computer for the customer, constituted copyright infringement. The court affirmed summary judgment and an injunction against the third-party maintenance provider's unauthorized use of the software. The court's holding included the point that the ISO's copying of the program into the computer's working memory (RAM) to run the program created an embodiment that could be "perceived, reproduced, or otherwise communicated" under section 101 of the Copyright Act, 17 U.S.C. § 101, and consequently was sufficiently "fixed" to qualify as a "copy," giving rise to infringement liability. 991 F.2d at 518-19; *see also Vault Corp. v. Quaid Software Ltd.*, 847 F.2d 255, 260 (5th Cir. 1988) ("the act of loading a program from a medium of storage into a computer's memory creates a copy of the program"), *cited in MAI Systems Corp.*

Advanced Computer Systems v. MAI Systems Corp., 845 F. Supp. 356 (E.D. Va. 1994) (granting MAI's motion for summary judgment of copyright infringement; rejecting fair use defense): MAI was likewise successful in a Virginia district court against another ISO. That court also rejected the ISO's argument that its use of MAI's software constituted fair use. *See*

Triad Systems Corp. v. Southeastern Express Co., 64 F.3d 1330 (9th Cir. 1995): The Ninth Circuit rejected a contention that similar use of a customer's software by an ISO constituted fair use..

NLFC Inc. v. Devcom Mid-America Inc., 45 F.3d 231 (7th Cir. 1995): In this somewhat peculiar case, the Seventh Circuit affirmed summary judgment of noninfringement in favor of a defendant third-party maintenance provider. The court based its decision on the ground that there was no evidence the defendant had done more

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than operate licensed copies of the software in question on the licensees' computers. The *NLFC* plaintiff's copyrighted software had "contained many bugs (among other assorted problems)." *Id.*, 45 F.3d at 233. The defendant had originally been hired by one licensee, with the plaintiff's agreement, to fix the problems, which it did. Another licensee subsequently hired the defendant to do the same. Apparently recognizing a market opportunity, the defendant sent out solicitation letters to other licensees. The plaintiff sued for copyright infringement. It evidently based its case on the defendant's alleged copying of the software to the defendant's own computers. The Seventh Circuit agreed with the district court that the plaintiff had failed to put forth evidence of such copying (and observed in a footnote that even if such copying had occurred it might have been authorized by the plaintiff's license agreements with its licensees). *Id.*, 45 F.3d at 235 & n.5. The *NLFC* court cursorily cited *MAI Systems* for the proposition that loading software into memory to execute it constitutes "copying." 45 F.3d at 235. Strangely, the Seventh Circuit apparently did not consider that under *MAI Systems*, a nonlicensee is liable for infringement if it runs licensed software on a licensee's computer, even though the defendant had apparently admitted doing just that. *Id.*, 45 F.3d at 233. Nor did the appellate court seem to regard as significant the fact that the defendant conceded printing out a copy of the source code of the software for reference purposes. *Id.*

Hogan Systems, Inc. v. Cybresource Int'l, Inc., 158 F.3d 319 (5th Cir. 1998), *affirming* 1997 WL 311526 at *3 (N.D. Tex. June 2, 1997): The language of the license agreement made all the difference in the Fifth Circuit's *Hogan Systems* case. The language in question prohibited the licensee from making the licensed software available to anyone "except to [Norwest's] employees or [the licensor's] employees or to other persons during the period such other persons are on [Norwest's] premises for purposes specifically relating to [Norwest's] authorized use of the licensed program." (granting defendant's motion for summary judgment). The district court concluded that the license agreement "authorizes third-party contractors to provide consulting services to Norwest on Hogan-produced software, including use, copying, and modification. What Norwest could itself do under the License, Norwest may use a contractor to do. In other words, while they are engaged in consulting services on behalf of Norwest, Defendants' activities are 'sheltered under' Norwest's license rights." 1997 WL 311526 at *4.

The Fifth Circuit agreed; the court even endorsed the proposition that the third-party contractor's remote access to the software by remote-control software had not been shown to constitute infringement. *See* 158 F.3d at 322-24.

[2] The 1998 Amendment to Section 117

In 1998, Congress effectively overruled the *MAI Systems* line of cases by adding a new paragraph (c) to section 117 of the Copyright Act. The new paragraph provides as follows:

(c) Machine maintenance or repair.-- Notwithstanding the provisions of section 106, it is not an infringement for the owner or lessee of a machine to make or authorize the making of a copy of a computer program if such copy is made solely by virtue of the activation of a machine that lawfully contains an authorized copy of the computer program, for purposes only of maintenance or repair of that machine, if--

(1) such new copy is used in no other manner and is destroyed immediately after the maintenance or repair is completed; and

(2) with respect to any computer program or part thereof that is not necessary for that machine to be activated, such program or part thereof is not accessed or used other than to make such new copy by virtue of the activation of the machine.

(d) Definitions.--For purposes of this section—

(1) the “maintenance” of a machine is the servicing of the machine in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that machine; and

(2) the “repair” of a machine is the restoring of the machine to the state of working in accordance with its original specifications and any changes to those specifications authorized for that machine.

[d] Unauthorized Use of Software**[1] Infringement by Unauthorized Loading of Software into RAM**

Absent a license, unauthorized use of computer software constitutes copyright infringement, because the act of copying the software into the computer's working memory (RAM) to run the software itself constitutes infringement. *See MAI Systems Corp. v. Peak Computer Inc.*, 991 F.2d 511 (9th Cir. 1993), summarized on page 77: The Ninth Circuit held that the defendant's copying of the plaintiff's computer program into a computer's working memory (RAM) to run the program created an embodiment that could be "perceived, reproduced, or otherwise communicated" under section 101 of the Copyright Act, 17 U.S.C. § 101, and consequently was sufficiently "fixed" to qualify as a "copy," giving rise to infringement liability. 991 F.2d at 518-19; *see also Vault Corp. v. Quaid Software Ltd.*, 847 F.2d 255, 260 (5th Cir. 1988) ("the act of loading a program from a medium of storage into a computer's memory creates a copy of the program"), *cited in MAI Systems Corp.*

[2] But, Use Beyond the Scope of a License May Be Simply a Breach of Contract

What if the putative infringer has a license but is using the software beyond the scope of the license? The Second Circuit has promulgated a test for determining whether the copyright owner's claim is for copyright infringement (which creates federal-question jurisdiction) or simply for breach of contract (which does not):

1. the copyright owner's putative copyright claim against the licensee must not be "merely incidental" to what would otherwise be characterized as a contract claim for breach of the license agreement, nor purely a consequence of resolving the contract dispute; and
2. the alleged breach that gives rise to the claim must be:
 - (a) for breach of a condition precedent, in which case the license recited in the license agreement was never effectively granted in the first place, or

- (b) for breach of a covenant in the license agreement that would justify rescission of the agreement, in which case again the license is deemed not effective.

If the above conditions are met, then the licensor's claim sounds in copyright, and a federal court would have federal-question jurisdiction. *See Shoenberg v. Shapolsky Publishers, Inc.*, 971 F.2d 926, 932 (2d Cir. 1992), *subsequent proceeding*, 916 F. Supp. 333, 335-36 (S.D.N.Y. 1996).

Selected cases:

National Car Rental System, Inc. v. Computer Assoc. Int'l, Inc., 991 F.2d 426 (8th Cir. 1993): The court held that a licensee's use of a licensed computer program beyond the scope of the license did not involve unauthorized "copying" of program, and that the licensor's claim of breach of license agreement was not equivalent to claim under exclusive rights arising under Copyright Act, and thus was not preempted.

Computer Assocs. Int'l, Inc. v. State St. Bank & Trust, 789 F. Supp. 469, 475 (D. Mass. 1992). The court held that "[a] use of an authorized copy of copyrighted subject matter ordinarily is not infringing. . . . Therefore, applicable limitations on State Street's use of the programs, if any, must be derived initially from the license agreements, not copyright law."

USAR Systems Inc. v. Brain Works Inc., 887 F. Supp. 84 (S.D.N.Y. 1995): The court dismissed a copyright-infringement action for lack of subject matter jurisdiction. It held that the putative copyright infringement claim was "merely incidental" to a contract-law claim for breach of license agreement.

[e] Disassembly and Reverse Engineering

Disassembly of a copy of machine-readable "object" code, unreadable by humans in itself, as an intermediate-copying step in reverse engineering for creation of another work, can constitute "fair use" if the copy is legitimately in the possession of the reverse engineer.

[1] Selected Cases Involving Reverse Engineering

Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992): Disassembly was held by the Ninth Circuit technically to

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constitute infringement, but to be *fair use* when “disassembly is the only way to gain access to the ideas and functional elements embodied in a computer program and where there is a legitimate reason for seeking such access,” e.g., to facilitate entry into the marketplace by a competitor creating similar but noninfringing programs. *Id.* at 1527.

Atari Games Corp. v. Nintendo of America Inc., 975 F.2d 832 (Fed. Cir. 1992), *affirming* 8 USPQ2d (BNA) 1935 (N.D. Cal. 1991): Atari, the declaratory plaintiff, evidently went too far for the court’s comfort in disassembling a copyrighted Nintendo program embedded in a computer chip. When Atari was only partially successful in physically peeling away the layers of its rival Nintendo’s computer chip to study the embedded programming, Atari obtained a copy of the program from the Copyright Office, stating that it needed the copy for use in defending against a pending infringement suit (see discussion of requirements for obtaining access to copyright registration deposits in § 2.4[b][1]). In fact, no such suit had then been brought. *Id.*, 975 F.2d at 836. The Federal Circuit noted that scope of nonliteral copyright protection for software was limited. *Id.* at 838-40 (**citing Treatise**). It held that it *would* have been fair use for Atari to disassemble an object-code copy of the Nintendo program “to understand [that] program and to distinguish the protected from the unprotected elements of [the] program,” *if* the copy had been lawfully acquired. The court held that under the circumstances, Atari’s unclean hands precluded it from asserting a fair-use defense. *Id.* at 843-44 (affirming preliminary injunction).

Sony Computer Entertainment, Inc. v. Connectix Corp., 203 F.3d 596 (9th Cir. 2000), *reversing* 48 F.Supp.2d 1212, 1214 (N.D. Cal. 1999) (granting preliminary injunction): This was a case similar in some respects to *Sega v. Accolade*, discussed *supra* on page 81, and ultimately with a similar outcome. Plaintiff Sony was the manufacturer of the Sony PlayStation and PlayStation games. Defendant Connectix developed an “emulator,” a software program which could be installed on a computer and used to run PlayStation games. *Id.*, 48 F. Supp. at 1215.

In developing its emulator, Connectix bought a PlayStation, broke it apart, and copied its BIOS (the basic input-output software) from an internal ROM chip to a disk. Connectix’s engineers then used this disk to continue their development of the Connectix emulator. It was undisputed that an early version of the emulator

contained the complete, unchanged Sony BIOS. Eventually, Connectix replaced the Sony BIOS code with its own BIOS code. 48 F. Supp. at 1216. Connectix engineers admitted in deposition that they used copies of the Sony BIOS code to gradually convert Sony's code to their own code. 48 F. Supp. at 1218.

Sony conceded that the finished emulator did not contain any part of Sony's code. 48 F. Supp. at 1214. Its copyright infringement claim was based on a theory of intermediate infringement — it asserted that Connectix “repeatedly duplicated Sony's BIOS code in its entirety and used those copies while it developed a computer program that emulates the hardware components of the PlayStation console,” and that it “disassembled Sony's BIOS in order to develop its own VGS BIOS by gradually replacing elements of Sony's code with its own.” *Id.* at 1217. The district court granted a preliminary injunction against Connectix's distribution of the emulator, even though there was no infringing code left in it, on the theory that “the only effective remedy for such intermediate infringement is to enjoin the end product. If not, an intermediate infringer could always avoid the consequences of illegal copying and use by editing the protected code out of its final product.” 48 F. Supp. at 1224 (paragraphing edited).

The Ninth Circuit reversed the preliminary injunction. It held that “[t]he intermediate copies made and used by Connectix during the course of its reverse engineering of the Sony BIOS were protected fair use, necessary to permit Connectix to make its non-infringing Virtual Game Station function with PlayStation games. Any other intermediate copies made by Connectix do not support injunctive relief, even if those copies were infringing.” 203 F.3d at 599. The appellate court focused on the evidence showing that the making of intermediate copies was in fact necessary under the specific circumstances; it rejected Sony's argument that the reverse engineering could have been accomplished with less intermediate copying, because such a rule “would require that a software engineer, faced with two engineering solutions that each require intermediate copying of protected and unprotected material, often follow the least efficient solution.” *Id.* at 605.

DSC Communications Corp. v. DGI Technologies, Inc., 898 F. Supp. 1183, 1189-92 (N.D. Tex. 1995) (partially vacating ex parte seizure order), *aff'd on other grounds*, 81 F.3d 597 (5th Cir. 1996): In this case, disassembly and reverse-engineering of software was

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not, in and of itself, the cause of the defendant's difficulty — apparently it was the defendant's surreptitious copying of other software owned by the plaintiff that got the defendant into trouble. The defendant did not use a "clean room" approach; that is, the individuals who disassembled the plaintiff's firmware were not walled off from the individuals who developed the defendant's firmware. In an early proceeding partially vacating its own *ex parte* seizure order, the district court noted that while failure to use a clean room meant that the defendant could not negate access, that failure did not rule out a fair-use defense. *Id.* at 1189 n.3.

What sank the *DGI* defendant's fair-use defense was its surreptitious copying of other software. Plaintiff DSC had developed operating-system software that it provided to its customers under a license agreement that prohibiting giving access to the software to third parties. The software was not otherwise available for purchase or licensing. *DSC v. DGI*, 898 F. Supp. at 1192. An agent of the defendant visited a customer that owned circuit boards of both the plaintiff and the defendant, and which possessed a licensed copy of the plaintiff's operating-system software. Without asking permission, the defendant's agent surreptitiously made a copy of the plaintiff's operating-system software and brought it back to the defendant, allegedly for study and reverse-engineering. *Id.* The *DSC* trial court came down hard on the defendant. It refused to believe the defendant's testimony that it was unaware of the licensing agreement for the plaintiff's operating system software. *Id.* at 1194. Analogizing to *Atari*, the court held that it was not fair use for the defendant to disassemble and reverse-engineer a copy of the operating-system software because it was not authorized to possess the copy. *Id.*

(The subsequent trial and appeal apparently focused on the defendant's liability for contributor infringement, for inducing customers to infringe plaintiff DSC's copyright by using DSC's software with defendant DGI's circuit boards, and not on the reverse-engineering fair-use defense. The later proceedings, after DSC's acquisition by the French telecommunications company Alcatel, are reported in *Alcatel USA, Inc. v. DGI Technologies, Inc.*, 166 F.3d 772 (5th Cir. 1999).)

DSC Communications Corp. v. Pulse Communications Inc., 976 F. Supp. 359, 363-64, 43 USPQ2d 1589 (E.D. Va. 1997) (granting judgment as a matter of law), *aff'd in part, rev'd in part, vacated in*

part, and remanded, 170 F.3d 1354 (Fed. Cir. 1999): DSC's competitor Pulse Communications ("Pulsecom") had reverse engineered certain digital switching software in a DSC "Litespan" switching product to develop a competing product. The district court cited *Sega* and *Atari* in granting judgment as a matter of law (JMOL), at the close of plaintiff DSC's case, that "[s]uch copying for reverse engineering of a lawfully acquired system is permissible fair use." But the Federal Circuit vacated that part of the judgment on grounds that, at least as shown by plaintiff DSC's evidence, defendant Pulsecom's activity in question did not constitute fair use, and as a result the grant of a judgment as a matter of law was impermissible:

On the basis of DSC's evidence at trial, Pulsecom's activities in creating copies of the POTS-DI software on its POTS cards by using the RBOCs' Litespan systems does not qualify as "fair use" under the *Sega* analysis. DSC's evidence showed that Pulsecom representatives made copies of the POTS-DI software on Pulsecom POTS cards as part of the ordinary operation of those cards, not as part of an effort to determine how the Litespan system worked. Rather than being part of an attempt at reverse engineering, the copying appears to have been done after Pulsecom had determined how the system functioned and merely to demonstrate the interchangeability of the Pulsecom POTS cards with those made and sold by DSC. 170 F.3d at 1363.

The Federal Circuit noted, however, that defendant Pulsecom had not put on its own evidence (because the trial court granted judgment as a matter of law at the close of DSC's case). The appeals court remanded the case for a new trial. *Id.*

NEC Corp. v. Intel Corp., 10 USPQ2d (BNA) 1177, 1186 (N.D. Cal. 1989): The court found that NEC's engineer did not infringe the copyright in Intel's microcode by disassembling the microcode for study, when the ultimate NEC end product was not infringing.

Bateman v. Mnemonics, Inc., 79 F.3d 1532, 1548 (11th Cir. 1996): The defendant had been found liable for copyright infringement and misappropriation of trade secrets in reverse engineering a circuit board, including disassembling its associated software. The district court had instructed the jury that only

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nonliteral copying could be the subject of an *Altai* filtration defense (see § 2.7[g]). The appeals court reversed, holding that that even literal copying might be permissible under *Altai*; the court also hinted strongly that the defendant's disassembly had been a fair use. *Id.*, 79 F.3d at 1539 nn. 17-18.

Cadence Design Systems, Inc. v. Avant! Corp., 125 F.3d 824, 830-31 (9th Cir. 1997): The appeals court reversed and remanded the lower court's refusal to enjoin the defendant's distribution of its software. It held that the district court was required to determine whether the software produced by the defendant's clean-room process infringed the copyright in the plaintiff's software.

E. F. Johnson Co. v. Uniden Corp., 623 F. Supp. 1485 (D. Minn. 1985): The court found that the defendant had infringed the copyright in the plaintiff's computer software. It noted that "[the] fact that defendant's engineers dumped, flow charted, and analyzed plaintiff's codes does not of itself establish pirating"; it observed that if the defendant had "contented itself with surveying the general outline of the program, thereafter converting the scheme into detailed code through its own imagination, creativity and independent thought, a claim of infringement would not have arisen." *Id.* at 1501-02 n.17.

[2] The Reverse-Engineering Exception in the Digital Millennium Copyright Act

As discussed in § 2.7[h], the Digital Millennium Copyright Act (DMCA) added new section 1201 to Title 17, prohibiting circumvention of technological measures that control access to copyrighted works. Section 1201(f) contains a specific exception to liability for some, but not all, reverse engineering activities:

a person who has lawfully obtained the right to use a copy of a computer program may circumvent a technological measure that effectively controls access to a particular portion of that program *for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs* ... to the extent that any such acts of identification and analysis do not constitute infringement under this title.

17 U.S.C. § 1201(f)(1) (emphasis added).

[f] Marketing of Aftermarket or Add-On Software to Create Similar Audio-Visual Effects

Lewis Galoob Toys, Inc. v. Nintendo of America, Inc., 964 F.2d 965, (9th Cir. 1992) (affirming judgment of noninfringement): The Ninth Circuit held that the sale or use by Galoob of “aftermarket” software (or programmed hardware), designed to *enhance* the use of Nintendo’s copyrighted software and not to *replace* it, was did not infringe Nintendo’s copyrights. Galoob’s “Game Genie” was designed so that it could be plugged into a Nintendo Game Boy video console instead of a game cartridge; then the game cartridge would be plugged into the Game Genie. The programming of the Game Genie permitted the user to alter several of the parameters of the game program by overwriting a particular data byte in the signals exchanged between the game cartridge and the Game Boy (the programming of the game cartridge was not altered). *Id.*, 964 F.2d at 967. The Ninth Circuit noted in dicta that spell-checkers designed to work with word processing programs “could not be produced and marketed if courts were to conclude that the audiovisual display of a word processor and spell-checker combination is a derivative work based on the display of the word processor alone.” *Galoob*, 964 F.2d at 969. Subsequently, Galoob was awarded the entire amount of Nintendo’s \$15 million bond as damages for wrongful injunction. *See* 16 F.3d 1032, 29 USPQ2d 1857 (9th Cir. 1994) (affirming damage award).

Microstar v. Formgen: In the *Microstar* case, a district court confronting a similar situation denied copyright protection to add-on data sequences that could be used in the Duke Nukem 3D computer game, but the Ninth Circuit later reversed that denial. *Microstar v. Formgen, Inc.*, 942 F. Supp. 1312 (S.D. Cal. 1996) (denying preliminary injunction against distribution of CD-ROM containing data sequences, but granting preliminary injunction against use of packaging and screen-saver containing copies of copyrighted images from game), *rev’d in part, aff’d in part*, 154 F.3d 1107 (9th Cir. 1998). The Duke Nukem game had “29 levels through which players advance, killing monsters and other evil creatures.” *Id.*, 942 F. Supp. at 1314. To keep players interested, the copyright owner included a utility program for developing new levels by

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creating .MAP data files; users were encouraged to pass these files on to other players, e.g., over the Internet. *Id.*

The accused infringer in *Microstar* commercially distributed a CD-ROM (compact disk read-only memory) that included 300 of these new user-created levels in the form of its own .MAP files. The copyright owner alleged that this commercial distribution constituted infringement of the game copyright. Citing *Galoob* in passing, the district court denied the copyright owner's motion for preliminary injunction, holding that:

[T]he court is not convinced that the movants have shown that the data sequence in the [accused infringer's CD-ROM] files is subject to copyright protection.

Furthermore, the court finds that [accused infringer and declaratory plaintiff] *Microstar* has shown that the audiovisual elements which appear on the screen [when playing the additional levels] originate from [the copyright owner's] *Duke 3D*, and not from [the accused infringer's] *Nuke It*. *Id.* at 1316 (paragraphing supplied).

The Ninth Circuit reversed the denial of a preliminary injunction. In an opinion by the always-interesting Judge Kozinski, the court first explained its understanding of the technology at issue:

In order to understand FormGen's claims, one must first understand the way D/N-3D [Duke Nukem 3D] works. The game consists of three separate components: the game engine, the source art library and the MAP files.

The game engine is the heart of the computer program; in some sense, it is the program. It tells the computer when to read data, save and load games, play sounds and project images onto the screen.

In order to create the audiovisual display for a particular level, the game engine invokes the MAP file that corresponds to that level. Each MAP file contains a series of instructions that tell the game engine (and, through it, the computer) what to put

where. For instance, the MAP file might say scuba gear goes at the bottom of the screen. The game engine then goes to the source art library, finds the image of the scuba gear, and puts it in just the right place on the screen.

The MAP file describes the level in painstaking detail, but it does not actually contain any of the copyrighted art itself; everything that appears on the screen actually comes from the art library.

Think of the game's audiovisual display as a paint-by-numbers kit. The MAP file might tell you to put blue paint in section number 565, but it doesn't contain any blue paint itself; the blue paint comes from your palette, which is the low-tech analog of the art library, while you play the role of the game engine.

When the player selects one of the N/I levels, the game engine references the N/I MAP files, but still uses the D/N-3D art library to generate the images that make up that level. *Id.*, 154 F.3d at 1110 (footnotes omitted, paragraphing added).

Judge Kozinski's opinion then analogized the MAP files of the Duke Nukem game to more-familiar art forms:

In the present case the audiovisual display that appears on the computer monitor when a N/I level is played is described—in exact detail—by a N/I MAP file.

This raises the interesting question whether an exact, down to the last detail, description of an audiovisual display (and—by definition—we know that MAP files do describe audiovisual displays down to the last detail) counts as a permanent or concrete form for purposes of *Galoob*.

We see no reason it shouldn't. What, after all, does sheet music do but describe in precise detail the way a copyrighted melody sounds? To be copyrighted, pantomimes and dances may be

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“described in sufficient detail to enable the work to be performed from that description.”

Similarly, the N/I MAP files describe the audiovisual display that is to be generated when the player chooses to play D/N-3D using the N/I levels. Because the audiovisual displays assume a concrete or permanent form in the MAP files, *Galoob* stands as no bar to finding that they are derivative works.

Id. at 1111-12 (citations omitted, paragraphing edited). The Ninth Circuit court concluded that, as to the question of substantial similarity of ideas and expression, “FormGen will doubtless succeed in making these showings since the audiovisual displays generated when the player chooses the N/I levels come entirely out of D/N-3D’s source art library.” *Id.* at 1112. It explained that:

The work that Micro Star infringes is the D/N-3D story itself—a beefy commando type named Duke who wanders around post-Apocalypse Los Angeles, shooting Pig Cops with a gun, lobbing hand grenades, searching for medkits and steroids, using a jetpack to leap over obstacles, blowing up gas tanks, avoiding radioactive slime.

A copyright owner holds the right to create sequels, and the stories told in the N/I MAP files are surely sequels, telling new (though somewhat repetitive) tales of Duke’s fabulous adventures.

A book about Duke Nukem would infringe for the same reason, even if it contained no pictures.

Id. (footnote and citations omitted).

[g] Copying the “Structure, Sequence, and Organization” of Software: The Successive-Filtration Test

As the Second Circuit noted in its famous *Altai* decision, under classical copyright principles it is well-settled that “[a]s a general matter, and to varying degrees, copyright protection extends beyond a literary work’s strictly textual form to its non-literal components.” The court pointed out that

As we have said, “[i]t is of course essential to any protection of *literary* property [*sic*] ... that the right cannot be limited literally to the text, else a plagiarist would escape by immaterial variations.”

Thus, where “*the fundamental essence or structure* of one work is duplicated” ... courts have found copyright infringement.

Computer Associates International, Inc., v. Altai, Inc., 982 F.2d 693, 701 (2d Cir. 1992) (emphasis and paragraphing added, extensive citations omitted).

Where software is concerned, deciding actual cases on that basis has often proved to be difficult because of a countervailing policy: “It is a fundamental principle of copyright law that a copyright does not protect an idea, but only the expression of the idea. This axiom of common law has been incorporated into the governing statute,” which provides that “[i]n no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.” *Altai*, 982 F.2d at 703, *citing Baker v. Selden*, 101 U.S. 99, 25 L.Ed. 841 (1879) (holding that plaintiff who developed accounting system and published a book explaining it could not prevent others from using system); 17 U.S.C. § 102(b).

The struggle to define a workable analysis of software copyright claims is fueled by two competing policy currents underlying American intellectual property law generally and copyright law. The law restricts copying of innovations in certain circumstances, to provide innovators with incentives to come forward with their work. On the other hand, the law also limits the protection afforded to innovation because it favors vigorous competition in the marketplace—including copying of unprotected innovation so that the benefits thereof will quickly be disseminated to the public. *See, e.g.*, 35 U.S.C. §§ 102, 103 (prohibiting patent protection for inventions that are not new or that would have been obvious to a person of ordinary skill); 17 U.S.C. § 102(b) (prohibiting copyright protection for “any idea, procedure, process, system, method of operation, concept, principle or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work”). *See also, e.g.*, *Feist Publications, Inc.*,

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v. Rural Telephone Service Co., 499 U.S. 340, 111 S. Ct. 1282, 1286 (1991) (O'Connor, J.; holding that white pages of telephone directory are not copyrightable as a compilation of facts and that factual information therein can be freely copied; competitors may not be forced to incur costs that would result from being forced to generate a new compilation from scratch), *discussed supra* § 2.1[b]; *Bonito Boats, Inc., v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 109 S. Ct. 971, 981, 984-85 (1989) (O'Connor, J.; holding that state law prohibiting plug-molding methods of copying boat hulls was preempted by federal patent law, which implicitly establishes a federal right to copy unpatented articles; state law may not interfere with public's right to economic benefits of most efficient method of manufacturing unpatented articles).

As the Supreme Court has noted on a number of occasions, “[t]he primary objective of copyright is not to reward the labor of authors, but [t]o promote the Progress of Science and useful Arts.” *Feist*, 499 U.S. at 349, 111 S. Ct. at 1290, *quoting* U.S. Const. art. I, § 8, cl. 8.

As a result, to establish a claim of copyright infringement, a plaintiff must show *both* (a) ownership of a valid copyright and (b) that the defendant copied *protectable* elements of the copyrighted work. *See Feist*, 499 U.S. at 361, 111 S. Ct. at 1295-96; *Altai*, 982 F.2d at 701.

For a while, the courts definitely seemed to favor copyright owners, who frequently were able to obtain expansive protection of “nonliteral” elements of their software. In recent years, however, the courts appear to have been markedly more conservative in the scope of protection afforded to such nonliteral elements.

At least for the moment, the most popular non-literal copyright infringement analysis for computer software seems to be the three-pronged “successive filtration” test articulated in *Altai*, with variations by other courts, notably *Gates Rubber*.

(That test may also be appropriate in cases where literal copying is alleged as well. *Bateman*, 79 F.3d at 1543-46 (reversing judgment on jury verdict of copyright infringement and remanding for new trial; holding that district court erred in instructing jury that *Altai* analysis was applicable only to nonliteral copying).)

In *Altai*, the Second Circuit gently rejected the Third Circuit’s much-criticized “structure, sequence, and organization” approach in

Whelan v. Jaslow. Whelan Assocs., Inc. v. Jaslow Dental Laboratories, 797 F.2d 1222, 1236-43 (3d Cir. 1986) (affirming judgment of infringement on basis of similarity in “structure, sequence, and organization”).

Instead, the *Altai* court adapted Learned Hand’s “levels of abstraction” analysis from *Nichols v. Universal Pictures Co. Nichols v. Universal Picture Co.*, 45 F.2d 119, 121 (2d Cir. 1930). It suggested that a three-part approach should be used to test whether an accused computer program is “substantially similar” to, and thus might infringe the exclusive rights in, a copyrighted program:

In ascertaining substantial similarity under this approach, a court would/:

[1] [F]irst break down the allegedly infringed program into its constituent structural parts.

[2] Then, by examining each of these parts for such things as *[a]* incorporated ideas, *[b]* expression that is necessarily incidental to those ideas, and *[c]* elements that are taken from the public domain, a court would then be able to sift out all non-protectable material.

[3] Left with a kernel, or possible kernels, of creative expression after following this process of elimination, the court’s last step would be to compare this material with the structure of an allegedly infringing program. The result of this comparison will determine whether the protectable elements of the programs at issue are substantially similar so as to warrant a finding of infringement.

Altai, 982 F.2d at 706 (paragraphing and bracketed numbering supplied). The Second Circuit affirmed as not clearly erroneous the judgment below that, on the evidence presented, the accused software was *not* substantially similar to the copyrighted software in any protectable respect. *Id.* at 715.

The Tenth Circuit’s *Gates Rubber* opinion approved the use of a variation of the *Altai* analysis: Abstraction is still to be performed first, but filtration could come after comparison because that sequence of analysis is likely to present a clearer picture whether

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impermissible copying has occurred. *Gates Rubber Co.*, 9 F.3d at 833 n.7; *see also Mitel*, 124 F.3d at 1372 (“the appropriate test to be applied and the order in which its various components are to be applied ... may vary depending upon the claims involved, the procedural posture of the suit, and the nature of the [works] at issue”), *quoting Gates Rubber Co.*, 9 F.3d at 834 n. 12.

The Fifth Circuit followed the *Gates Rubber* order of analysis in *Engineering Dynamics*, 26 F.3d at 1342-43, and in *CMAC Computer Management Assistance Co. v. Robert F. DeCastro, Inc.*, 220 F.3d 396 (5th Cir. 2000) (affirming bench-trial judgment of no infringement; features of software for picture-framing industry for which copyright protection was claimed were dictated by standard industry practices and by specific needs of business).

[1] Six Levels of Declining Abstraction

In any given case, the abstraction step is likely to be heavily dependent on the imaginativeness of the plaintiff’s trial counsel and expert witness in discerning “creative” elements of the computer program. The *Gates Rubber* court set out a series of factors that could be regarded as creative elements, which it referred to as “at least six levels of generally declining abstraction: (i) the main purpose, (ii) the program structure, (iii) modules, (iv) algorithms and data structures, (v) source code, and (vi) object code.” *Gates Rubber Co.*, 9 F.3d at 835, *quoted in Baystate Technologies*, 946 F. Supp. at 1089. Other courts appear to be using these six levels at least as a starting point. *See, e.g., Baystate Technologies*, 946 F. Supp. at 1089; *Harbor Software, Inc. v. Applied Systems, Inc.*, 925 F. Supp. 1042, 1046-47, *subsequent proceeding*, 936 F. Supp. 167 (S.D.N.Y. 1996) (granting in part and denying in part defendant’s motion for summary judgment).

The abstraction step is likely to be unnecessary if the copyright owner specifically identifies the non-literal program elements that allegedly are infringe (perhaps in response to contention interrogatories propounded by the defendant). The *MiTek* court noted that “the district court took at face value MiTek’s representations as to what elements of the ACES program MiTek considered to be protectable expression. In accepting MiTek’s representations, the district court committed no error.” *MiTek*, 89 F.3d at 1555; *see also Mitel*, 124 F.3d at 1372 (“[n]ot every case requires an extensive abstraction-filtration-comparison analysis”).

[2] Filtration of Unprotectable Subject Matter

The filtration step in the *Altai* analysis is perhaps the most critical one, and arguably the most problematic. Perhaps for that reason, in the 1996 *Harbor Software* opinion, a district court ruled that the filtration process is a matter for the court, not for the jury, reasoning by analogy to the Supreme Court's *Markman* decision in the patent arena. *See Harbor Software*, 925 F. Supp. at 1046-47.

Filtration of externally-dictated factors: The *Altai* court noted that aspects of a program might be unprotectable if they are constrained by efficiency considerations, by factors external to the program itself (e.g., features required by specifications of the computer and supporting software, or by industry standards and customary programming practices), or by the existence of a limited number of ways to design the program in relevant respect. *See Altai*, 982 F.2d at 707-10. Other courts have followed *Altai*'s lead on that point. *See, e.g., MiTek*, 89 F.3d at 1557 n.20 (alternative holding; even if ACES program's menu structure were not unprotectable as a method of operation, it was unprotectable because it tracked the way in which human workers did job in question); *Engineering Dynamics*, 46 F.3d at 410 (directing district court to determine on remand whether data formats were so influenced by industry practice as to be unprotectable); *Baystate Technologies*, 946 F. Supp. at 1088-89 (holding that selection of data-structure names was driven by industry-standard practice and by efficiency considerations and therefore was unprotectable); *Harbor Software*, 925 F. Supp. at 1049-52 (some aspects of program were protectable, others not because dictated by externalities). *But see Control Data Systems, Inc. v. Infoware, Inc.*, 903 F. Supp. at 1323 (rejecting defendant's contention that externalities limited the range of choices available to programmers).

Filtration of mathematical constants: The *Gates Rubber* court likewise ruled that a number of the factors considered by the trial court in that case were not permissible evidence of substantial similarity, at least not without further analysis and explanation. "Mathematical constants" in particular were disapproved by the appellate court as an impermissible factor bearing on substantial similarity. The court held outright that the mathematical constants in question were unprotectable facts and the district court therefore should not have treated similarity in constants as evidence of

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infringement. *Gates Rubber Co.*, 9 F.3d at 844; *see also* § 2.2 (cases discussing copyrightability of data).

Filtration applied to functional characteristics: The *Gates Rubber* appellate court also called for further explanation, “in light of the process-expression dichotomy, merger and scenes à faire doctrines,” of other similarity factors that the lower court had used, e.g.:

- menus and sorting criteria,
- control and data flow,
- engineering calculation and design modules,
- common errors,
- fundamental tasks, and
- install[ation] files.

Gates Rubber Co., 9 F.3d at 844-47; *see also* e.g., *Ashton-Tate Corp. v. Ross*, 916 F.2d 516, 521-22 (9th Cir. 1990) (affirming holding that list of typical spreadsheet commands to be implemented in spreadsheet program did not rise to the level of copyrightable subject matter; plaintiff therefore was not a joint author); *Healthcare Affiliated Services, Inc. v. Lippany*, 701 F. Supp. 1142, 1151-52 (W.D. Pa. 1988) (refusing to enter preliminary injunction; evidence of similarities in gross-level methodology choices was insufficient to warrant finding of substantial similarity of protectable elements); *NEC Corp. v. Intel Corp.*, 10 USPQ2d (BNA) 1177, 1183 (N.D. Cal. 1989) (crediting testimony of expert witness that many similarities were functional in nature and in some instances inevitable; finding that similarities between accused microcode and defendant’s copyrighted microcode were not a result of copying of protectable elements); *Q-Co Industries, Inc. v. Hoffman*, 625 F. Supp. 608, 615 (S.D.N.Y. 1985) (refusing to enter preliminary injunction on copyright infringement claim on grounds that similarities between teleprompter programs were limited to elements that would have been part of any program of that kind).

Filtration as applied to screen displays: Whether screen-display similarity should be filtered out is an often-disputed point. This was one of the principal issues in *Apple v. Microsoft* as well as in *Lotus v. Borland*, and has arisen in other cases as well. *See, e.g., MiTek*, 89 F.3d at 1557-58 (program menus merely followed the same general steps that would be taken by a draftsman designing a roof truss by hand and were therefore unprotectable); *Harbor Software*, 925 F. Supp. at 1052 (holding that “sufficient expressive choices were made in the selection and arrangement of [screen-display

elements] to satisfy the minimal requirement of originality and warrant protection"); *Productivity Software Int'l Inc. v. Healthcare Technologies, Inc.*, 1995 WL 437526, 37 USPQ2d 1036 (S.D.N.Y. 1995) (granting summary judgment of noninfringement; "[a]ny similarity between the two menu bars is due only to the fact that industry standards dictate the limited number of command labels available"); *Manufacturers Technologies, Inc. v. CAMS, Inc.*, 706 F. Supp. 984 (D. Conn. 1989) (holding that some screen displays and sequences of displays were protectable but others were dictated by external or functional concerns and were not protectable; *Digital Communications Assocs., Inc. v. Softklone Distrib. Corp.*, 659 F. Supp. 449, 455-56 (N.D. Ga. 1987) (holding that defendant's arrangement of command prompts and status displays on computer screen infringed copyright in plaintiff's program).

Protectability of combinations of otherwise-unprotectable elements: A copyright defendant will not necessarily win just because individual "elements" of a copyrighted program are unprotectable. The court is still required to determine "whether the manner in which [the copyright owner] combined the various design elements in its software was protectible expression, and, if it was, whether [the defendant] infringed that expression." *Softel, Inc. v. Dragon Medical and Scientific Communications, Inc.*, 118 F.3d 955, 966-67, 43 USPQ2d 1385 (2d Cir. 1997) (vacating and remanding judgment of noninfringement).

[3] Comparison: Close Similarity May Be Required

Conventional copyright analysis requires a showing a substantial similarity between a copyrighted work and an accused infringing work. As a practical matter, a software copyright owner asserting nonliteral infringement may be required to demonstrate that the similarities are significant in the context of the *content, purpose, use, or operation* of the copyrighted program and accused program *as a whole*. *Baystate*, 946 F. Supp. at 1090.

An even more stringent standard may be imposed if a *Feist* copyright is claimed in an original selection or arrangement of otherwise-unprotectable elements. In that case, the copyright owner is likely to be required to demonstrate that in that respect the accused software is "virtually identical" to the copyrighted software. *MiTek*, 89 F.3d at 1558-59 (holding that where copyright is claimed in a compilation of otherwise-unprotectable elements, accused

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program must meet “virtual identicity” standard), *citing with approval Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir.1994) (noting that, in the case of alleged infringement of a work as a whole (i.e., a compilation), “there can be no infringement unless the works are virtually identical”). *MiTek*, 89 F.3d at 1558-59 (holding that where copyright is claimed in a compilation of otherwise-unprotectable elements, accused program must meet “virtual identicity” standard).

[h] “Cracking” of Copyright Protection as Violation of Digital Millennium Copyright Act

[Portions of this section are adapted from Universal City Studios, Inc. v. Reimerdes, 82 F.Supp.2d 211 (S.D.N.Y. 2000) (granting preliminary injunction against distribution of “DeCSS” software, used for cracking code protecting movies recorded on digital versatile disks or “DVDs”), subsequent proceeding, 111 F. Supp. 294 (S.D.N.Y. 2000) (granting permanent injunction), affirmed sub nom. Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001); and from a U.S. Copyright Office summary of the DMCA available on the World Wide Web at www.loc.gov; no copyright claimed in works of the U.S. Government.]

[1] The Prohibition Against Circumvention of Access-Control or Copy-Protection Measures

The Digital Millennium Copyright Act (DMCA) added a new chapter 12 to Title 17 of the U.S. Code, in which the Copyright Act is codified. In the new chapter, section 1201 implements an obligation to provide adequate and effective protection against circumvention of technological measures used by copyright owners to protect their works.

Section 1201 divides technological measures into two categories: *(i)* measures that prevent unauthorized *access* to a copyrighted work, and *(ii)* measures that prevent unauthorized *copying* of a copyrighted work. Making or selling devices or services that are used to circumvent either category of technological measure is prohibited in certain circumstances, described below. As to the act of circumvention in itself, the provision prohibits circumventing the first category of technological measures, but not the second. This distinction was employed to assure that the public will have the continued ability to make fair use of copyrighted works.

Since copying of a work may be a fair use under appropriate circumstances, section 1201 does not prohibit the act of circumventing a technological measure that prevents *copying*. By contrast, since the fair use doctrine is not a defense to the act of gaining unauthorized *access* to a work, the act of circumventing a technological measure in order to gain access is prohibited.

In particular, section 1201(a)(2) provides that:

No person shall ... offer to the public, provide or otherwise traffic in any technology ... that--

(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under [the Copyright Act];

(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under [the Copyright Act]; or

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a work protected under [the Copyright Act].

17 U.S.C. § 1201(a)(2).

The statute defines "circumvent a technological measure" to mean descrambling a scrambled work, decrypting an encrypted work, or "otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner." 17 U.S.C. § 1201(a)(3)(A).

The statute explains further that "a technological measure 'effectively controls access to a work' if the measure, in the ordinary course of its operation, requires the application of information or a process or a treatment, with the authority of the copyright owner, to gain access to a work." *Id.* § 1201(a)(3)(B).

Selected cases:

RealNetworks, Inc. v. Streambox, Inc., No. 2:99CV02070, 2000 WL 127311 (W.D. Wash. Jan. 18, 2000) (granting order for

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preliminary injunction) *[summary adapted from opinion]*: RealNetworks offered “RealPlayer” software that enable consumers to access audio and video content, in “RealMedia” format, over the Internet through a process known as “streaming.” When an audio or video clip is “streamed” to a consumer, no trace of the clip is left on the consumer’s computer, unless the content owner has permitted the consumer to download the file. Streaming is contrasted with “downloading,” a process by which a complete copy of an audio or video clip is delivered to and stored on a consumer’s computer. Once a consumer has downloaded a file, he or she can access the file at will, and can generally redistribute copies of that file to others. The court noted that to guard against the unauthorized copying and redistribution of their content, many copyright owners do not make their content available for downloading, and instead distribute the content using streaming technology in a manner that does not permit downloading.

The Streambox VCR software enabled end-users to access and download copies of RealMedia files that are streamed over the Internet. In order to gain access to RealMedia content located on a server running RealNetworks’ server software (“RealServer”), the VCR software mimicked RealPlayer software and circumvented the authentication procedure, or Secret Handshake, that a RealServer required before it would stream content. In other words, the Streambox VCR was able to convince the RealServer into thinking that the VCR was, in fact, a RealPlayer. Having convinced a RealServer to begin streaming content, the Streambox VCR, like the RealPlayer, acted as a receiver. However, unlike the RealPlayer, the VCR ignored the Copy Switch instruction that told a RealPlayer whether an end-user was allowed to make a copy of (i.e., download) the RealMedia file as it is being streamed. The VCR thus allowed the end-user to download RealMedia files even if the content owner had used the Copy Switch instruction to prohibit end-users from downloading the files. The Streambox VCR thus circumvented both the access control and copy protection measures.

The court held that the Streambox VCR software met two of the three alternative tests for liability under the DMCA, because *(i)* at least a part of the Streambox VCR software was primarily, if not exclusively, designed to circumvent the access control and copy protection measures that RealNetworks afforded to copyright owners, and *(ii)* the portion of the VCR software that circumvented the Secret Handshake so as to avoid the Copy Switch instruction had

no significant commercial purpose other than to enable users to access and record protected content and did not appear to have any other commercial value. *Id.*, 2000 WL 127311 at *7.

[2] Exceptions to the Anti-Circumvention Prohibition

The anti-circumvention prohibitions contained in section 1201 are subject to a number of exceptions. One is an exception to the operation of the entire section, for law enforcement, intelligence and other governmental activities. (Section 1201(e)). The others relate to section 1201(a), the provision dealing with the category of technological measures that control access to works.

The broadest of these exceptions, section 1201(a)(1)(B)-(E), establishes an ongoing administrative rule-making proceeding to evaluate the impact of the prohibition against the act of circumventing such access-control measures. This conduct prohibition does not take effect for two years. Once it does, it is subject to an exception for users of a work which is in a particular class of works if they are or are likely to be adversely affected by virtue of the prohibition in making noninfringing uses.

The applicability of the exemption is determined through a periodic rulemaking by the Librarian of Congress, on the recommendation of the Register of Copyrights, who is to consult with the Assistant Secretary of Commerce for Communications and Information.

The six additional exceptions are as follows:

1. *Nonprofit library, archive and educational institution exception (section 1201(d)).* The prohibition on the act of circumvention of access control measures is subject to an exception that permits nonprofit libraries, archives and educational institutions to circumvent solely for the purpose of making a good faith determination as to whether they wish to obtain authorized access to the work.

2. *Reverse engineering (section 1201(f)).* This exception permits circumvention, and the development of technological means for such circumvention, by a person who has lawfully obtained a right to use a copy of a computer program for the sole purpose of identifying and analyzing elements of the program necessary to achieve interoperability with other programs, to the extent that such acts are permitted under copyright law.

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3. *Encryption research (section 1201(g))*. An exception for encryption research permits circumvention of access control measures, and the development of the technological means to do so, in order to identify flaws and vulnerabilities of encryption technologies.

4. *Protection of minors (section 1201(h))*. This exception allows a court applying the prohibition to a component or part to consider the necessity for its incorporation in technology that prevents access of minors to material on the Internet.

5. *Personal privacy (section 1201(i))*. This exception permits circumvention when the technological measure, or the work it protects, is capable of collecting or disseminating personally identifying information about the online activities of a natural person.

6. *Security testing (section 1201(j))*. This exception permits circumvention of access control measures, and the development of technological means for such circumvention, for the purpose of testing the security of a computer, computer system or computer network, with the authorization of its owner or operator.

Selected cases:

Universal City Studios, Inc. v. Reimerdes, 82 F. Supp.2d 211 (S.D.N.Y. 2000) (granting preliminary injunction), *subsequent proceeding*, 111 F. Supp. 294 (S.D.N.Y. 2000) (granting permanent injunction), *affirmed sub nom. Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2d Cir. 2001): In this early case brought under the DMCA, several of the foregoing exceptions to liability were held not to shield “content crackers” from liability. The *Reimerdes* case was another episode in the continuing battle of the movie industry against unauthorized copies; *cf. Sony Corp. of America v. Universal City Studios*, 464 U.S. 417, 104 S.Ct. 774, 78 L.Ed.2d 574 (1984) (holding that home use of video cassette recorders (VCRs) for “time-shifting” recording of movies and other programming broadcast on television did not infringe copyrights in the programming).

The *Reimerdes* defendants had posted, on the Web, software known as DeCSS. That software could crack the Content Scramble System (“CSS”) encryption that provides anti-copying protection for movies distributed on DVD (digital versatile discs). Several movie studios filed suit against them. The defendants claimed that they were entitled to the benefit of the reverse-engineering, encryption-

research, and security-testing exceptions to liability. The court had no trouble rejecting the defendants' claims, *see* 82 F. Supp.2d at 217-20; it granted a preliminary injunction and later a permanent injunction. The permanent injunction prohibited even linking to other Web sites containing the DeCSS code; the Second Circuit had no trouble affirming that prohibition against a free-speech challenge. *See* 273. F3d art 455-58.

DVD Copy Control Ass'n v. Bunner, 2001 WL 1340619 (Cal. App. 6 Dist. Nov. 1, 2001): In a trade-secret case under state law, a California appellate court looked to the First Amendment in reversing a preliminary injunction that had prohibited the defendant from posting DeCSS source code on his Web site. The appellate court held that "DeCSS is a written expression of the author's ideas and information about decryption of DVDs without CSS." *Id.* at __. The court then held that "the trial court's preliminary injunction barring Bunner from disclosing DeCSS can fairly be characterized as a prohibition of 'pure' speech." *Id.* at __.

Without deciding whether the defendant had engaged in misappropriation of trade secrets, the *Bunner* court held that the plaintiffs' trade-secret interests were trumped by the defendant's First Amendment free-speech rights. Whereas the DMCA's *copyright*-based prohibitions were constitutionally grounded in the Copyright Clause, trade-secret law "lacks any constitutional foundation. Consequently, a clash between the trade secrets law and the First Amendment does not involve a balancing between two constitutional interests." *Id.* at __. Moreover, "injunctions in copyright infringement cases have been upheld on the ground that First Amendment concerns are protected by and coextensive with the [Copyright Act's] fair use doctrine." *Id.* at __ (citation and internal quotation marks omitted). Finally, "the statutory prohibition on disclosures of trade secrets is of infinite duration rather than 'for limited Times.' While the limited period of copyright protection authorized by the United States Constitution ensures that copyrighted material will eventually pass into the public domain, thereby serving the public interest by increasing its availability to the general public, the [Uniform Trade Secrets Act] bars disclosure of a trade secret for a potentially infinite period of time, thereby ensuring that the trade secret will never be disclosed to the general public." *Id.* at __.

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The Bunner court distinguished cases where injunctions were granted to enforce nondisclosure agreements: “The enforcement of a contractual nondisclosure obligation does not offend the First Amendment. A voluntary agreement not to disclose a trade secret ordinarily waives any First Amendment protection for an ensuing disclosure.” *Id.* at ____.

[3] No “Betamax” Fair-Use Defense Under the DMCA

As discussed in the *RealNetworks* opinion summarized in § 2.7[h][1], the DMCA does not provide a “time-shifting” fair-use defense under the *Sony* “Betamax” doctrine in traditional copyright law (see § 2.9[a]). *See RealNetworks, Inc. v. Streambox, Inc.*, No. 2:99CV02070, 2000 WL 127311 at *7-9 (W.D. Wash. Jan. 18, 2000) (granting order for preliminary injunction) (reviewing statutory language).

[i] Removal of “Copyright Management Information”

[This subsection is adapted, largely verbatim, from a U.S. Copyright Office summary, available on the World Wide Web at www.loc.gov; no copyright claimed in works of the U.S. Government.]

As part of the Digital Millennium Copyright Act (DMCA), Congress enacted new section 1202 in Title 17 to protect the integrity of copyright management information (CMI). CMI is defined as identifying information about a copyrighted work, the author, the copyright owner, and in certain cases, the performer, writer or director of the work, as well as the terms and conditions for use of the work, and such other information as the Register of Copyrights may prescribe by regulation. (Information concerning users of works is explicitly excluded.) *See* 17 U.S.C. § 1202(c).

The scope of the protection is set out in two separate paragraphs, the first dealing with false CMI and the second with removal or alteration of CMI:

- Subsection (a) prohibits the knowing provision or distribution of false CMI, if done with the intent to induce, enable, facilitate or conceal infringement.
- Subsection (b) bars the intentional removal or alteration of CMI without authority, as well as the dissemination of CMI or copies of works, knowing that the CMI has been removed or altered without authority.

Liability under subsection (b) requires that the act be done with knowledge or, with respect to civil remedies, with reasonable grounds to know that it will induce, enable, facilitate or conceal an infringement.

See 17 U.S.C. § 1202(a), (b).

Section 1202 is subject to a general exemption for law enforcement, intelligence and other governmental activities. *See 17 U.S.C. § 1202(d).* It also contains limitations on the liability of broadcast stations and cable systems for removal or alteration of CMI in certain circumstances where there is no intent to induce, enable, facilitate or conceal an infringement. *See 17 U.S.C. § 1202(e).*

§ 2.8 Copyright Infringement and the Internet

A variety of Internet activities may violate the exclusive rights of one or more copyright owners if done without authorization.

[a] Posting to Web Sites, Etc.

Posting a work to an Internet-accessible server – e.g., posting the work on a Web site from which it can be downloaded by others – can infringe one or more copyrights. Examples include:

- posting someone else's copyrighted music, text, graphic, computer program, etc. to a Web site or a Usenet newsgroup.
- transmitting the text of someone else's book, article, etc., via an email message or via one of the file-sharing software systems such as Napster.

Selected cases:

UMG Recordings, Inc. v. MP3.com, Inc., 92 F. Supp.2d 349 (S.D.N.Y. 2000) (granting motion for partial summary judgment of copyright infringement) [*the summary below is adapted from the opinion at 350*]: The technology known as “MP3” permits rapid and efficient conversion of compact disc recordings (“CDs”) to computer files easily accessed over the Internet. *See generally Recording Industry Ass’n of America v. Diamond Multimedia Systems Inc.*, 180 F.3d 1072, 1073-74 (9th Cir.1999). Utilizing this technology, defendant MP3.com launched its “My.MP3.com” service, which was advertised as permitting subscribers to store, customize and listen to the recordings contained on their CDs from any place where they

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have an Internet connection. To make good on that offer, MP3.com purchased tens of thousands of popular CDs in which plaintiffs held the copyrights, and, without authorization, copied their recordings onto its computer servers so as to be able to replay the recordings for its subscribers. To access such a recording, a subscriber to MP3.com was required either to “prove” that he already owns the CD version of the recording by inserting his copy of the commercial CD into his computer CD-Rom drive for a few seconds (the “Beam-it Service”) or to purchase the CD from one of MP3.com’s cooperating online retailers (the “instant Listening Service”). Thereafter, however, the subscriber was able to access via the Internet from a computer anywhere in the world the copy of plaintiffs’ recording made by defendant. MP3.com sought to portray its service as the “functional equivalent” of storing its subscribers’ CDs, but in actuality, the court found, it was re-playing for the subscribers converted versions of the recordings it copied, without authorization, from plaintiffs’ copyrighted CDs. The court held that “[o]n its face, this makes out a presumptive case of infringement under the Copyright Act of 1976 ...” 92 F. Supp.2d at 350 (citations and footnote omitted). The court also rejected MP3.com’s “fair use” defense as discussed infra at § 2.9[a][2].

Religious Technology Center v. Lerma, 1996 WL 633131, 40 USPQ2d 1569 (E.D. Va. 1996): The defendant had downloaded or scanned copyrighted materials owned by the Church of Scientology. The court granted summary judgment of copyright infringement.

Religious Technology Center v. Netcom On-Line Communication Services, Inc., 907 F. Supp. 1361 (N.D. Cal. 1995): The Church of Scientology sued Internet service provider Netcom for infringement because of postings made via Netcom. The court granted Netcom’s motion for summary judgment that Netcom was not a direct infringer of Scientology copyrights in materials posted to Usenet, but denied the motion as to contributory infringement claim, because a fact issue existed about Netcom’s knowledge of the infringing activities.

Michaels v. Internet Entertainment Group, Inc., 5 F. Supp. 2d 823 (C.D. Cal. 1998): The court granted a preliminary injunction against posting, on the Web, digitized videos of rock star Brent Michaels and actor Pamela Anderson Lee having sexual intercourse; such distribution would conflict with Lee’s and Michaels’s exclusive

rights to distribute copies of the videotape to the public and to publicly display the videotape.

Marobie-FL, Inc. v. Nat'l Ass'n of Fire Equipment Distributors, 983 F. Supp. 1167 (N.D. Ill. 1997): The court granted partial summary judgment that the defendant was liable for posting a copyrighted collection of clip art on its Web site. *Id.* at 1173.

[b] “Sharing” of Copyrighted Files Over the Internet

Universal City Studios, Inc. v. Reimerdes, 82 F.Supp.2d 211, *subsequent proceeding*, 111 F.Supp.2d 294 (S.D.N.Y. 2000): The court enjoined the defendants from posting DeCSS software on their Web sites as summarized in § 2.7[h][1]); see also § 2.8[g] (court enjoins *Reimerdes* defendants from linking to other sites hosting the DeCSS software).

A & M Records, Inc. v. Napster, Inc., 114 F.Supp.2d 896 (N.D. Cal. 2000), *aff'd in pertinent part, rev'd in part and remanded*, 239 F.3d 1004 (9th Cir. 2001), *after remand*, 284 F.3d 1091 (9th Cir. 2002) (affirming modified shut-down injunction): *[t]his summary adapted from district court opinion*: A & M Records and seventeen other record companies (“record company plaintiffs”) filed a complaint for contributory and vicarious copyright infringement, among other claims, against Napster, Inc., an Internet start-up that enables users to download MP3 music files without payment. The plaintiffs successfully moved for a preliminary injunction prohibiting Napster from engaging in or assisting others in copying, downloading, uploading, transmitting, or distributing copyrighted music without the express permission of the rights owner. The Ninth Circuit noted that “[t]he mere existence of the Napster system, absent actual notice and Napster's demonstrated failure to remove the offending material, is insufficient to impose *contributory* liability,” but it also noted that because Napster had a financial interest in the infringement, “Napster may be *vicariously* liable when it fails to affirmatively use its ability to patrol its system and preclude access to potentially infringing files listed in its search index.” 239 F.3d at 1027 (emphasis added).

[c] Infringement Liability for Web Surfing Per Se?

Unauthorized *posting* of a copyrighted work on the World Wide Web obviously can constitute copyright infringement. Such a

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transmission results in the creation of a copy on one or more computers. If done without authorization, creation of such a copy violates the copyright owner's exclusive right to make copies of the work.

What about the person who uses a Web browser to *retrieve* information from a Web site (a "Web surfer")? Suppose that Jane Doe uses her Web browser to view a copyrighted work on a Web site. In doing so, she is causing a copy of the work to be created in the working memory, i.e., RAM, of her computer, and probably also more permanently "in cache" on her hard disk drive. *Cf. MAI Systems Corp. v. Peak Computer Inc.*, 991 F.2d 511, 518-19 (9th Cir. 1993) (affirming summary judgment of infringement; copying of a computer program into a computer's working memory (RAM) to run the program created an embodiment that could be "perceived, reproduced, or otherwise communicated" under section 101 of the Copyright Act, 17 U.S.C. § 101, and consequently was sufficiently "fixed" to qualify as a "copy," giving rise to infringement liability). The question then arises: Were those copies authorized?

If the copyrighted work was posted on the Web site by the copyright owner itself (or with the owner's permission), then the surfing / copying likely would be deemed to have been implicitly and perhaps even explicitly authorized by the owner. After all, the whole point of posting a document on the Web is to permit convenient viewing — i.e., making of at least a temporary copy — of a document by others.

On the other hand, if the copyrighted work was posted on the Web site *without* the copyright owner's permission, then theoretically the *surfer* might be liable for making an unauthorized copy, whether or not s/he knew that the material had not been authorized for posting. The surfer is in fact causing a copy to be made from the Web site. While innocence does provide a limited shield against a *statutory* damages award, it is not a defense to liability; "[a]s a matter of law, 'innocent infringement,' or copying from a third source wrongfully copied from the plaintiff, without knowledge that the third source was infringing, does not absolve a defendant of liability for copyright infringement." *Lipton v. The Nature Co.*, 71 F.3d 464, 471 (2d Cir. 1995) (affirming summary judgment of infringement; even giving credit to evidence of innocence, defendant was not entitled to assert innocent-infringer defense).

(The Copyright Act provides for a reduced award of *statutory* damages (as opposed to profits and proven actual damages), in the discretion of the court, if the defendant proves that it did not know and had no reason to believe it was infringing. *See* 17 U.S.C. § 504(c)(2).)

In such a situation Jane Doe, the accused Web surfer, might be able to assert absent some sort of fair-use defense. *See* 17 U.S.C. § 107 (fair-use defense).

[d] Trespass Liability for Web Surfing Per Se?

Now consider the situation in which a Web site contains a link to a page of information, but the link text says, in effect, "If you are a lawyer, you are not allowed to access this information." According to the court in *eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 1058 (N.D. Cal. 2000) (granting preliminary injunction), the Web site owner can use a trespass-to-chattels theory to block access to lawyers, or to other unauthorized human- or electronic-robot researchers. *See id.* at 1069-70 The court held:

[I]t is undisputed that eBay's server and its capacity are personal property, and that BE's searches use a portion of this property. Even if, as BE argues, its searches use only a small amount of eBay's computer system capacity, BE has nonetheless deprived eBay of the ability to use that portion of its personal property for its own purposes. The law recognizes no such right to use another's personal property. Accordingly, BE's actions appear to have caused injury to eBay and appear likely to continue to cause injury to eBay. If the court were to hold otherwise, it would likely encourage other auction aggregators to crawl the eBay site, potentially to the point of denying effective access to eBay's customers. If preliminary injunctive relief were denied, and other aggregators began to crawl the eBay site, there appears to be little doubt that the load on eBay's computer system would qualify as a substantial impairment of condition or value. California law does not require eBay to wait for such a disaster before applying to this court for relief.

Id. at 1071-72.

[e] Web Site Mirroring

Mirroring is a practice in which the operator of an Internet-connected computer duplicates another person's Web site so that the computer's users will have access to the site's contents without having to request it from the site itself. While this can result in the users in question having faster access (because the need to go out on the 'Net to obtain the contents is eliminated), it also raises issues of copyright infringement. While it seems clear that individual browsing is probably authorized, at least by the site, it also seems clear that mirroring may not be within the scope of that authorization — and if not, may constitute copyright infringement.

[f] Framing of, Others' Web Sites

Some Web sites engage in “framing,” which typically involves setting up a multiple-frame page with a “contents” frame including a collection of Web links and a “viewer” frame on the other:

Contents Frame	Viewer Frame
A table-of-contents frame includes a collection of links to other sites.	The content of framed sites is displayed in this viewer frame. The Web surfer can display content from different framed sites by clicking on a link in the contents frame (to the immediate left).
Advertising Frame	
Ad content is displayed to the Web surfer – the content created by the proprietors of the framed sites is used to generate ad revenue for the framing site.	

Hypothetical example of “framing” others’ Web sites

Framing has led to at least one lawsuit: In early 1997 the operators of the TotalNews site, www.totalnews.com, which frames a variety of news organizations’ Web sites, was sued for copyright infringement (and trademark infringement) by a number of those organizations. An *Arizona Business Gazette* report of the filing of the suit, apparently taken largely from the TotalNews press release, is posted at <http://www.azcentral.com/depts/work/news/abg/0227tot.shtml>.

The only court known to have addressed the issue, however, apparently did not regard framing as particularly heinous and declined to issue a preliminary injunction, a decision which was affirmed by the Ninth Circuit. In that case, the frame site was by a company called Futuredontics; the framing site was by Applied Anagrams, Inc. (AAI). As the Ninth Circuit reported in an unpublished opinion, “Futuredontics’ claim, that the AAI framed link ‘falsely implies that AAI--not Futuredontics--is responsible for the success of Futuredontics’s dental referral service,’ even if true,

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is not tied to any tangible loss of business or customer goodwill. We do not find that the district court abused its discretion in denying a preliminary injunction.” *Futuredontics, Inc. v. Applied Anagrams, Inc.*, 1998 WL 417413 (9th Cir. 1998) (unpublished) (affirming denial of preliminary injunction).

One issue may be whether the displays created by framing the sites of CNN, etc., are unauthorized “derivative works” based on the underlying works. The owners of the copyrights in the underlying works might make such an argument by analogy to cases holding that purchasing copies of copyrighted art and mounting them in decorative frames for resale constitutes infringement because it “recast[s]” and “transform[s]” the copyrighted works. *See Mirage Editions, Inc. v. Albuquerque A.R.T. Co.*, 856 F.2d 1341 (9th Cir. 1988) (holding that removal of copyrighted art images from commemorative art book and affixing them to individual tiles constituted infringement as a matter of law); *Greenwich Workshop, Inc. v. Timber Creations, Inc.*, 932 F. Supp. 1210 (C.D. Cal. 1996) (same; granting motion for partial summary judgment of infringement).

[g] Linking to Others’ Web Sites

A ubiquitous feature of the Web is the “link farm,” i.e., collections of links to other Web sites. Linking has generated controversy, although apparently on trademark grounds: Ticketmaster Group Inc. filed suit against Microsoft, whose “Seattle Sidewalk” Web site contained links directly to specific pages on Ticketmaster’s own site, permitting Web surfers to bypass the Ticketmaster home page and the advertising on the Ticketmaster site. Bruce Orwall, *Ticketmaster Sues Microsoft Corp. over Internet Link*, Wall St. J., Apr. 29, 1997, at B8, col. 6.

It seems likely that one of the principal issues in such disputes will be the extent to which a Web site operator implicitly consents to having other sites assist Internet users by making links available in this way.

In *Reimerdes*, a court enjoined defendants from linking to Web sites containing “DeCSS” software for circumventing access-control mechanisms for DVD movies in violation of the Digital Millennium Copyright Act. *Universal City Studios, Inc. v. Reimerdes*, 111 F.

Supp. 2d 294 (S.D.N.Y. 2000) (Kaplan, J.) [*summary below adapted from opinion*], affirmed *sub nom. Universal City Studios, Inc. v. Corley*, 273 F3d 429 (2d. Cir. 2001). In granting the anti-linking injunction, Judge Kaplan considered whether such an injunction would infringe the defendants' free speech rights under the First Amendment. It reasoned that

Just as the potential chilling effect of defamation suits has not utterly immunized the press from all actions for defamation, however, the potential chilling effect of DMCA liability cannot utterly immunize web site operators from all actions for disseminating circumvention technology. And the solution to the problem is the same: the adoption of a standard of culpability sufficiently high to immunize the activity, whether it is publishing a newspaper or linking, except in cases in which the conduct in question has little or no redeeming constitutional value.

Id., 111 F. Supp. 2d at 340. Judge Kaplan then articulated a test for granting anti-linking injunctive relief:

Accordingly, there may be no injunction against, nor liability for, linking to a site containing circumvention technology, the offering of which is unlawful under the DMCA, absent clear and convincing evidence that those responsible for the link[.]

- (a) know at the relevant time that the offending material is on the linked-to site,
- (b) know that it is circumvention technology that may not lawfully be offered, and
- (c) create or maintain the link for the purpose of disseminating that technology.

Such a standard will limit the fear of liability on the part of web site operators just as the New York Times standard gives the press great comfort in publishing all sorts of material that would have been actionable at common law, even in the face of flat denials by the subjects of their stories. And it will

not subject web site operators to liability for linking to a site containing proscribed technology where the link exists for purposes other than dissemination of that technology.

Id. at 341 (paragraphing added). Judge Kaplan found that the plaintiffs had proved their entitlement to an injunction under the above test by the required clear and convincing evidence. *Id.*

[h] ISP Copyright Liability for Users' Infringement

If an Internet user transmits a copy of a work (e.g., a game or a message) without authorization, what copyright infringement liability will accrue to the Internet service provider (ISP) who provided Internet access to the user?

[1] ISP Liability for *Direct* Copyright Infringement

In *Religious Technology Center v. Netcom On-Line Communication Services, Inc.*, 907 F. Supp. 1361 (N.D. Cal. 1995), the court indicated that if the ISP did no more than provide facilities that happened to be used for infringing purposes, it probably would not be liable for direct copyright infringement:

[T]he mere fact that Netcom's system incidentally makes temporary copies of plaintiffs' works does not mean Netcom has caused the copying. The court believes that Netcom's act of designing or implementing a system that automatically and uniformly creates temporary copies of all data sent through it is not unlike that of the owner of a copying machine who lets the public make copies with it. Although some of the people using the machine may directly infringe copyrights, courts analyze the machine owner's liability under the rubric of contributory infringement, not direct infringement.

Plaintiffs' theory would create many separate acts of infringement and, carried to its natural extreme, would lead to unreasonable liability. . . . [P]laintiffs' theory further implicates a Usenet server that carries [the infringing user's] message to other servers regardless of whether that server acts

without any human intervention beyond the initial setting up of the system. It would also result in liability for every single Usenet server in the worldwide link of computers transmitting Erlich's message to every other computer.

These parties, who are liable under plaintiffs' theory, do no more than operate or implement a system that is essential if Usenet messages are to be widely distributed. There is no need to construe the Act to make all of these parties infringers. Although copyright is a strict liability statute, there should still be some element of volition or causation which is lacking where a defendant's system is merely used to create a copy by a third party.

Id. at 1369-70 (footnotes and citations omitted, paragraphing supplied).

The *Netcom* court went to great lengths to distinguish *Playboy Enterprises, Inc. v. Frena*, 839 F. Supp. 1552, 1554 (M.D.Fla.1993). In that case, the defendant operated a small computer bulletin board system (BBS) whose system contained files of erotic pictures, uploaded by users of the BBS. He was held liable for copyright infringement, the *Netcom* court said, *not* because he had any involvement in making the copies, but because he had *distributed* copies in violation of a separate statutorily-enumerated right of the copyright owner. *See Netcom*, 907 F. Supp. at 1370; *cf. Playboy Enterprises, Inc. v. Webbworld, Inc.*, 968 F. Supp. 1171, 1175 (N.D. Tex. 1997) (granting summary judgment of copyright infringement against Web site operator that provided fee-based access to collection of copied photographic images, despite operator's claim that it had no control over which images were posted by its user).

In contrast, *Netcom* was accused of *reproducing* the copyrighted work, not of distributing it. The court apparently focused on that fact, and on the fact that when *Netcom*'s computers retransmitted copies of infringing works, they did so in response to commands from persons other than *Netcom*: "[T]he storage on a defendant's system of infringing copies and retransmission to other servers is not a direct infringement by [Netcom] of the exclusive right to reproduce the work where such copies are uploaded by an infringing user. *Playboy* does not hold otherwise." *Id.* at 1371.

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In any event, the holding in *Playboy v. Frena*, distinguished in *Netcom*, was later overruled by Congress, and that of *Netcom* was essentially codified, in the safe-harbor provisions of the Digital Millennium Copyright Act, discussed in Section § 2.8[i]. See generally *ALS Scan, Inc. v. RemarQ Communities, Inc.*, 239 F.3d 619, 621-22 (4th Cir. 2001) (following *Netcom* and noting safe-harbor provisions of DMCA; affirming dismissal of claim of direct infringement); *CoStar Group Inc. v. LoopNet, Inc.*, 164 F. Supp. 2d 688 (D. Md. 2001) (granting partial summary judgment of no direct infringement).

[2] ISP Liability for *Contributory* Infringement

A separate question in *Netcom*, however, was whether the defendant ISP could be liable for *contributory* infringement, as distinct from direct infringement, by virtue of its having provided the facilities for the infringement to occur. The cases seem to be going in the direction of requiring “substantial participation” in the infringing activity — but for an ISP, that can take the form of failing to block transmission of infringing materials after learning about the infringement. As stated in *Netcom*:

If plaintiffs can prove the knowledge element, Netcom will be liable for contributory infringement since its failure to simply cancel [the infringing user's] infringing message and thereby stop an infringing copy from being distributed worldwide constitutes *substantial participation* in [his] public distribution of the message.

Id. at 1374 (emphasis supplied).

The court thus indicated that to avoid liability, an ISP must take steps to block reproduction and distribution of a copyrighted work as soon as it “knows” of the infringement. It rejected Netcom’s argument that it did not have unequivocal knowledge of the infringement (but it did suggest that an ISP might not have to take immediate action to cut off an allegedly infringing use if the use might qualify as a “fair use”):

Netcom argues that its knowledge after receiving notice of Erlich’s alleged infringing activities was too equivocal given the difficulty in assessing whether

registrations are valid and whether use is fair. Although a mere unsupported allegation of infringement by a copyright owner may not automatically put a defendant on notice of infringing activity, Netcom's position that liability must be unequivocal is unsupportable. While perhaps the typical infringing activities of BBSs will involve copying software, where BBS operators are better equipped to judge infringement, the fact that this involves written works should not distinguish it.

Where works contain copyright notices within them, as here, it is difficult to argue that a defendant did not know that the works were copyrighted. To require proof of valid registrations would be impractical and would perhaps take too long to verify, making it impossible for a copyright holder to protect his or her works in some cases, as works are automatically deleted less than two weeks after they are posted.

The court is more persuaded by the argument that it is beyond the ability of a BBS operator to quickly and fairly determine when a use is not infringement where there is at least a colorable claim of fair use. Where a BBS operator cannot reasonably verify a claim of infringement, either because of a possible fair use defense, the lack of copyright notices on the copies, or the copyright holder's failure to provide the necessary documentation to show that there is a likely infringement, the operator's lack of knowledge will be found reasonable and there will be no liability for contributory infringement for allowing the continued distribution of the works on its system.

Netcom, 907 F. Supp. at 1374 (paragraphing supplied).

In the subsequent *Sega Enterprises, Ltd. v. Maphia*, 948 F. Supp. 923 (N.D. Cal. 1996), the defendant was the system operator for MAPHIA, an electronic bulletin board (BBS). Sega allegedly received an anonymous tip that the MAPHIA BBS contained and distributed pirated and unauthorized versions of the plaintiff's video game software. At the time it was seized, the MAPHIA BBS

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contained unauthorized copies of 12 Sega games developed by Sega, ten Sega-licensed games, and six Sega pre-release or “beta” version games, developed in-house by Sega.

The *Sega* court was persuaded by *Netcom*, and held that the defendant was not liable for direct infringement even though he knew that infringing activity was occurring. *See id.* at 932.

The court went on to hold, however, that Sega could prevail on a contributory-infringement theory if it established that “the users of Sherman’s MAPHIA BBS directly infringed Sega’s copyright [and] that (i) with knowledge of the users’ infringing activity, (ii) Sherman induced, caused, or materially contributed to their infringing activity.” *Id.* The court spent little time on the first issue, namely the defendant’s knowledge that his customers were in fact infringing.

The *Sega* court then proceeded to the second issue, namely the defendant’s active participation in the alleged infringement. The court pointed out that the defendant “actively solicited users to upload unauthorized games, and provided a road map on his BBS for easy identification of Sega games available for downloading. Additionally, through the same MAPHIA BBS medium, he offered copiers for sale to facilitate playing the downloaded games.” This, the court said, established a *prima facie* case of contributory infringement of copyright. *Id.*; *accord, Sega Enterprises Ltd. v. Sabella*, 1996 WL 780560 (N.D. Cal. 1996) (granting plaintiff’s motion for summary judgment that defendant BBS operator was liable for contributory copyright infringement, but holding that she was not a “direct” infringer notwithstanding her providing of facilities to BBS users who engaged in direct infringement).

[i] Limitations on ISP Liability in the Digital Millennium Copyright Act

[This subsection is adapted, largely verbatim, from a U.S. Copyright Office summary, available on the World Wide Web at www.loc.gov; no copyright claimed in works of the U.S. Government.]

Title II of the Digital Millennium Copyright Act added a new section 512 to the Copyright Act to create four new limitations on liability for copyright infringement by online service providers. The limitations are based on the following four categories of conduct by a service provider:

1. Transitory communications;
2. System caching;
3. Storage of information on systems or networks “at direction” of users – in *CoStar Group Inc. v. LoopNet, Inc.*, 164 F. Supp. 2d 688 (D. Md. 2001) (granting partial summary judgment), the plaintiff district court rejected the copyright owner’s contention that the service provider’s screening of uploaded photographs for obvious copyright infringement negated this element and disqualified the service provider from the benefits of the safe harbor; and
4. Information location tools.

New section 512 also includes special rules concerning the application of these limitations to nonprofit educational institutions.

Each limitation entails a complete bar on monetary damages, and restricts the availability of injunctive relief in various respects. (Section 512(j)). Each limitation relates to a separate and distinct function, and a determination of whether a service provider qualifies for one of the limitations does not bear upon a determination of whether the provider qualifies for any of the other three. (Section 512(n)).

The failure of a service provider to qualify for any of the limitations in section 512 does not necessarily make it liable for copyright infringement. The copyright owner must still demonstrate that the provider has infringed, and the provider may still avail itself of any of the defenses, such as fair use, that are available to copyright defendants generally. (Section 512(l)). In addition to limiting the liability of service providers, Title II establishes a procedure by which a copyright owner can obtain a subpoena from a federal court ordering a service provider to disclose the identity of a subscriber who is allegedly engaging in infringing activities. (Section 512(h)).

Section 512 also contains a provision to ensure that service providers are not placed in the position of choosing between limitations on liability on the one hand and preserving the privacy of their subscribers, on the other. Subsection (m) explicitly states that nothing in section 512 requires a service provider to monitor its service or access material in violation of law (such as the Electronic

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Communications Privacy Act) in order to be eligible for any of the liability limitations.

[1] Eligibility for Limitations Generally

A party seeking the benefit of the limitations on liability in Title II must qualify as a “service provider.” For purposes of the first limitation, relating to transitory communications, “service provider” is defined in section 512(k)(1)(A) as “an entity offering the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user’s choosing, without modification to the content of the material as sent or received.” For purposes of the other three limitations, “service provider” is more broadly defined in section 512(k)(1)(B) as “a provider of online services or network access, or the operator of facilities therefor.” [See *A&M Records, Inc. v. Napster, Inc.*, No. C 99-05183 MHP, 2000 WL 573136, 54 USPQ2d 1746 (C.D. Cal. May 12, 2000) (refusing to grant summary adjudication that Napster was entitled to assert section-512 defense because it had not established that it was a service provider and it had not established its compliance with the policies described in the text), *subsequent proceedings*, 114 F. Supp. 2d 896 (N.D. Cal. 2000), *aff’d in pertinent part, rev’d in part and remanded*, 239 F.3d 1004 (9th Cir. 2001).]

In addition, to be eligible for any of the limitations, a service provider must meet two overall conditions: (1) it must adopt and reasonably implement a policy of terminating in appropriate circumstances the accounts of subscribers who are repeat infringers; and (2) it must accommodate and not interfere with “standard technical measures.” (Section 512(i)). “Standard technical measures” are defined as measures that copyright owners use to identify or protect copyrighted works, that have been developed pursuant to a broad consensus of copyright owners and service providers in an open, fair and voluntary multi-industry process, are available to anyone on reasonable nondiscriminatory terms, and do not impose substantial costs or burdens on service providers.

[2] Limitation for Transitory Communications

In general terms, section 512(a) limits the liability of service providers in circumstances where the provider merely acts as a data conduit, transmitting digital information from one point on a network to another at someone else’s request. This limitation covers

acts of transmission, routing, or providing connections for the information, as well as the intermediate and transient copies that are made automatically in the operation of a network.

In order to qualify for this limitation, the service provider's activities must meet the following conditions:

- The transmission must be initiated by a person other than the provider.
- The transmission, routing, provision of connections, or copying must be carried out by an automatic technical process without selection of material by the service provider.
- The service provider must not determine the recipients of the material.
- Any intermediate copies must not ordinarily be accessible to anyone other than anticipated recipients, and must not be retained for longer than reasonably necessary.
- The material must be transmitted with no modification to its content.

[3] Limitation for System Caching

Section 512(b) limits the liability of service providers for the practice of retaining copies, for a limited time, of material that has been made available online by a person other than the provider, and then transmitted to a subscriber at his or her direction. The service provider retains the material so that subsequent requests for the same material can be fulfilled by transmitting the retained copy, rather than retrieving the material from the original source on the network.

The benefit of this practice is that it reduces the service provider's bandwidth requirements and reduces the waiting time on subsequent requests for the same information. On the other hand, it can result in the delivery of outdated information to subscribers and can deprive website operators of accurate "hit" information — information about the number of requests for particular material on a website — from which advertising revenue is frequently calculated. For this reason, the person making the material available online may establish rules about updating it, and may utilize technological means to track the number of "hits."

The limitation applies to acts of intermediate and temporary storage, when carried out through an automatic technical process

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for the purpose of making the material available to subscribers who subsequently request it. It is subject to the following conditions:

- The content of the retained material must not be modified.
- The provider must comply with rules about “refreshing” material—replacing retained copies of material with material from the original location— when specified in accordance with a generally accepted industry standard data communication protocol.
- The provider must not interfere with technology that returns “hit” information to the person who posted the material, where such technology meets certain requirements.
- The provider must limit users’ access to the material in accordance with conditions on access (e.g., password protection) imposed by the person who posted the material.
- Any material that was posted without the copyright owner’s authorization must be removed or blocked promptly once the service provider has been notified that it has been removed, blocked, or ordered to be removed or blocked, at the originating site.

[4] Limitation for Information Residing on Systems or Networks at the Direction of Users

Section 512(c) limits the liability of service providers for infringing material on websites (or other information repositories) hosted on their systems. It applies to storage at the direction of a user. In order to be eligible for the limitation, the following conditions must be met:

- The provider must not have the requisite level of knowledge of the infringing activity, as described below.
- If the provider has the right and ability to control the infringing activity, it must not receive a financial benefit directly attributable to the infringing activity.
- Upon receiving proper notification of claimed infringement, the provider must expeditiously take down or block access to the material.

In addition, a service provider must have filed with the Copyright Office a designation of an agent to receive notifications of claimed infringement. The Office provides a suggested form for the

purpose of designating an agent (<http://www.loc.gov/copyright/onlinesp/>) and maintains a list of agents on the Copyright Office website (<http://www.loc.gov/copyright/onlinesp/list/>).

Under the knowledge standard, a service provider is eligible for the limitation on liability only if it does not have actual knowledge of the infringement, is not aware of facts or circumstances from which infringing activity is apparent, or upon gaining such knowledge or awareness, responds expeditiously to take the material down or block access to it.

The statute also establishes procedures for proper notification, and rules as to its effect. (Section 512(c)(3)). Under the notice and takedown procedure, a copyright owner submits a notification under penalty of perjury, including a list of specified elements, to the service provider's designated agent.^[1] Failure to comply substantially with the statutory requirements means that the notification will not be considered in determining the requisite level of knowledge by the service provider. If, upon receiving a proper notification, the service provider promptly removes or blocks access to the material identified in the notification, the provider is exempt from monetary liability. In addition, the provider is protected from any liability to any person for claims based on its having taken down the material. (Section 512(g)(1)).

In order to protect against the possibility of erroneous or fraudulent notifications, certain safeguards are built into section

¹ **Editor's note:** The specificity of the required notice was considered in *ALS Scan, Inc. v. RemarQ Communities, Inc.*, 239 F.3d 619 (4th Cir. 2001) (reversing and remanding summary judgment in favor of accused ISP). The court held that the notice requirement was substantially met when "ALS Scan provided RemarQ with information that (1) identified two sites created for the sole purpose of publishing ALS Scan's copyrighted works, (2) asserted that virtually all the images at the two sites were its copyrighted material, and (3) referred RemarQ to two web addresses where RemarQ could find pictures of ALS Scan's models and obtain ALS Scan's copyright information. In addition, it noted that material at the site could be identified as ALS Scan's material because the material included ALS Scan's 'name and/or copyright symbol next to it.'" *Id.* at 625.

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512. Subsection (g)(1) gives the subscriber the opportunity to respond to the notice and takedown by filing a counter notification. In order to qualify for the protection against liability for taking down material, the service provider must promptly notify the subscriber that it has removed or disabled access to the material. If the subscriber serves a counter notification complying with statutory requirements, including a statement under penalty of perjury that the material was removed or disabled through mistake or misidentification, then unless the copyright owner files an action seeking a court order against the subscriber, the service provider must put the material back up within 10-14 business days after receiving the counter notification.

Penalties are provided for knowing material misrepresentations in either a notice or a counter notice. Any person who knowingly materially misrepresents that material is infringing, or that it was removed or blocked through mistake or misidentification, is liable for any resulting damages (including costs and attorneys' fees) incurred by the alleged infringer, the copyright owner or its licensee, or the service provider. (Section 512(f)).

[5] Limitation for Information Location Tools

Section 512(d) relates to hyperlinks, online directories, search engines and the like. It limits liability for the acts of referring or linking users to a site that contains infringing material by using such information location tools, if the following conditions are met:

- The provider must not have the requisite level of knowledge that the material is infringing. The knowledge standard is the same as under the limitation for information residing on systems or networks.
- If the provider has the right and ability to control the infringing activity, the provider must not receive a financial benefit directly attributable to the activity.
- Upon receiving a notification of claimed infringement, the provider must expeditiously take down or block access to the material.

These are essentially the same conditions that apply under the previous limitation, with some differences in the notification requirements. The provisions establishing safeguards against the possibility of erroneous or fraudulent notifications, as discussed

above, as well as those protecting the provider against claims based on having taken down the material apply to this limitation. (Sections 512(f)-(g)).

**[6] Special Rules Regarding Liability of
Nonprofit Educational Institutions**

Section 512(e) determines when the actions or knowledge of a faculty member or graduate student employee who is performing a teaching or research function may affect the eligibility of a nonprofit educational institution for one of the four limitations on liability. As to the limitations for transitory communications or system caching, the faculty member or student shall be considered a “person other than the provider,” so as to avoid disqualifying the institution from eligibility. As to the other limitations, the knowledge or awareness of the faculty member or student will not be attributed to the institution. The following conditions must be met:

- the faculty member or graduate student’s infringing activities do not involve providing online access to course materials that were required or recommended during the past three years;
- the institution has not received more than two notifications over the past three years that the faculty member or graduate student was infringing; and
- the institution provides all of its users with informational materials describing and promoting compliance with copyright law.

**§ 2.9 Defenses to Copyright-Infringement
Charges**

**[a] The Fair-Use Doctrine Does Not Provide Much
Comfort for Software Copyright Infringers**

Accused software-copyright infringers have had little success in asserting fair-use defenses.

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[1] Statutory Basis

Section 107 of the Copyright Act provides the underpinning for the assertion of fair-use defenses by accused infringers. It states that:

[F]air use of a copyrighted work, including such use by reproduction in copies or phonorecords ... for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. § 107.

[2] Selected Cases

Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 114 S. Ct. 1164 (1994) (Souter, J.): In *Campbell*, the Supreme Court explained some of the jurisprudence underlying the fair-use doctrine. In that case, the song “Pretty Woman,” by the rap group 2 Live Crew, was accused of infringement of the copyright in the Roy Orbison hit “Oh Pretty Woman.” The district court granted summary judgment of noninfringement on grounds of fair use, but the Sixth Circuit reversed. *See* 972 F.2d 1429 (6th Cir. 1992), *reversing* 754 F. Supp. 1150 (M.D. Tenn. 1991).

Examining the four factors prescribed in the Copyright Act for evaluating putative fair uses, the *Campbell* Court characterized the

“central purpose” of the investigation into first factor—the purpose of the use—as:

to see, in Justice Story’s words, whether the new work merely “supersede[s] the objects of the original creation, or instead *adds something new, with a further purpose or different character*, altering the first with new expression, meaning, or message; it asks, in other words, whether and to what extent the new work is “*transformative*.”

Although such transformative use is not absolutely necessary for a finding of fair use, *the goal of copyright, to promote science and the arts, is generally furthered by the creation of transformative works*. Such works thus lie at the heart of the fair use doctrine’s breathing space within the confines of copyright, and the more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use.

Campbell, 510 U.S. at 579 (emphasis and paragraphing added, citations and footnote omitted). The Court rejected the Sixth Circuit’s reading of the Court’s own *Betamax* decision, *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 451 (1984), that commercial purpose in a copyright infringement almost automatically establishes a presumption of unfair use. Apparently seeking to dispel a perceived anti-commercial bias in the courts, the Court quoted Samuel Johnson’s pronouncement that “[n]o man but a blockhead ever wrote, except for money.” *Campbell*, 510 U.S. at 584 (citation omitted). The Court announced held that “[n]o ‘presumption’ or inference of market harm … is applicable to a case involving something beyond mere duplication for commercial purposes.” *Id.*, 510 U.S. at 591 (citation omitted).

The Court suggested in dictum that injunctive relief might not be available against copyright infringers who engage in “transformative” uses of copyrighted works:

Because the fair use enquiry often requires close questions of judgment as to the extent of permissible borrowing in cases involving parodies (or other critical works), courts may also wish to bear in mind

that the goals of the copyright law, “to stimulate the creation and publication of edifying matter,” are not always served by automatically granting injunctive relief when parodists are found to have gone beyond the bounds of fair use.

[There may be cases] “raising reasonable contentions of fair use” where “there may be a strong public interest in the publication of the secondary work [and] the copyright owner’s interest may be adequately protected by an award of damages for whatever infringement is found”

Id., 510 U.S. at 578 n.10 (paragraphing supplied, citations omitted).

Sony Computer Entertainment, Inc. v. Connectix Corp., 203 F.3d 596 (9th Cir. 2000), reversing 48 F.Supp.2d 1212 (N.D. Cal. 1999): The defendant succeeded in its transformative fair-use defense, but only on appeal to the Ninth Circuit. Connectix was a vendor of emulation software for the Sony Playstation, which was held to infringe Sony’s copyrights. It argued that its emulation was transformative because it operated on a different platform, i.e., a computer instead of a television. The district court rejected that argument because “[Connectix’s] VGS supplants Sony’s prior invention. ... The VGS does not do anything new, anything different, or anything unique from the PlayStation.” 48 F.Supp.2d at 1219. The Ninth Circuit disagreed, holding that

Connectix’s Virtual Game Station is modestly transformative. The product creates a new platform, the personal computer, on which consumers can play games designed for the Sony PlayStation. This innovation affords opportunities for game play in new environments, specifically anywhere a Sony PlayStation console and television are not available, but a computer with a CD-ROM drive is. More important, the Virtual Game Station itself is a wholly new product, notwithstanding the similarity of uses and functions between the Sony PlayStation and the Virtual Game Station. The expressive element of software lies as much in the organization and structure of the object code that runs the computer as it does in the visual expression of that code that appears on a computer screen.

Id. 203 F.3d at 606; *see also supra* § 2.7[e] (discussion of reverse-engineering aspects of the case).

Sony Computer Entertainment America, Inc. v. Bleem, LLC, 214 F.3d 1022 (9th Cir. 2000) (vacating preliminary injunction): This Sony case also led to a successful fair-use defense, although on different factual grounds. The defendant marketed a software emulator for playing PlayStation games on a regular computer. The defendant used screen-shot images to show how a game would actually look if played on a PlayStation console versus how it would actually look if played using the defendant's software emulator. The Ninth Circuit characterized such use as competitive advertising and held that it was fair use.

Kelly v. Arriba Soft Corp., 280 F.3d 934 (9th Cir. 2002) (affirming, in pertinent part, summary judgment of fair use): The plaintiff posted graphic images of photographs on his Web site. The defendant's search-engine database created and stored "thumbnail" images of the photographs and, when the photographs matched an end-user's search query, would cause the thumbnails to be displayed on the end-user's browser. The Ninth Circuit analyzed the four factors of fair use and concluded the creation and display of thumbnails qualified as transformative use. The court observed that:

the thumbnails were much smaller, lower-resolution images that served an entirely different function than Kelly's original images. Kelly's images are artistic works used for illustrative purposes. His images are used to portray scenes from the American West in an esthetic manner. Arriba's use of Kelly's images in the thumbnails is unrelated to any esthetic purpose. Arriba's search engine functions as a tool to help index and improve access to images on the internet and their related web sites. In fact, users are unlikely to enlarge the thumbnails and use them for artistic purposes because the thumbnails are of much lower resolution than the originals; any enlargement results in a significant loss of clarity of the image, making them inappropriate as display material.

* * *

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This case involves more than merely a retransmission of Kelly's images in a different medium. Arriba's use of the images serves a different function than Kelly's use-improving access to information on the internet versus artistic expression. Furthermore, it would be unlikely that anyone would use Arriba's thumbnails for illustrative or esthetic purposes because enlarging them sacrifices their clarity. Because Arriba's use is not superseding Kelly's use but, rather, has created a different purpose for the images, Arriba's use is transformative.

Id. at 941-42.

UMG Recordings, Inc. v. MP3.com, Inc., 92 F. Supp.2d 349 (S.D.N.Y. 2000) (granting motion for partial summary judgment of copyright infringement) [*portions of this summary are adapted from 92 F. Supp.2d at 351*]: MP3.com made the contents of selected music CDs available to its Web-site customers who could demonstrate that they owned a copy of the selected CDs (see § 2.8[a]). It did not succeed in establishing a fair-use defense to the plaintiffs' copyright-infringement claims. MP3.com did not dispute that the purpose of its use of the copyrighted works was commercial, for while subscribers to My.MP3.com were not charged a fee, MP3.com sought to attract a sufficiently large subscription base to draw advertising and otherwise make a profit. The court rejected MP3.com's argument that its use provided "a transformative 'space shift' by which subscribers can enjoy the sound recordings contained on their CDs without lugging around the physical discs themselves"; the court held that "this is simply another way of saying that the unauthorized copies are being retransmitted in another medium – an insufficient basis for any legitimate claim of transformation." 92 F. Supp.2d at 351 (extensive citations omitted).

A & M Records, Inc. v. Napster, Inc., 114 F. Supp. 2d 896 (N.D. Cal. 2000) (granting preliminary injunction against Napster), *aff'd in pertinent part, rev'd in part and remanded*, 239 F.3d 1004 (9th Cir. 2001) [*this summary adapted from district-court opinion*]: In opposition to the plaintiffs' motion for preliminary injunction, Napster sought unsuccessfully to expand the "fair use" doctrine articulated in *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 104 S.Ct. 774, 78 L.Ed.2d 574 (1984), to encompass the

massive downloading of MP3 files by Napster users. The court rejected the fair-use defense because “any potential non-infringing use of the Napster service is minimal or connected to the infringing activity, or both. The substantial or commercially significant use of the service was, and continues to be, the unauthorized downloading and uploading of popular music, most of which is copyrighted.” The court observed that “[a]lthough downloading and uploading MP3 music files is not paradigmatic commercial activity, it is also not personal use in the traditional sense. ... At the very least, a host user sending a file cannot be said to engage in a personal use when distributing that file to an anonymous requester. Moreover, the fact that Napster users get for free something they would ordinarily have to buy suggests that they reap economic advantages from Napster use.”

Compaq Computer Corp. v. Procom Technology, Inc., 908 F. Supp. 1409 (S.D. Tex. 1995): The court held that the defendant’s copying of the plaintiff’s selection of a specific set of hard-disk operational parameter values, used to trigger display of on-screen message suggesting replacement of the disk, was not fair use. *See id.* at 1419-21.

**[b] Section 117 Immunizes Certain Actions by
“Owners” of Copies of Computer Programs**

Section 117 of the Copyright Act expressly authorizes the “owner” of a copy of a computer program to create another copy (or adaptation) of the computer program — provided that the copy or adaptation is created (a) “as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner,” or for archival or back-up purposes, and (b) so long as copies or adaptations so made are not transferred except in accordance with conditions set out in the statute. *See* 17 U.S.C. § 117.

In the early years of software-copyright litigation, a number of accused infringers attempted to use section 117 as a shield against liability. By and large, the courts were not especially sympathetic, and the accused infringers were not notably successful. *See Sega Enterprises Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1520 & n.6 (9th Cir. 1992) (holding that disassembly of plaintiff’s executable program code to study its underlying concepts and methods, as intermediate step in creating program that was compatible with plaintiff’s video-game

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computer system, was not permitted under section 117 [but reversing preliminary injunction on fair-use grounds as discussed in § 2.7[e]]); *citing but not addressing Vault Corp. v. Quaid Software Ltd.*, 847 F.2d 255, 260-61 (5th Cir. 1988) (affirming dismissal of copyright infringement claim by proprietor of copy-protected software against vendor of software to defeat copy-protection schemes; holding that authorization of section 117(1) not limited to use of program intended by copyright owner); *CMAX/Cleveland, Inc., v. UCR, Inc.*, 804 F. Supp. 337, 356 (M.D. Ga. 1992) (holding that defendants' use of copies of computer program beyond the scope of § 117 and failure to comply with destruction requirements of that section precluded resort to that section as defense to infringement claim; granting judgment for plaintiff); *Micro-Sparc, Inc. v. Amtype Corp.*, 592 F. Supp. 33, 34-35, 223 USPQ (BNA) 1210 (D. Mass. 1984) (holding that "keyboarding service" which input programs, published in source-code form in hobbyist magazine, onto disk and sold disks to purchasers of magazine, infringed copyright in programs; rejecting section-117 defense); *Apple Computer, Inc. v. Formula Int'l, Inc.*, 594 F. Supp. 617, 621 (C.D. Cal. 1984) (holding that copying of copyrighted software onto silicon chips is not an "essential step" in the utilization of the software, because the software could be used through RAM, therefore copying and subsequent sale of chips not protected by section 117).

More recently, one of the main issues relating to section 117 has been whether a *licensee* of software can be deemed an "owner" of a copy of the software. The Copyright Act does not define the term "owner." Nor is the legislative history particularly enlightening. Section 117 was originally proposed by the National Commission on New Technological Uses of Copyrighted Works ("CONTU"). CONTU's original proposal for section 117 provided that "it is not an infringement for the rightful possessor of a copy of a computer program to make or authorize the making of another copy or adaptation of that program...." NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT at 30 (1978) (emphasis added). NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT at 30 (1978) (emphasis added). The statute as enacted, however, contains the words "owner of a copy" in place of the words "rightful possessor of a copy." *See* Pub. L. No. 96-517, 96th Cong., 2d Sess. (1980). *See* Pub. L. No. 96-517, 96th Cong., 2d Sess. (1980). The legislative history does not explain the reason for the change. *See Cf.* H.R. REP. No. 1307, 96th Cong. 2d Sess. 23, *reprinted in* 1980 U.S.C.C.A.N.

6460, 6492 (indicating that 1980 amendments were intended to embody CONTU recommendations). *See Cf. H.R. REP. NO. 1307, 96th Cong. 2d Sess. 23, reprinted in 1980 U.S.C.C.A.N. 6460, 6492* (indicating that 1980 amendments were intended to embody CONTU recommendations).

As discussed below, the courts have been generally unwilling to find that a licensee of software was an "owner" under section 117 when the issue was whether the licensee had the right to use the software in a way that both violated the license agreement and injured the copyright owner's business. On the other hand, the courts have been more inclined to allow a licensee to make use of section 117 if the licensee is simply modifying the software, e.g., to get the software to work correctly.

[1] **Can a Software Licensee Claim to Be an "Owner" When Dealing With the Licensor's Competitor?**

When the issue is one of duplication of a plaintiff's software by a licensee, e.g., for use with hardware not provided by the plaintiff, the courts have generally declined to find that the licensee was an "owner" of a copy of the software.

Selected cases:

MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1995).: The plaintiff was a computer manufacturer and also provided after-the-sale service for its computers. It owned a copyright in software that performed diagnostic functions for the computers. A non-licensee service provider, which competed with the plaintiff for after-the-sale service business, used a customer's licensed copy of the diagnostic software when doing maintenance on a customer's computer. The customer's license agreement for the software prohibited the customer from permitting third parties to use of the software. The Ninth Circuit held that the non-licensee service provider's use of the software constituted copyright infringement (see § 2.7[c][2] re legislation overturning this specific holding). The court held that the customer was not an "owner" of the copies of the software for purposes of section 117 and thus did not enjoy the right to copy conferred on owners by the statute. *See id.* at 518 n.5 (9th Cir. 1995). The court stated that it reached the conclusion that the customer was not an owner because the customer had licensed the software from MAI. *See id.*; *see also Advanced Computer Services of Michigan v. MAI Systems Corp.*, 845 F. Supp.

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356, 367 (E.D. Va. 1994) (“MAI customers are not ‘owners’ of the copyrighted software; they possess only the limited rights set forth in their licensing agreements”). That rationale, however, was later rejected as too broad in *DSC v. Pulsecom*, discussed below.

DSC Communications Corp. v. Pulse Communications, Inc., 170 F.3d 1354 (Fed. Cir. 1999): DSC was a manufacturer of digital loop carrier equipment for telephone systems, including interface cards that were plugged into the equipment. It sold its equipment to the regional Bell operating companies or “RBOCs.” DSC provided software for controlling the interface cards; the software was “downloaded,” i.e., copied, from the equipment to the interface cards each time the equipment was powered up. The defendant, Pulse Communications (Pulsecom), also sold interface cards, which were designed to be compatible with DSC’s equipment and to be controlled by DSC’s software. *See* 170 F.3d at 1357-58. (The reverse-engineering aspects of the *Pulsecom* case are discussed in § 2.7[e].)

Each time a Pulsecom customer powered up its DSC equipment with a Pulsecom interface card installed in it, the DSC equipment automatically downloaded a copy of DSC’s controller software to the Pulsecom interface card, in violation of the license agreement. *See* 170 F.3d at 1359. This was a violation of DSC’s license agreement, which prohibited the customers from using the controller software except with DSC-provided hardware. *See* 170 F.3d at 1361. According to DSC, Pulsecom’s customers were thereby infringing DSC’s copyright in its controller software, and Pulsecom was thus a contributory infringer.

Initially, Pulsecom prevailed at trial on a section-117 theory. The district court noted that DSC’s customers obtained a right to possession of DSC’s controller software for an unlimited period by making a single payment. According to the district court, this made the transaction a “sale” and made DSC’s customers the owners of copies of the software; that in turn gave the customers the right to make copies of the software in connection with using Pulsecom’s competing interface cards. *See* 170 F.3d at 1360-61.

The Federal Circuit, however, rejected the district court’s ownership analysis. Looking to the legislative history, the appellate court held that “it is clear from the fact of the substitution of the term ‘owner’ for ‘rightful possessor’ that Congress must have meant to require more than ‘rightful possession’ to trigger the section 117 defense.” Although the Federal Circuit disagreed with *MAI*

Systems's view that the mere existence of a license agreement implied a lack of ownership, *see* 170 F.3d at 1360, the court did hold that the specific license agreements in question "characterize the [customers] as non-owners of copies of the software, [and] the restrictions imposed on the RBOCs' rights with respect to the software are consistent with that characterization," and that the license agreements "severely limit the rights of the [customers] with respect to the [software] in ways that are inconsistent with the rights normally enjoyed by owners of copies of software." *Pulsecom*, 170 F.3d at 1361. *Pulsecom* was thus unsuccessful in attempting to assert its section-117 defense.

[2] Adaptation: Modification of Owned Copies of Software

Some opinions have addressed the extent to which customers have the right to modify their copies of software. At least some courts have been inclined to be sympathetic to customers who modified software that they had paid for.

Aymes v. Bonelli, 47 F.3d 23 (2d. Cir. 1995): According to the Second Circuit, the owner of a copy of a computer program can modify the program for its own use, even though the modification amounts to creation of a derivative work. In *Aymes*, an independent-contractor programmer sued his former customer for copyright infringement after the customer modified the software. The Second Circuit had no trouble agreeing with the district court that the programmer, who had been paid \$70,000 to design a computer program specifically for the customer, had sold the customer a copy of the program. The court then relied on 17 U.S.C. § 117 to hold that the customer, as rightful owner of a copy of the program, "did not infringe upon Aymes's copyright, because the changes made to [the program] were necessary measures in their continuing use of the software in operating their business." *Id.*, 47 F.3d at 26. *Id.*, 47 F.3d at 26. The court said that an owner's right of adaptation "includes 'the right to add features to the program that were not present at the time of rightful acquisition,' and was intended to apply to modifications for internal use, as long as the adapted program is not distributed in an unauthorized manner." *Id.* (citations omitted). (The *Aymes* case's holding concerning ownership and the work-made-for-hire doctrine is discussed *supra* at § 2.6[b][2].)

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Synergistic Technologies, Inc. v. IDB Mobile Communications, Inc., 871 F. Supp. 24 (D.D.C. 1994) (granting defendant's motion for summary judgment of no copyright infringement): In this case a similar result to that in *Aymes* was reached, although on different grounds. The plaintiff had sold the defendant computer hardware, with software installed, for use in a satellite communications earth station. The system malfunctioned; the defendant discovered that the source code had been deleted and hired a third party to fix the software problems. The plaintiff thereupon sued for copyright infringement. The court first held that under section 2-401 of the Uniform Commercial Code, “[t]he parties not having explicitly agreed otherwise, title to the hardware *and to a copy of the software* passed to IDB at the time of delivery of the goods. Accordingly, IDB is the owner of a copy of the computer program and is entitled to copy and adapt the program in the limited manner described in § 117.” *Id.* at 29 (emphasis supplied). (The court granted summary judgment for the defendants on other grounds, namely that the plaintiff had failed, in response to the defendants' summary judgment motion, to establish a *prima facie* case that any potentially impermissible copying had occurred. *Id.* at 29-30.)

§ 2.10 Remedies for Copyright Infringement

Infringement of a copyright can lead to an injunction and an award of the copyright owner's damages, plus the infringer's profits arising from infringement to the extent not taken into account in computing damages. *See* 17 U.S.C. §§ 502-505 (remedies for copyright infringement).

[a] Direct and Indirect Profits

The computation of the infringer's profits can take into account the infringer's business revenues earned *using* the copyrighted software (as opposed to selling copies of the software). An example is found in an antitrust suit brought against Xerox by independent service organizations (ISOs), in which Xerox counterclaimed for infringement of copyrights in Xerox's software. The district court awarded Xerox damages including the infringer's profits, measured as its business revenues minus its proved costs. *See In re Indep. Services Organizations Antitrust Litigation*, 23 F. Supp.2d 1242, 1250-53 (D. Kan. 1998), *aff'd*, 203 F.3d 1322 (Fed. Cir. 2000).

An award of an infringer's profits can also include *indirect* profits. An example not in the software field is the *Frank Music Corp. v. MGM* case, in which MGM was hit with an award for "a piece of the action" at its casino because its floor show infringed a copyright in a musical production. As described by the Ninth Circuit:

Plaintiffs are the copyright owners and authors of *Kismet*, a dramatico-musical work. MGM, Inc. under license produced a musical motion picture version of *Kismet*. Beginning April 26, 1974, MGM Grand presented a musical revue entitled *Hallelujah Hollywood* in the hotel's Ziegfeld Theatre. ... The show comprised ten acts, four billed as "tributes" to MGM motion pictures. Act IV was entitled "Kismet", and was a tribute to the MGM movie of that name. It was based almost entirely on music from *Kismet*, and used characters and settings from that musical.

* * *

In *Frank Music I*, we held that the plaintiffs were entitled to recover, in addition to direct profits, a proportion of ascertainable indirect profits from defendants' hotel and gaming operations attributable to the promotional value of *Hallelujah Hollywood*. The district court considered the relative contributions of Hallelujah Hollywood and other factors contributing to the hotel's profits The district court concluded that two percent of MGM Grand's indirect profit was attributable to *Hallelujah Hollywood*. ... [T]his conclusion is not clearly erroneous.

Frank Music Corp. v. Metro-Goldwyn-Mayer, Inc., 886 F.2d 1545, 1547-48, 1550 (9th Cir. 1989) (footnotes omitted, emphasis added).

[b] Statutory Damages

If the copyright owner so chooses, and provided that it timely registered its copyright(s) (see § 2.4[a]), it can elect, instead of recovering actual damages and profits, to receive an award of

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“statutory damages,” essentially a civil fine paid to the copyright owner. The amount of statutory damages is set by the judge; it can range from not less than \$750 to not more than \$30,000 for all infringements involved in the lawsuit in respect of any one copyrighted “work.” The court can increase the statutory damages to \$150,000 if the copyright owner proves, and the court finds, that the infringement was willful. *See* 17 U.S.C. § 504(c).

Selected cases:

UMG Recordings, Inc. v. MP3.com, Inc., NO. 00 CIV. 472 (JSR), __ F. Supp.2d __ (S.D.N.Y. Sept. 6, 2000): The court had previously granted summary judgment that MP3.com had infringed the copyright in thousands of music CDs (see § 2.8[a]). The court awarded statutory damages of \$25,000 per CD, with MP3.com claiming that 4,700 CDs were copied but UMG claiming the correct number was in the neighborhood of 10,000. The resulting damage award would thus be between \$118 million and \$250 million. The court reserved for a separate phase of the trial the issue of the specific number of CDs copied.

[c] Personal Liability for Controlling Persons

Infringement can also lead to vicarious liability for “controlling persons” (possibly including personal liability for corporate officers who have the authority and ability to control the infringing acts. The reported cases tend to be fairly fact-intensive; it appears that notions of equity may inform the courts’ decisions in particular cases.

Selected cases:

Softel, Inc. v. Dragon Medical and Scientific Communications, Inc., 118 F.3d 955 (2d Cir. 1997): The Second Circuit affirmed dismissal of copyright-infringement and trade-secret claims against the president of company with five employees. The president was not shown to have “a right and ability to supervise [that] coalesce[d] with an obvious and direct financial interest in the exploitation of copyrighted materials” 118 F.3d at 966-67 (internal quotation marks and citation omitted; brackets by the court).

Engineering Dynamics, Inc. v. Structural Software, Inc., 26 F.3d 1335 (5th Cir. 1994): The plaintiff, a software manufacturer, filed an infringement suit against both a corporate defendant and the

defendant's principal officer. The district court dismissed the suit as against the officer, who according to the court had personally engaged in infringing acts. The Fifth Circuit reversed, holding that the officer was individually liable in his personal capacity. *See* 26 F.3d at 1349-50.

Ez-Tixx, Inc. v. Hit-Tix, Inc., 919 F. Supp. 728 (S.D.N.Y.1996): The court denied a defense motion for summary judgment. It held that individual defendants could be vicariously liable for infringement, because they had at least some control over primary corporate defendant as well as a financial interest in the alleged acts of infringement. *See* 919 F. Supp. at 732-35.

Data General Corp. v. Grumman Data Sys. Corp., 886 F. Supp. 927 (D. Mass. 1994): The court granted partial summary judgment against a company of which a corporate infringement defendant was a wholly-owned subsidiary. The court held that the parent company was vicariously liable for judgment of \$52 million in respect of the subsidiary's copyright infringement infringement. *See* 886 F. Supp. at 931-32 (citing cases).

[d] Injunctions; Seizures

The copyright owner's remedies may also include an injunction against further infringement, *see* 17 U.S.C. § 502, as well as ex parte seizure and/or post-judgment confiscation of the defendant's computer equipment used to make unauthorized copies. *See* 17 U.S.C. § 503.

Selected cases:

Central Point Software Inc. v. Nugent, 903 F. Supp. 1057 (E.D. Tex. 1995): The court granted the copyright owner's motion for summary judgment. It ruled that requiring defendant to deliver to plaintiff the computer equipment used to make infringing copies was a "reasonable disposition" under 17 U.S.C. § 503(b).

DSC Communications Corp. v. DGI Technologies, Inc., 898 F. Supp. 1183 (N.D. Tex. 1995), *aff'd*, 81 F.3d 597 (5th Cir. 1996): The district court upheld its own ex parte seizure order in pertinent part and granted a preliminary injunction against infringement.

[e] Product Recalls

An injunction can include an order to recall all copies of the infringing product. Selected cases:

In the *Montgomery* case discussed in § 2.2, the court issued a preliminary injunction that, among other things, required the defendants to recall and surrender to the plaintiff all infringing products in their possession, and to advertise via bulletin board that the infringing products were produced without a license and thus were subject to payment of a licensing fee to the plaintiff. *See Montgomery*, 168 F.3d at 1287 n.5.

CyberMedia, Inc. v. Symantec Corp., 19 F.Supp.2d 1070 (N.D. Cal. 1998) (granting preliminary injunction): The plaintiff was the manufacturer of a computer cleanup program called UnInstaller, which allowed users to remove unwanted applications and files from their computers. The court was persuaded, by expert testimony showing “line after line” of identical or nearly-identical code, that the defendant had simply lifted blocks of source code from the plaintiff’s software. *See id.* at 1077. The court entered a preliminary injunction requiring the defendants to issue a notice of recall to all of its distributors, with the notice to state that distribution of any infringing version of the software “may expose the distributor to liability as a contributory infringer.” *Id.* at 1081-82.

[f] Remedies Under the Digital Millennium Copyright Act

[Adapted from a U.S. Copyright Office summary, available on the World Wide Web at www.loc.gov; no copyright claimed in works of the U.S. Government.]

Under the Digital Millennium Copyright Act (DMCA), any person injured by a violation of the anti-circumvention provisions of 17 U.S.C. § 1201 (*see supra* § 2.7[h]) or the copyright-management-information provisions of 17 U.S.C. § 1202 (*see supra* § 2.7[h][3]) may bring a civil action in Federal court. Section 1203 gives courts the power to grant a range of equitable and monetary remedies similar to those available under the Copyright Act, including statutory damages.

The court has discretion to reduce or remit damages in cases of innocent violations, where the violator proves that it was not aware

and had no reason to believe its acts constituted a violation. *See* 17 U.S.C. § 1203(c)(5)(A).

Special protection is given to nonprofit libraries, archives and educational institutions, which are entitled to a complete remission of damages in these circumstances. *See* 17 U.S.C. § 1203(c)(5)(B).

Internet service providers (ISPs) are also given special protection from liability for copyright infringement, provided that they comply with certain procedural requirements in their operations (see

§ 2.11 Criminal Liability for Copyright Infringement

Section 506 of the Copyright Act criminalizes copyright infringement *(i)* for commercial purposes, *(ii)* for bartering purposes, or *(iii)* if the retail value of the illegal copies would exceed \$1,000. Specifically, infringement is subject to criminal penalties if it is done:

- “willfully and for purposes of commercial advantage or private financial gain,” 17 U.S.C. § 506(a)(1):
 - “willful” infringement must consist of evidence of more than the mere intentional reproduction or distribution of copyrighted works. 17 U.S.C. § 506(a)(2);
 - “financial gain” is defined as including “receipt, or expectation of receipt, of anything of value, including the receipt of other copyrighted works,” to ensure that persons who illegally traffic in copyrighted works by using barter rather than cash are covered by the statute. 17 U.S.C. § 101; **or**,
- “by the reproduction or distribution, including by electronic means, during any 180-day period, of 1 or more copies or phonorecords of 1 or more copyrighted works, which have a total retail value of more than \$1,000[.]” 17 U.S.C. § 506(a)(2).

Conviction can result in imprisonment for up to one year (plus a fine) for minor offenses. 18 U.S.C. § 2319(b). Conviction of “the

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reproduction or distribution, during any 180-day period, of at least 10 copies . . . of 1 or more copyrighted works, with a retail value of more than \$2,500" can result in a 5-year prison term, or a 10-year term in the case of a repeat offense. *Id.*

Computer equipment used in copyright infringement can be seized in a criminal action: Section 506 of the Copyright Act requires forfeiture, upon conviction, of "all infringing copies . . . and all implements, devices, or equipment used in the manufacture of such infringing copies . . ." 17 U.S.C. § 506(b).

Violators of the anti-circumvention and copyright-management-information provisions of the Digital Millennium Copyright Act (see § 2.7[h] and § 2.7[h][3]) can also be fined and/or imprisoned. If a violation is willful and for purposes of commercial advantage or private financial gain, the violator can be fined and/or imprisoned – up to \$500,000 and 5 years for a first offense, or up to \$1,000,000 and 10 years for subsequent offenses. (Nonprofit libraries, archives and educational institutions are entirely exempted from criminal liability.) See 17 U.S.C. § 1204(b).

Selected cases:

United States v. Rothberg, 2002 WL 171963 (N.D. Ill. Feb. 4, 2002): Members of a computer software piracy group called "Pirates with Attitudes (PWA)" pleaded guilty to conspiracy to commit copyright infringement by distributing pirated computer software over the Internet; another member was found guilty after a jury trial. The computer equipment used to store the pirated software on an Internet site was seized; for purposes of the Sentencing Guidelines, the court assessed the value of the pirated software as being the retail value, which added up to more than \$1.4 million.

Appendix: Sample Copyright Assignment Instrument

STATE OF WHATEVER

COUNTY OF WHEREVER

KNOW ALL MEN BY THESE PRESENTS:

That ABC, INC., a Delaware corporation having a mailing address at *[insert address]* and a principal place of business at *[insert address]* (the ASSIGNOR), in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby:

SELLS, ASSIGNS, and TRANSFERS to XYZ, INC., a Delaware corporation having a mailing address at *[insert address]* and a principal place of business at *[insert address]* (the ASSIGNEE), the entire right, title, and interest, including without limitation the right to sue and recover damages for past infringements of copyrights and the like, for the United States and all foreign countries, in and to that certain computer software package entitled *[insert title, e.g., from copyright registration, if any]* and whose U.S. copyright is registered with the Register of Copyrights under registration number TX-*[insert registration number, if any, or refer to registration application to be filed contemporaneously if applicable]*, all as more fully described below:

[Include adequate but nonconfidential description]

The assignment herein is subject only to the following PERMITTED EXCEPTIONS:

[Insert list of Permitted Exceptions, e.g., licenses, security interests, etc., or make reference to separate list that will not be recorded]

ASSIGNOR WARRANTS AND COVENANTS that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed, other than the above-recited PERMITTED EXCEPTIONS, has been or will be made to others by the ASSIGNOR or any predecessor in title thereto, and that the full right to convey the same as herein expressed is possessed thereby;

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TO BE BINDING on the successors and assigns of the ASSIGNOR
and to extend to the successors, assigns, and nominees of the
ASSIGNEE.

[Signature and notary acknowledgement]

COPYRIGHT

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CHAPTER 3

Software- and Internet Patents

D. C. Toedt

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§ 3.1 Introduction: Software- and Internet Patents are “For Real”

Many patents for software- and Internet-related technology are issuing each week, to the point where the Patent and Trademark Office (“PTO”) recently initiated a program to improve the quality of its searching and examination of business method patents. See U.S. Patent & Trademark Office, Business Methods Patent Initiative: An Action Plan, March 29, 2000, posted at <http://www.uspto.gov/web/offices/com/sol/actionplan.html>.) The official abstracts of some patents recently in the news are set forth below:

Amazon.com: USP 5,960,411, “Method and system for placing a purchase order via a communications network.” A method and system for placing an order to purchase an item via the Internet. [1] The order is placed by a purchaser at a client system and received by a server system. [2] The server system receives purchaser information including identification of the purchaser, payment information, and shipment information from the client system. [3] The server system then assigns a client identifier to the client system and associates the assigned client identifier with the received purchaser information. [4] The server system sends to the client system the assigned client identifier and an HTML document identifying the item and including an order button. [5] The client system receives and stores the assigned client identifier and receives and displays the HTML document. [6] In response to the selection of the order button, the client system sends to the server system a request to purchase the identified item. [7] The server system receives the request and combines the purchaser information associated with the client identifier of the client system to generate an order to purchase the item in accordance with the billing and shipment information whereby the purchaser effects the ordering of the product by selection of the order button. (Bracketed numbering added.)

Double Click, Inc.: USP 5,948,061, “Method of delivery, targeting, and measuring advertising over networks.” Methods and apparatuses for targeting the delivery of advertisements over a network such as the Internet are disclosed. Statistics are compiled on individual users and networks and the use of the advertisements

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is tracked to permit targeting of the advertisements of individual users. In response to requests from affiliated sites, an advertising server transmits to people accessing the page of a site an appropriate one of the advertisement based upon profiling of users and networks.

Priceline.com: USP 5,897,620, "Method and apparatus for the sale of airline-specified flight tickets." An unspecified-time airline ticket representing a purchased seat on a flight to be selected later, by the airlines, for a traveler-specified itinerary (e.g., NY to LA on March 3rd) is disclosed. Various methods and systems for matching an unspecified-time ticket with a flight are also disclosed. An exemplary method includes: (1) making available an unspecified-time ticket; (2) examining a plurality of flights which would fulfill the terms of the unspecified-time ticket to determine which flight to select; and (3) providing notification of the selected flight prior to departure. The disclosed embodiments provide travelers with reduced airfare in return for flight-time flexibility and, in turn, permits airlines to fill seats that would have otherwise gone unbooked. Because of the flexibilities required of the unspecified-time traveler, unspecified-time tickets are likely to attract leisure travelers unwilling to purchase tickets at the available published fares and, at the same time, are likely to "fence out" business travelers unwilling to risk losing a full day at either end of their trip. Moreover, the flexibilities required of the unspecified-time traveler need not be limited to a departure time; the flexibilities may also include the airline, the departing airport, the destination airport, or any other restriction that increases the flexibility afforded the airline in placing the traveler aboard a flight. The disclosed embodiments thus permit airlines to fill otherwise empty seats in a manner that stimulates latent and unfulfilled leisure travel demand while leaving their underlying fare structures intact.

In recent months such patents have gotten a great deal of ink; not just journalistic ink but increasingly, judicial ink. For example:

Xerox Corp. v. 3Com Corp., 2001 WL 1757247 (W.D.N.Y. Dec. 20, 2001), *on remand from* 267 F.3d 1361 (Fed. Cir. 2001): *Technology:* Palm Pilot "Graffiti" software. Xerox sued manufacturers of Palm Pilot personal digital assistants (PDAs), claiming that Palm's "Graffiti" handwriting-recognition software infringed a Xerox patent. The district court initially granted summary judgment of noninfringement, but after being reversed on

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that point by the Federal Circuit, the court granted summary judgment that the patent was valid, infringed, and enforceable.

Amazon.com, Inc. v. Barnesandnoble.com, Inc., 73 F.Supp.2d 1228 (W.D. Wash. 1999) (granting preliminary injunction). *Technology:* “One-click” ordering system for e-commerce Web sites. *Comment:* This opinion is worthy of careful reading for insights into how evidence is marshaled by counsel – and assessed by the trier of fact – in a patent infringement case.

Wang Laboratories, Inc., v. America Online, Inc., 197 F.3d 1377, 1384 (Fed. Cir. 1999) (affirming summary judgment that AOL and Netscape Web browsers did not infringe). *Technology:* Videotex frame processing system.

WMS Gaming, Inc. v. Int'l Game Technology, 184 F.3d 1339, 1355-60 (Fed. Cir. 1999) (affirming judgment that patent was not invalid and was infringed under doctrine of equivalents). *Technology:* Microprocessor-based slot machine in which the spinning reels were electronically controlled to vary the odds of winning. *Comment:* This opinion provides an excellent summary of a variety of different patent-law doctrines.

Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261 (Fed. Cir. 1999) (vacating and remanding summary judgment of noninfringement). *Technology:* Garage door opener remote-control systems. *Comment:* The court held that a fact question existed as to whether a *software*-based system for selecting transmitter codes was “equivalent” (see § 3.7[e]) to the patented *mechanically*-based system.

Oacis Health Care Systems, Inc. v. Allcare Health Management Systems, Inc., 2000 WL 550040 (N.D. Cal. 2000) (granting patent owner-defendant’s motion to dismiss declaratory-judgment action for lack of personal jurisdiction). *Technology:* Integrated health-care information management system.

Dymo Costar Corporation v. Seiko Instruments USA, Inc., 2000 WL 502616 (D. Conn., Mar 20, 2000) (granting preliminary injunction against accused infringer). *Technology:* Postage label that could be produced with an inexpensive thermal printer, which was described as useful in “Internet postage,” i.e., downloading postage credits to a personal computer over the internet:

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Novadigm, Inc. v. Marimba, Inc., 2000 WL 228356 (N.D. Cal. Feb 15, 2000) (granting patent owner's motion to dismiss inequitable-conduct defense). *Technology*: "Push"-type system for proactively delivering content over the Internet.

CIVIX-DDI, LLC v. Microsoft Corp., 84 F.Supp.2d 1132 (D. Colo. 2000) (granting defendants' motion for summary judgment of noninfringement). *Technology*: Street-mapping software used on Web sites and Internet kiosks.

AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 1358-60 (Fed. Cir. 1999) (reversing and remanding summary judgment of invalidity of patent on statutory-subject-matter grounds); *on remand*, 1999 WL 1050064, 52 U.S.P.Q.2d 1865 (D. Del. 1999) (NO. (granting defendant's motion for summary judgment of invalidity on prior-art grounds). *Technology*: Method of recording primary interexchange carrier (PIC) of recipient of telephone call as data field in message record. *Comment*: The claims of this patent were found to be anticipated by MCI's Friends and Family program.

Charles E. Hill & Associates, Inc. v. CompuServe, Inc., 65 F.Supp.2d 924, 931 (S.D. Ind. 1999) (construing claim language). *Technology*: "Distributed" catalog system in which up-to-date information related to a selected product is transmitted from a main computer to a remote computer.

(Continued on next page)

§ 3.2 Exactly What is a Patent?

A patent is a Government document that announces:

- that the inventor has submitted a patent application, containing a written disclosure of what the inventor believes to be a new invention,
- that a patent examiner has reviewed the patent application and made a determination that the application and the invention appear to meet certain legal criteria, and
- in exchange for submitting the invention for publication in a patent, the Government has granted the inventor certain rights, for a limited period of time, in the invention as claimed.

What is a Patent?

- Limited grant of right to exclude others
- Bargain between inventor and government
- Not a “permit” to *use* the invention
- Rights defined by claims
- Competitors have rights, too

A patent gives the owner the right to exclude others from making, using, offering for sale, and selling the invention described and claimed in the patent. The statute provides that:

Every patent shall contain . . . a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and if the invention is a process, of the right to exclude others from using, offering for sale or selling

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throughout the United States, or importing into the United States, products made by that process

35 U.S.C. § 154(a)(1).

Some noteworthy points about patents:

(i) *A patent gives the inventor the right to exclude, not the right to practice the invention.* A patent is not like a fishing license or a building permit; an inventor does not need a patent to be able to practice his or her invention. Every patent contains a grant to the owner of the right, for a limited period of time, not to practice the invention him- or herself, but instead to *exclude others* from making, using, selling, offering to sell, or importing the specific subject matter described by the claims of the patent in the United States.

(ii) *An inventor's competitors can freely copy and use an unpatented invention.* If a new product has been made public (for example, by putting it on sale or by publishing information about it), then others have the right to freely copy and use the product (**but** not necessarily to copy any subject matter that is protected by other patents or by copyright), without any obligation to its inventor, unless and until a patent is issued that covers the product.

Why Competitors Have the Right to Copy Unpatented Inventions

- Free competition is the rule in the U.S.
- Competitors' copying of unpatented, publicly-available technology benefits the public
- Gives inventors an incentive to develop *patentable* inventions

There are several reasons for this rule. For example, free competition in the marketplace is the rule in the United States, and competitors are encouraged to copy unpatented, publicly available technology, because that benefits the public by disseminating new ideas. *See, e.g., Bonito Boats, Inc., v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151, 164-65, 160, 109 S. Ct. 971, 977-78, 984-85, (1989) (holding that state law prohibiting plug-molding methods of copying

boat hulls was preempted by federal patent law; “[t]he novelty and nonobviousness requirements of patentability embody a congressional understanding, implicit in the Patent Clause itself, that free exploitation of ideas will be the rule, to which the protection of a federal patent is the exception. Moreover, the ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure.”).

In addition, this rule gives inventors an incentive to develop inventions that meet the rigid criteria for patentability – if an inventor develops an invention that falls short of those criteria, or if he does not go through the procedures for obtaining a patent, then he will not be able to stop competitors from copying the invention. *See id.*, 489 U.S. at 160, 109 S. Ct. at 982 (“the competitive reality of reverse engineering may act as a spur to the inventor, creating an incentive to develop inventions that meet the rigorous requirements of patentability”).

§ 3.3 Legal Basis for Software- and Internet-Related Patents

[a] The Patent Statute Allows *Useful Processes* to be Patented

The Patent Act of 1952 provides that:

Whoever invents or discovers *any new and useful process*, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101 (emphasis added).

The term “process” means process, art or method, and *includes a new use of a known process*, machine, manufacture, composition of matter, or material.

35 U.S.C. § 100(b) (emphasis added). The Supreme Court has held that, with certain exceptions, the statutory language was intended to “include anything under the sun that is made by man.” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (affirming CCPA reversal

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of Patent and Trademark Office (PTO) refusal to grant patent for new genetically-engineered organism; citation to legislative history omitted).

[b] But the Patentability of Software and of “Business Methods” Was Much Debated for Decades

Until recent years, however, the patentability of software was regarded as, at best, limited. The courts disagreed over whether software-related subject matter should be patentable in the first place, and then they had difficulty arriving at a workable test for patentability of such subject matter.

[1] The Years-Long Battle Between the CCPA and the Supreme Court

From about 1969 to 1981, the Court of Customs and Patent Appeals (CCPA) battled the Supreme Court on the issue of software patentability. The CCPA, notably in a series of opinions by Judge Giles S. Rich (one of the two principal drafters of the 1952 Patent Act), held that software-related technology could be patented if it met the usual tests of novelty, utility, and non-obviousness. *See, e.g., In re Musgrave*, 431 F.2d 882 (CCPA 1970) (Rich, J.) (reversing PTO rejection of claims to a method of correcting seismogram signals received back from geological formations in the earth's crust); *In re Tarczy-Hornoch*, 397 F.2d 856 (CCPA 1968) (Rich, J.) (reversing rejection of claims directed to a method for sorting or counting electrical pulses).

But in its famous *Benson* and *Flook* opinions, the Supreme Court slapped down the CCPA, each time holding that software technology was “nonstatutory subject matter” that could not be patented. *See Gottschalk v. Benson*, 409 U.S. 64 (1972) (Douglas, J.) (reversing CCPA and approving PTO rejection of claims to method for performing a particular mathematical operation), *reversing In re Benson*, 441 F.2d 682 (CCPA 1970) (Rich, J.); *Parker v. Flook*, 437 U.S. 584 (1978) (reversing CCPA and approving PTO rejection of claims to method of updating an alarm limit in a catalytic conversion process). Interestingly, the Court did not deign even to cite, let alone discuss, any of the CCPA’s body of work in this area.

The Court started to change its tune in its 5-4 *Diehr* decision of 1981. *See Diamond v. Diehr*, 450 U.S. 175 (1981). Citing *Chakrabarty, supra*, the Court held that a method for curing rubber was not necessarily unpatentable just because it was implemented in software.

Even so, for over a decade the CCPA – perhaps still smarting from the previous confrontations – took a fairly conservative approach to software patentability. The result was what became known as the “*Freeman-Walter-Abele*” test (now obsolete as discussed below). *See In re Freeman*, 573 F.2d 1237, 1243-45 (CCPA 1978); *In re Walter*, 618 F.2d 758, 767 (CCPA 1980); *In re Abele*, 684 F.2d 902 (CCPA 1982).

[2] The Federal Circuit’s Grappling with Software Patentability

In 1982 the CCPA was succeeded by the newly-created Court of Appeals for the Federal Circuit, which was given jurisdiction over appeals in essentially all patent cases in order to develop a uniform body of patent law. *See* 28 U.S.C. § 1295(a)(1); *Cable Electric Products, Inc., v. Genmark, Inc.*, 770 F.2d 1015, 1032 (Fed. Cir. 1985) (Congress created the Federal Circuit with the specific mission of achieving doctrinal uniformity in patent law). Beginning in the late 1980s, the Federal Circuit was forced to confront the difficulties of the *Freeman-Walter-Abele* test and to reexamine the issue of software patentability. The major cases from this era include:

- *In re Grams*, 888 F.2d 835 (Fed. Cir. 1989) (affirming PTO rejection of claims to method of diagnosing an abnormal condition in an individual);
- *In re Iwahashi*, 888 F.2d 1370 (Fed. Cir. 1989) (reversing PTO rejection of patent application for auto-correlation unit in voice recognition);
- *Arrhythmia Research Technology, Inc., v. Corazonix Corp.*, 958 F.2d 1053 (Fed. Cir. 1992) (reversing summary judgment of invalidity of patent on a “number crunching” method of analyzing EKG signals to predict whether a heart attack patient might suffer from ventricular tachycardia);

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- *In re Schrader*, 22 F.3d 290 (Fed. Cir. 1994) (affirming PTO rejection of claims to system for managing bids for parcels of land);
- *In re Warmerdam*, 33 F.3d 1354 (Fed. Cir. 1994) (affirming pertinent PTO rejections of patent application for robot control system);
- *In re Trovato*, 42 F.3d 1376 (Fed. Cir. 1994) (affirming PTO rejection of patent application for method for determining the shortest path over which an object could be moved between two points), *vacated and remanded*, 60 F.3d 807 (Fed. Cir. 1995) (*en banc*);
- *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994) (*en banc*) (reversing PTO rejection of patent application for a rasterizer, i.e., means for creating a smooth waveform display in a digital oscilloscope);
- *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994) (reversing PTO obviousness rejection [there was no statutory-subject-matter rejection] of claims directed to “[a] memory for storing data . . . comprising: a data structure stored in said memory” where the data structure was organized in a useful and nonobvious way).

[c] The PTO's Abrupt About-Face on Software Patentability

In a startling turn of events in 1995, the PTO announced that, in view of *Lowry*, it would begin granting patents on program storage devices – e.g., floppy disks, CD ROMs, and the like – that contained new, useful, and nonobvious programming. *See In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995); *see also* U.S. Patent and Trademark Office, Examination Guidelines for Computer-Related Inventions, 61 Fed. Reg. 7478-02 (Feb. 28, 1996), *available at* <http://www.uspto.gov>.

[d] After *State Street Bank*, Business Processes Implemented in Software, or Via the Internet, Are Now Potentially Patentable

In its 1998 *State Street Bank* opinion, the Federal Circuit seemingly opened the door for expanded patent protection of automated business processes implemented in software or, usually, via the Internet. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), *reversing* 927 F. Supp. 502 (D. Mass 1996), *cert. denied*, 525 U.S. 1093, 119 S. Ct. 851 (1999).

State Street Bank involved a patent on a computerized accounting system for managing a mutual fund investments. The federal district court in Boston granted a summary judgment of invalidity as to patent. The Federal Circuit, in an opinion by Judge Rich, some 30 years after his CCPA opinions discussed above, distinguished between an abstract mathematical algorithm, which would not be patentable, and a useful implementation of the algorithm, which could indeed be patentable. “Unpatentable mathematical algorithms are identifiable by showing they are merely abstract ideas constituting disembodied concepts or truths that are not ‘useful.’ From a practical standpoint, this means that to be patentable an algorithm must be applied in a ‘useful’ way.” *Id.*, 149 F.3d at 1373.

The Federal Circuit then held that “the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete and tangible result’—a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” *Id.*, 149 F.3d at 1373, *citing Alappat*, 33 F.3d at 1544. The panel put the *Freeman-Walter-Abele* test out of its misery, on grounds that *Diehr* and *Chakrabarty* had effectively overruled the Supreme Court precedent on which that test was based. *See id.*, 149 F.3d at 1374.

The *State Street Bank* panel also killed off the old rule that “business methods” were *per se* unpatentable. The court noted that “[a]s an alternative ground for invalidating the '056 patent under § 101, the court relied on the judicially-created, so-called ‘business

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method' exception to statutory subject matter. We take this opportunity to lay this ill-conceived exception to rest." *Id.*, 149 F.3d at 1375. It held that "[s]ince the 1952 Patent Act, business methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method." *Id.* (footnote omitted).

Court-watchers noted that it took the *State Street Bank* panel an unusually long time to decide the case after oral argument. Some observers speculated that the panel had been informally consulting with the court's other judges, thus in effect doing an unofficial and undocumented en-banc review. And many were surprised when the Supreme Court denied certiorari, thus possibly ending at least the judicial portion of the debate over software patentability.

§ 3.4 Substantive Requirements of Patentability

While software- and e-commerce inventions can be patented more readily than before (at least in the United States), not all such inventions meet the substantive requirements for patentability. It is probably safe to say that the majority of patent applications filed are rejected for failure to meet the patentability requirements set out in U.S. law.

[a] The Enabling-Disclosure Requirement

By statute, a patent application must include an "enabling" disclosure of how to make and use the invention, as well as a disclosure of the "best mode" known to the inventor of practicing the invention. *See* 35 U.S.C. § 112, first paragraph.

An "enabling" disclosure in a patent application is one that will allow persons skilled in the art to make and use the invention without *undue* experimentation. *See* 35 U.S.C. § 112 (requiring enabling, best-mode disclosure of how to make and use invention); *see generally, e.g., In re Hayes Microcomputer Products, Inc., Patent Litigation*, 982 F.2d 1527 (Fed. Cir. 1992) (affirming jury verdict of infringement of patent relating to modem guardtime escape sequence and rejecting enablement- and best-mode challenge; "an inventor is not required to describe every detail of his invention"); *Northern Telecom, Inc., v. Datapoint Corp.*, 908 F.2d 931, 940-43 (Fed. Cir. 1990) (reversing trial court finding of lack of enablement

for failure to disclose source code of computer program, but affirming finding of failure to disclose best mode of magnetic tape cassette used for program and data storage).

[b] The Best-Mode Disclosure Requirement

A “best mode” disclosure in a patent application relates to the best way known to the inventor of practicing the *claimed* subject matter at the time of filing the patent application. For example, if one of the claims in the application is directed to implementing a new software technique on a specific platform, then a disclosure of all points of “cleverness” relating to that specific implementation may be required. *See* the enablement cases cited *supra*; *cf. Consolidated Aluminum Corp. v. Foseco Int'l, Ltd.*, 910 F.2d 804 (Fed. Cir. 1990) (affirming holding of inequitable conduct and resulting unenforceability of patent where patentee found to have concealed best mode intentionally).

On the other hand, if the claims are general in nature and applicable across a wide range of hardware — i.e., if they are not specific to any particular machine, operating system, etc. — then disclosure of specific implementation techniques *may* not be required. In particular, there is no rule that the details of a specific commercial implementation be disclosed; “[t]he focus of a section 112 inquiry is not what a particular user decides to make and sell or even in what field the invention is most likely to find success. Rather, in keeping with the statutory mandate, our precedent is clear that the parameters of a section 112 inquiry are set by the CLAIMS.” *Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563, 1567 (Fed. Cir. 1996) (affirming judgment that patent was not invalid for failure to disclose best mode) (emphasis in original).

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[c] No Requirement to Disclose Source Code

Patent application drafters and their clients frequently must confront the question whether to include in an application the source code of a computer program used in the invention. While the case law was unclear at first, technically the answer now appears to be “no”; the Federal Circuit has held several times that there is no hard and fast requirement for a source-code disclosure. “[W]hen disclosure of software is required, it is generally sufficient if the functions of the software are disclosed, it usually being the case that creation of the specific source code is within the skill of the art.” *Robotic Vision Systems, Inc. v. View Eng’g, Inc.*, 112 F.3d 1163, 1166 (Fed. Cir. 1997) (reversing summary judgment of invalidity; holding that patent’s disclosure of functions was adequate and that disclosure of source code was not necessary for compliance with best mode requirement), *citing Fonar Corp. v. General Electric Co.*, 107 F.3d 1543 (Fed. Cir. 1997) (same).

Disclosure of source code can still be a good idea, however, as discussed in § 3.5[d][2].

[d] The *Claims* Define the Protectable Invention

The last section of a patent contains the claims, which define the patented invention in words. There is no infringement of a patent unless the accused product (or process) is “covered” by at least one claim of the patent. Any similarities or dissimilarities between the *description* in the patent and the accused product are irrelevant, because “[t]he written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (in banc), *aff’d*, 517 U.S. 370, 116 S. Ct. 1384, 134 L.Ed.2d 577 (1996) (holding that Seventh Amendment does not require jury trial of disputes over proper interpretation of patent claim).

Each claim sets forth a number of checklist-like elements. To prove infringement, a patent owner must show that every element of at least one claim is present in the accused product or process. (In a patent claim, *less is more*: A claim that has very few elements will be satisfied – i.e., infringed – by more things than will a claim that has more elements.)

Three hypothetical examples of patent claims are set out in the inset below.

1. *[Independent claim]* A chair comprising:
 - (a) a seat; and
 - (b) at least three legs extending downward from the seat.
2. *[Dependent claim]* The chair of claim 1, further comprising a fourth leg extending downwardly from the seat.
3. *[Dependent claim]* The chair of claim 2, further comprising a back.

Hypothetical Examples of Patent Claims

[e] The Novelty Requirement

One of the most important checks and balances in the patent system is that a patent cannot be granted on an invention that had already been invented. Even an independent reinvention of something that was already known is unpatentable by law. *See* 35 U.S.C. § 102 (categories of “prior art” that can preclude patentability of an invention). The underlying policy is that technology that is already available to the public should not be taken away from it by the granting of exclusionary rights. *See, e.g., Graham v. John Deere & Co.*, 383 U.S. 1, 6 (1966).

If a patent claim — which was described above as a list of elements or method steps that serves to define the claimed invention in question — is satisfied or “met” by technology that was already known in the art, then the claim is unpatentable. In the parlance of the patent bar, the claimed subject matter is “anticipated.”

- For example, if someone else invented the subject matter first, and did not abandon, suppress, or conceal it, then the second inventor is not entitled to a patent (whether or not the first inventor is or might have been so entitled). *See* 35 U.S.C. § 102(g).

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- If the claimed subject matter was patented or described in a printed publication anywhere in the world, or known or used by others in this country, before the inventor invented it, then it is unpatentable to that inventor. *See 35 U.S.C. § 102(a).*

[f] “Obvious” Subject Matter is Unpatentable

Even if a single prior-art reference does not completely satisfy a patent claim's list of elements, the claim may still be unpatentable. The patent statute provides that if the claimed subject matter would have been “obvious” in view of what was already known, the claim is unpatentable. *See 35 U.S.C. § 103* (statutory requirement of nonobviousness).

A useful discussion of a variety of obviousness-related issues can be found in *WMS Gaming, Inc. v. Int'l Game Technology*, 184 F.3d 1339, 1355-60 (Fed. Cir. 1999) (affirming judgment that patent on slot machine using computer-simulated spinning reels was not invalid for obviousness).

[1] Measuring the Claimed Subject Matter Against the “Prior Art”

In evaluating the nonobviousness of a claimed invention, the ultimate question is whether the prior activities and publications of others would have made the claimed invention obvious to a *hypothetical person of ordinary skill* at the time it was invented. The phrase “hypothetical person of ordinary skill” is an important one. What counts is not what would have been obvious to the inventor (who may be of far greater – or lesser – skill than those of ordinary skill), but instead what would have been obvious to those who were practicing the art or arts in question. *See generally, e.g., Custom Accessories, Inc., v. Jeffrey-Allan Industries, Inc.*, 807 F.2d 955, 962-63 (Fed. Cir. 1986) (factors involved in determining level of ordinary skill); *Bausch & Lomb, Inc., v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 447 (Fed. Cir. 1986) (inventor's subjective belief of obviousness not dispositive of the issue).

A shorthand metaphor sometimes used by the courts is: Consider a worker of “ordinary” skill in his workshop. Hanging on the workshop walls are all the prior patents, publications, known devices, etc., that such a worker might consult and study if he were diligently researching a problem and how to solve it. Assume that

this worker is familiar with all of these materials. The worker is assumed to be an ordinary worker and not someone who seeks to innovate. *See Standard Oil Co. v. American Cynamid Co.*, 774 F.2d 448, 454 & n.3 (Fed. Cir. 1985), *citing In re Winslow*, 365 F.2d 1017 (CCPA 1966), and *In re Antle*, 444 F.2d 1168 (CCPA 1971).

Generally speaking, the question is: would these materials have suggested or taught, to such a worker, the subject matter that is being *claimed* by the patent owner, as set forth in the claim's checklist of elements? If so, the claimed subject matter would have been obvious and is unpatentable to the claimant; otherwise not. *E.g., ACS Hospital Systems, Inc., v. Montefiore Hospital*, 732 F.2d 1572, 1577 (Fed. Cir. 1984).

The Supreme Court laid down the basic analytical requirements for determining nonobviousness in *Graham v. John Deere & Co.*, 383 U.S. 1 (1966). A decisionmaker inquiring into the nonobviousness question must ascertain (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; and (3) the differences between the prior art and the claimed subject matter as a whole. Giving due weight to any circumstantial evidence, the decisionmaker must rule whether the claimed subject matter would have been obvious. *See id.* at 17-18; *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567 (Fed. Cir. 1987). The ultimate question of obviousness is one of law. *Panduit*, 810 F.2d at 1566-67.

[2] The Difficulty of Combining Multiple Prior-Art References

Allegations of obviousness are frequently based on combinations of prior-art references. The argument usually goes something like this: "Reference A says this, and Reference B says that. If we combine these two references, between them they disclose the complete patented invention, so the patent is invalid."

Legally that can be a tough argument to sell, because it relies on a hindsight reconstruction of the claimed invention. As the Federal Circuit summed up in *WMS Gaming*:

When an obviousness determination relies on the combination of two or more references, there must be some suggestion or motivation to combine the references. The suggestion to combine may be found in explicit or implicit teachings within the

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references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved. “When determining the patentability of a claimed invention which combines two known elements, ‘the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.’”

WMS Gaming, 184 F.3d at 1355 (citations omitted).

[3] The Importance of Circumstantial Evidence of Nonobviousness

Evaluating the obviousness of an invention in retrospect can be difficult. As noted above, the courts have held that hindsight is not the proper perspective — hindsight reconstruction of the claimed invention, “using ‘the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the results of the claims in suit,’” is impermissible. *Grain Processing Corp. v. American Maize-Products Corp.*, 840 F.2d 902, 907-08 (Fed. Cir. 1988) (citation omitted). Once the invention is known, however, by definition a certain amount of hindsight is involved. Add to this difficulty the fact that judges and juries are frequently untrained in technological matters.

Consequently, the courts attempt to look at “objective” evidence, which can aid in deciding the obviousness question by viewing it through the eyes of others. Nonobviousness can be (but is not necessarily) objectively indicated in a number of ways:

- Commercial success that is linked with the specific subject matter being claimed by the inventor;
- accolades from others in the field;
- initial skepticism on the part of those skilled in the art;
- satisfying a long-felt need;
- solving a problem that had stumped others;
- licenses showing industry respect.

See, e.g., WMS Gaming, 184 F.3d at 1359-60 (citing cases). Such evidence can rebut a *prima facie* showing that the prior art would

have rendered the claimed invention obvious. *See id.*.. Such evidence often can be the most probative evidence of the nonobviousness of the claimed subject matter. *See Ashland Oil, Inc., v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 306 (Fed. Cir. 1985); *Stratoflex, Inc., v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983).

Commercial success can have particularly strong probative value as evidence of nonobviousness. *See, e.g., Simmons Fastner*, 739 F.2d at 1576. Commercial success implies that there was money to be made with the invention. If the invention in fact was obvious, the chances are that someone would have done it before. Since by hypothesis the invention is novel (otherwise for that reason alone it would be unpatentable), commercial success therefore indicates that the invention also was nonobvious.

Objective evidence has no probative value, however, unless the patent owner shows a nexus between the secondary considerations offered and the merits of the claimed invention. *See, e.g., WMS Gaming*, 184 F.3d at 1359 (citing cases); *Simmons Fastner*, 739 F.2d at 1575. For example, commercial success is not shown merely by gross sales figures without proof of market share; furthermore, the commercial success must be shown “to have in some way been due to the nature of the claimed invention, as opposed to other economic and commercial factors unrelated to the technical quality of the patented subject matter.” *Cable Electric Products v. Genmark, Inc.*, 770 F.2d 1015, 1026-27 (Fed. Cir. 1985). Commercial success may be due to other factors such as extensive advertising or the patent owner’s preexisting leadership in the marketplace. *See Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 316 (Fed. Cir. 1985). As the Federal Circuit said in reversing a jury verdict of nonobviousness:

Commercial success is relevant only if it flows from the merits of the *claimed* invention. . . . [A]ll the evidence was to the effect that its commercial popularity was due to . . . a feature not claimed. Thus, the jury was not entitled to draw the inference that the success of [the device] was due to the merits of the claimed invention.

Sjolund v. Musland, 847 F.2d 1573, 1582 (Fed. Cir. 1988) (emphasis in original).

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Similarly, the fact that others have taken licenses under the patent will not be probative when there is no evidence relating that fact to “the inclusion of the claimed features” of the patented invention. *Medtronic, Inc., v. Intermedics, Inc.*, 799 F.2d 734, 740 (Fed. Cir. 1986). Nonobviousness is not shown when licensees take licenses out of a desire to avoid the costs of litigation instead of in acknowledgement of the validity of the patent claims. *Pentec*, 776 F.2d at 316.

Objective evidence of nonobviousness will not always serve to save a patent from invalidation. *See, e.g., FMC Corp. v. Hennessy Industries, Inc.*, 836 F.2d 521, 527 (Fed. Cir. 1987); *EWP Corp. v. Reliance Universal, Inc.*, 755 F.2d 898, 907-08 (Fed. Cir. 1985).

The absence of such evidence, however, does not establish the obviousness of the invention and is only a “neutral” factor. *E.g., Custom Accessories*, 807 F.2d at 960; *Medtronic*, 799 F.2d at 739 n.13.

§ 3.5 Building a Company's Software- or Internet Patent Portfolio

[a] Why Build a Portfolio

One school of thought that says that when it comes to patents in a portfolio, more is better. Jay Walker, of Priceline.com fame, apparently belongs to that school; his company, Walker Asset Management Limited Partnership, is listed as the assignee of dozens of issued patents purportedly covering various aspects of e-commerce. Priceline.com itself said in a January 2000 press release (available on its Web site) that it had been notified of the allowance of its seventh patent and that it had filed some 25 patent applications dating back to 1996.

Some of the potential benefits of a patent portfolio include:

- A portfolio gives its owner something to bargain with if a competitor (or other company) comes knocking at the door, asserting its own patents.
- An issued patent constitutes prior art as against any subsequent patent applicants, thus serving as a defensive publication for the issued patent's owner.

- A patent on a company's key technology may help attract attention in the marketplace.

**[b] Consider Filing Lots of
“Provisional” Patent Applications**

Software and e-commerce companies interested in building a patent portfolio should consider adopting a Darwinian approach to building a patent portfolio: File cheap and informal provisional patent applications for as many inventions as practicable. The company can then use the phrase “patent pending” for its products or services covered by the provisional applications; it can decide later on whether to incur the expense of a regular patent application for some or all of the provisional applications. Three aspects of provisional applications make this a potentially workable strategy:

(i) The hard-dollar cost of a provisional application can be minimal. The official filing fee is only \$75 for “small entities” (companies that have fewer than 500 employees including all affiliates), individual inventors, and educational and nonprofit institutions, and \$150 for other companies, less than 25% of the fee for a regular application. *See* National application filing fees, 37 C.F.R. § 1.16(b). The filing fee is low for provisional applications because such applications are not given an examination by the PTO; they merely serve as “placeholders” for one year from their filing dates. *See* 35 U.S.C. § 111(b).

(ii) The content of a provisional application can be just about anything that meets the enablement- and best-mode disclosure requirements, discussed below. In particular, an inventor's informal but substantive write-up of the invention, plus a cover page with identifying information, can be filed as a provisional patent application. *See* Application number, filing date, and completion of application, 37 C.F.R. § 1.53(b)(2).

(iii) A nonprovisional patent application can later be filed during that one-year period, claiming priority as of the filing date of the provisional application for everything that was disclosed in the provisional application. *See id.* § 119(e).

So, if a company believes that it has an even arguably patentable invention, a useful approach can be to collect whatever documentation is available about the invention, put a cover sheet on it, and file it as a provisional patent application with a \$75 or \$150

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fee as applicable. The documentation filed might take the form of a corporate invention disclosure form, an academic manuscript, a detailed lab notebook entry, source code for a computer program, etc.

There are risks, of course. A too-hasty provisional application might not meet the enablement- or best-mode requirements, discussed in § 3.4[a] and in § 3.4[b]. The inventor would then be forced to rely on a later filing date – which could be too late if the later filing date were after an applicable filing deadline (discussed below).

[c] Pay Attention to Filing Deadlines for Patent Applications

Every country imposes filing deadlines for patent applications. Most if not all of these deadlines are tied to (a) disclosure, or (b) commercial activity, involving the claimed subject matter.

[1] The U.S.'s One-Year Grace Period

In the United States (but not in most other countries), inventors have *one year* – no extensions can be obtained – in which to get a patent application on file after any of a number of events occur. *See* 35 U.S.C. § 102(b) (list of events that start the one-year clock running). The rationale for the grace period arises from a balance of two competing factors. The law regards it as undesirable policy to allow an inventor to take a long time to build up the market for his or her invention, and to wait until then to apply for years of patent protection. On the other hand, not every invention will be commercially significant enough to justify the cost of immediately preparing a patent application. Accordingly, U.S. law makes a compromise: it allows inventors a limited, one-year grace period in which to file a patent application.

[2] Offers for Sale Start the Clock Running

A single *offer for sale* (or license) of the claimed subject matter in the U.S. can start the clock running. The offer, however, must be “objectively manifested” and “definite.” *E.g., Envirotech Corp. v. Westech Eng'g Inc.*, 904 F.2d 1571, 1574, 1575 (Fed. Cir. 1990) (party asserting the bar “must prove by clear and convincing evidence ... that there was a definite sale or offer to sell more than one year before the application for the subject patent”).

In some circumstances, simply exploring the market might not be enough to start the one-year clock running. *E.g., Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 98 F.3d 1318, 1321 (Fed. Cir. 1996) (noting that “summary disposition is negated” when there is a genuine question “whether the inventor was merely exploring the market or had made an unconditional offer to sell”). *See also Articulate Systems, Inc. v. Apple Computer, Inc.*, No. 96-10345-RGS, 1999 WL 307928 (D. Mass. May 11, 1999) (denying summary judgment; fact issue existed as to whether voice-recognition software developer’s meetings with prospective purchasers involved sufficiently definite offers to constitute “offers for sale”).

An invention can be the subject of an offer for sale, even though it has not actually been built yet. *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 119 S. Ct. 304 (1998) (affirming Federal Circuit reversal of district court’s holding that invention was invalid because it was on sale more than one year before the critical date, but rejecting Federal Circuit’s test for determining whether an invention was on sale).

In *Pfaff*, the Supreme Court adopted a two-part test for determining whether an invention had been offered for sale:

- First, the invention must be the subject of a “commercial offer for sale,” and second, the invention must be “ready for patenting.”
- The second element, readiness for patenting, can be proved by proof of “reduction to practice before the critical date.” *Id.*, 119 S. Ct. at 307 n.2 (citation omitted). Alternatively, readiness for patenting can be proved by showing that prior to the critical date, the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention. *Id.*, 525 U.S. at __ & n.14, 119 S. Ct. at 312 & n.14.

Granting a license to a third party to commercialize an invention, without more, does not trigger the on-sale bar. *In re Kollar*, 286 F.3d 1326 (Fed. Cir. 2002) (reversing PTO rejection of patent application).

Sales or licenses to beta testers may come within an “experimental use” exception, but also might not qualify for such an exception. *See* § 3.5[c][5].

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[3] “Public” Use Can Bar a Patent

Any “public” use of the claimed subject matter in the U.S. can bar a patent if more than a year goes by. Use of invention is “public” if it is for gain, even if secret. *Kinzenbaw v. Deere & Co.*, 741 F.2d 383 (Fed. Cir. 1984), *citing Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516 (2d Cir.) (L. Hand, J.).

Thus, an e-commerce company’s internal use of a new computer program to control its own Web site is probably public use.

“Experimental” use devoted to proving the concept might not be public use, but use that is primarily commercial and only incidentally experimental may well be public use, as discussed above.

[4] Other Barring Events

Any description of the claimed subject matter in a “printed publication” anywhere in the world, and in some circumstances a description in an issued patent anywhere in the world, will usually start the one-year clock running. *See* 35 U.S.C. § 102(b). The key to whether a given paper, master’s thesis, on-line database item, etc., qualifies as a printed publication is usually whether the document is indexed so as to be locatable by a diligent researcher in the field of art in question.

And of course, if any of these events took place before the inventor’s invention of his invention (that sounds awkward, but is basically how it is set forth in the patent statute), then the invention may be unpatentable anyway because the inventor was not the first. *See* 35 U.S.C. § 102(a).

In any given case, the date on which the clock starts running is often extremely fact-intensive (and hard-fought in litigation). In particular, the term “experimental,” as applied to public use or commercial use, is one that depends heavily on the facts of the case.

[5] Beta Testing and the One-Year Deadline

Beta testing of software may or may not start the one-year clock running, depending on what the specific beta-testing arrangements are. In some circumstances, beta testing may be “experimental” use that does not begin the one-year grace period. In proving the experimental nature of the use, it helps if the beta testers are subject to a written obligation of confidence (but confidentiality alone will not

necessarily establish experimental use). In other situations, use of software by beta testers might, or might not, be “public” or “commercial” use that starts the one-year clock running. The deadline for filing a patent application might be a year after the first such use, even though the general release of the software might have been months thereafter. The safest bet is ordinarily to assume the worst, and to file a patent application less than one year after the first beta shipment or beta use of any kind.

Selected cases:

City of Elizabeth v. American Nicholson Pavement Co., 97 U.S. 126 (1878): In this “granddaddy” of experimental-use cases, the Supreme Court held that a patent owner’s use of a patented road paving material on privately owned toll road, for six years prior to filing of application for patent, was “experimental” and did not bar the patent.

Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc., 984 F.2d 1182, 1185-87, 1190-93 (Fed. Cir. 1993): The Federal Circuit affirmed a summary judgment that patent was invalid. The patented orthotic device had been sold prior to one year before the application filing date. The court held that such sales were not “experimental,” despite inventor’s affidavit to that effect. The patent owner had published price lists and sales letters that did not mention testing but did refer to “exhaustive clinical testing” and “lifetime guarantee.” In addition, the patent owner had not retained control of the orthotic devices, nor restricted their use. In addition, the court affirmed a summary judgment of inequitable conduct (see § 3.5[g][2]) for knowing failure to disclose the barring sales to patent examiner.

Manville Sales Corp. v. Paramount Systems, Inc., 917 F.2d 544, 551 (Fed. Cir. 1990): The Federal Circuit described the distinctions between barring “public” use vs. nonbarring “experimental” use.

Kinzenbaw v. Deere & Co., 741 F.2d 383 (Fed. Cir. 1984): The Federal Circuit held that secret use of a patented process for gain prior to the critical date was a barring “public” use.

TP Laboratories, Inc. v. Professional Positioners, Inc., 724 F.2d 965 (Fed. Cir. 1984): The court held that pre-critical-date use of a patented dental appliance on orthodontal patients had been experimental use.

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[6] No Grace Period in Most Other Countries

Most foreign countries do not allow the one year grace period that is provided by the United States. Consequently, if protection is desired in other countries, publication and commercialization efforts, and even beta testing, usually should be held up until after the U.S. application is filed. And for some countries (notably Taiwan), such efforts should be delayed until the application is filed in that country.

However, most countries will recognize each others' patent application filing dates for up to one year. For example, filing a patent application in the U.S. gets the inventor a priority date for France, as long as a French application is filed within one year after the U.S. filing date.

Two additional points should be noted about applying for patent protection in other countries:

- (i) A foreign-filing license from the U.S. Patent and Trademark Office, similar to an export license, is required before filing in foreign countries. *See 35 U.S.C. §§ 184-185 (foreign-filing licensing requirement).*
- (ii) Many foreign countries do not allow patent protection for software to begin with.

[d] Create a Judge- and Jury-Friendly Patent Application

Too often, patent applications are written for scientists and engineers, when the ultimate real-world audience consists of judges and jurors. In an infringement lawsuit, the patent in suit will always be admissible in evidence (and thus, unlike most demonstrative exhibits, it will always go back into the jury room during the jurors' deliberations).

So, in drafting the patent application, there is no reason not to think ahead to the trial and to include jury-friendly technical explanations, drawings, and the like. In particular, including source code in the patent application could pay big benefits in fending off a challenge to the sufficiency of the patent's disclosure.

[1] Flow Charts and Pseudocode
for Possible Use as Trial Exhibits

A company filing a patent application can take advantage of at least two opportunities for creating useful trial exhibits in the body of the patent itself:

(i) Flow charts, included as part of the drawings of the patent application, can be used by a technical expert witness at trial in talking the jury through how the invention actually works. Because the patent itself will go back into the jury room during the jury's deliberations, the drawings can be a helpful aid to the jury.

(ii) Pseudocode, i.e., a quasi-English description of the functions performed by the software, can also be used as a teaching tool by an expert witness who talks through the pseudocode for the jury.

[2] Benefits of Disclosing Source Code
in a Patent Application

Because disclosure of source code in a patent application is not *required*, *see* § 3.4[c], many applicants elect not to disclose source code because of a real or imagined concern that competitors would learn more from the source code than is required to be disclosed by statute. But inclusion of source code in a patent application can have some distinct advantages.

(i) A patent application with source code is probably cheaper and quicker to write than the same application without source code. When source code is disclosed, the drafter of the patent application can focus on explaining the significance of the program steps and need not spend time elaborating on details already disclosed in the code.

(ii) If the prior art turns out to be closer than previously thought, inclusion of source code can permit the patent attorney to draft new claims directed to specific implementation details that are disclosed in the source code but not in the actual patent-application text.

(iii) Source code can be an insurance policy against substantive errors in explaining the invention in the patent application. The statute provides that "new matter" cannot be added to a patent application after it is filed. *See* 35 U.S.C. § 132(a). If the patent attorney who drafts the patent application makes a mistake in describing some aspect of the invention, and if the inventor does not

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catch the mistake until after the application is filed, a source-code appendix can be used to support a later post-filing amendment to correct the mistake despite the new-matter prohibition.

(iv) Disclosure of source code can help shield a patent application and any subsequent patent against challenges on best-mode or enablement grounds (see § 3.4[a] and § 3.4[b]). A jury is less likely to be convinced that the patent contains an insufficient disclosure if the source code is included.

Actual code (source or executable) can be disclosed in several different ways. An appendix can be submitted either in microfiche (if more than 10 printout pages) in accordance with specified standards, *see* Submission of computer program listings, 37 C.F.R. § 1.96(b), or in hard copy. *Id.* at § 1.96(a)(2). If hard copy is submitted, it should either come after the specification and before the claims and be numbered accordingly, *see id.* (some examiners take literally the requirement of 35 U.S.C. § 112 that the specification “conclude” with one or more claims), or it can be submitted as drawings if ten pages or less. *See id.*

The competitive dangers of including source code in a patent application will vary with the circumstances. Patent applications normally are kept secret by the Patent and Trademark Office (PTO) unless and until a patent issues (or unless a foreign counterpart patent application is filed, in which case the U.S. application will be published approximately 18 months after its filing date under recent amendments to 35 U.S.C. § 122(b)). *See* Patent applications preserved in secrecy, 37 C.F.R. § 1.14. Public disclosure of the source code therefore is probably some time off. Unless the source code’s owner does nothing to improve the code during the intervening period, a competitor studying the code may well be studying old technology — and probably will have committed to its own design by that time anyway. (The potential influence on competitors of the not-invented-here syndrome also should not be underestimated.) Because disclosure of source code is not required, it can be considered on a case by case basis. Business risks are involved either way; the proprietor of the software can determine which risk it prefers to take.

[e] Claim Things That Are Provable

A company that drafts claims to an e-commerce invention should give some thought to how infringement will be *proved*, either

at trial or in a summary judgment motion. One straightforward approach is to claim the invention as a method performed by (preferably) a single processor or (if necessary) multiple processors. For example, consider the following claim from an Amazon.com patent (with bracketed paragraph numbering added); demonstrating infringement of such a claim likely would be straightforward:

1. A method of placing an order for an item comprising:
 - [a] under control of a client system,
 - [1] displaying information identifying the item; and
 - [2] in response to only a single action being performed, sending a request to order the item along with an identifier of a purchaser of the item to a server system;
 - [b] under control of a single-action ordering component of the server system,
 - [1] receiving the request;
 - [2] retrieving additional information previously stored for the purchaser identified by the identifier in the received request; and
 - [3] generating an order to purchase the requested item for the purchaser identified by the identifier in the received request using the retrieved additional information; and
 - [c] fulfilling the generated order to complete purchase of the item.

**[f] Draft Claims With Future
Provisional Royalty Rights in Mind**

The Internet world moves at lightning speed, but the PTO does not always do likewise. Even in the best of all possible worlds, a U.S. patent will not issue until about a year after its filing date (and that assumes that the applicant successfully requests accelerated examination of the application). The normal time to issuance can be anywhere from two to four years.

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Until recently, this meant that an infringer suffered no legal penalty for its pre-issuance activities. That will change on November 29, 2000. That is the effective date of a new provision of the Patent Act, to be codified as 35 U.S.C. § 154(d), contained in section 4505 of the Intellectual Property and Communications Omnibus Reform Act of 1999, S. 1948 (enacted as part of Public Law 106-113) (the “1999 Act”).

New section 154(d) provides for “provisional rights.” Under certain circumstances, the owner of a patent whose application was filed on or after that effective date will be able to recover damages for infringement that occurred even before the patent was issued. The new provisional rights will work basically like this:

- (i) The patent application is filed on or after November 29, 2000.
- (ii) The patent application is published promptly after the expiration of 18 months after its filing date – or, notably, on an earlier date if so requested by the applicant. *See 1999 Act § 4502, to be codified as 35 U.S.C. § 122(b)(1)(A).*
- (iii) After the patent issues, the accused infringer is proved 1) to have had actual notice of the published patent application, and 2) to have infringed, after the publication date, at least one claim that is “substantially identical” to a claim in the published application.
- (iv) The patent owner is then entitled, not only to proved damages for post-issuance infringement, but also to a reasonable royalty for the infringement occurring between the publication date of the patent application and the issue date of the patent itself.

So, a company that files a patent application on or after November 29, 2000, should consider doing the following:

- Craft several claims that are as narrow as possible in scope while still covering what an infringer is likely to do;
- Request early publication of the patent application;
- Upon publication, give actual notice of the published application to competitors and other likely infringers.

[g] Take Advantage of the Statutory Presumption of Validity by Aggressively Disclosing “Prior Art” to the Patent Examiner**[1] Strengthening a Patent Through Disclosure**

A company that files a patent application can “strengthen” any resulting patent by aggressively disclosing prior art to the PTO. By statute, a patent is presumed to be valid, and each claim is presumed valid independently of the validity of any other claims. *See 35 U.S.C. 283; see also § 3.8[d]*. In addition, patent owners usually benefit from a real-world psychological bias, on the part of judges and especially jurors, in favor of believing that the PTO did a good job.

But the PTO’s search library is far from perfect; the patent examiner might well have been unaware of important prior art. This is especially true in the software field, where much prior art is not documented in patents or printed publications.

With that in mind, now suppose that an accused infringer claims that a patent is invalid because of prior art. The court, and especially the jury, will naturally take into account whether or not the PTO considered the prior art in question during the patent-examination proceedings:

(i) If the accused infringer can point only to prior art that was already considered by the patent examiner, it will have a very tough time convincing the jury that the patent is invalid.

(ii) On the other hand, if an accused infringer is able to come up with significant prior art that was not considered by the patent examiner, then the accused infringer’s trial counsel will surely beat the drum about the fact that the PTO did not know about it.

A company filing a patent application can therefore consider doing a prior-art search of its own, with an eye toward stealing a defendant’s thunder at trial. Some possible places to search include:

- Software Patent Institute database: <http://www.spi.org/>
- PTO database: See <http://www.uspto.gov/patft/index.html>
- EPO worldwide database - See <http://ep.espacenet.com/>
- Gregory Aharonian: <http://www.patent-software.com/STO.htm>

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[2] Avoiding Trouble Through Disclosure of “Material Information”

Disclosing known material prior art and other known material information to the PTO is more than just a good idea; it's the law. A patent applicant (as well as certain others associated with the prosecution of the patent application) has an affirmative legal duty to disclose to the PTO all known “material” information. Failure to comply with that duty can render the patent unenforceable for “inequitable conduct” in the PTO. *See* 37 C.F.R. § 1.56; *see generally*, e.g., *Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*, 984 F.2d 1182, 1190-93 (Fed. Cir. 1993) (affirming summary judgment of inequitable conduct and patent unenforceability for knowing failure to disclose barring sales to patent examiner).

Even if litigation never occurs, a company that obtains a questionable patent may find itself attracting undesired publicity. Consider the famous Compton's multimedia-encyclopedia patent, “Multimedia search system using a plurality of entry path means which indicate interrelatedness of information,” U.S. Patent No. 5,241,671. At Fall Comdex 1993, Compton's announced a licensing program in which it sought royalties from publishers of CD-ROM encyclopedias and similar products. The announcement touched off a firestorm in the computer industry. *See*, e.g., John Eckhouse, *Key Patent To Shake Multimedia Industry*, San Francisco Chronicle, Nov. 15, 1993, posted at <http://www.base.com/software-patents/articles/compton.html>. The patent was soon recalled for reexamination by the PTO; eventually it was invalidated in view of numerous prior-art references that had never been considered by the patent examiner.

More recently, the PTO recalled a much-noted patent on the so-called windowing approach to dealing with the Y2K problem of two-digit year dates. See U.S. Patent & Trademark Office, “Patent and Trademark Office Orders Reexamination of Y2K Fix Patent,” Dec. 21, 1999, at <http://www.uspto.gov/web/offices/com/speeches/99-51.htm>.

[h] Start Collecting “Objective Evidence of Non-Obviousness”

As discussed in § 3.4[f][3], evaluating the obviousness of an invention in retrospect can be difficult, and thus the courts use

“objective evidence” of nonobviousness. Companies attempting to build a portfolio should be on the lookout for objective evidence of this kind.

§ 3.6 Ownership of Inventions and Patent Rights

[a] Ownership of Employee Inventions

U.S. patent rights belong initially to *inventors*. The patent statute’s basic granting provision states that inventors may obtain patents on new, useful, and unobvious inventions. *See* 35 U.S.C. § 101. The statute further states that applications for patent may be filed only by inventors or persons authorized by them. *Id.* § 111. A third party may file an application on behalf and as agent of an inventor who has assigned the invention to the third party (or agreed in writing to assign it), but unlike in many other countries, where an employer or other assignee can file a patent application in its own name—even then the patent is issued to the inventor, not to the third party. *Id.* § 118. If a patent is granted to a person who was not the true inventor (e.g., to someone who filed a patent application on another’s invention), then the true inventor can compel assignment of the patent to him. *E.g.*, *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1249-50 (Fed. Cir. 1989).

[1] No General Duty to Assign Invention Rights to the Employer

Patents and invention rights can be assigned by employees to their employers, *see* 35 U.S.C. § 262, and likewise can be the subject of contractual duties to assign.

Ordinarily, no duty to assign attaches to inventions made by non-fiduciary employees, absent a written assignment agreement or hired-to-invent status. This is in contrast to the rule about copyrights belonging to employers when the work is created within the scope of employment – even inventions made in fields relating to the employment are usually exempt from assignment to the employer:

[I]f the employment be general, albeit it covers a field of labor and effort in the performance of which the employee conceived the invention for which he

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obtained a patent, the contract is not so broadly construed as to require an assignment of the patent.

United States v. Dubilier Condenser Corp., 289 U.S. 178, 187 (1933).

(Most of the leading cases dealing with ownership of employee inventions are pre-*Erie R.R. v. Tomkins*, 304 U.S. 64 (1938), and thus are technically of doubtful authority as to state law; they nevertheless continue to be cited and followed by both federal and state courts.)

[2] Exception: Employees Who Were "Hired to Invent" Usually Must Assign

Employees who are "hired to invent" normally will be required to assign their inventions and patent rights. *E.g., Standard Parts Co. v. Peck*, 264 U.S. 52 (1924); *Solomon v. United States*, 137 U.S. 342, 346 (1890). As the Supreme Court said in *Solomon*:

An employe[e], performing all the duties assigned to him in his department of service, may exercise his inventive faculties in any direction he chooses, with the assurance that whatever invention he may thus conceive and perfect is his individual property. . . .

But this general rule is subject to these limitations: If one is employed to devise or perfect an instrument, or a means for accomplishing a prescribed result, he cannot, after successfully accomplishing the work for which he was employed, plead title thereto as against his employer.

That which he has been employed and paid to accomplish becomes, when accomplished, the property of his employer. Whatever rights as an individual he may have had in and to his inventive powers, and that which they are able to accomplish, he has sold in advance to his employer.

Solomon, 137 U.S. at 346 (paragraphing supplied).

[3] Exception: Employees Who Were "Set to Experimenting" Probably Must Assign

Likewise, employees who are "set to experimenting" to solve a specific problem will be required to assign their invention rights, even

though they might not have been originally hired to invent. *Teets v. Chromalloy Gas Turbine Corp.*, 83 F.3d 403 (Fed. Cir. 1996) (reversing declaratory judgment that employee owned invention; parties had implied-in-fact assignment agreement); *Houghton v. United States*, 23 F.2d 386 (4th Cir. 1928); *Forberg v. Servel, Inc.*, 88 F. Supp. 503 (S.D.N.Y. 1949); *cf. Moore v. American Barmag Corp.*, 693 F. Supp. 399, 401-03 (W.D.N.C. 1988) (reviewing case law; material fact issue existed whether employee had been directed to work on solving problem), *subsequent proceeding*, 710 F. Supp. 1050 (W.D.N.C. 1989) (fact issue existed as to whether employer entitled to shop right). It may not be necessary for an employer to make a formal directive that an employee commence experimenting; an informal request may suffice. *See Miller v. GTE Corp.*, 1989 WL 258184 (S.D. Tex. 1989) (granting defendants' motion for summary judgment dismissing former employee's claim for misappropriation of invention; former employee had a duty to assign invention rights to employer).

[4] Exception: Officer / Director
Fiduciary Obligation to Assign

(iv) In some circumstances, an inventor associated with a company as an officer (or director) may have an equitable duty to assign his or her patent rights to the company. Corporate officers and directors may have a fiduciary obligation to assign inventions to their corporation when the inventions relate to the business or occupation of the corporation. *Kennedy v. Wright*, 676 F. Supp. 888, 893 (C.D. Ill. 1988) (collecting cases; patent infringement suit by former president of corporation against successor to corporation dismissed; successor owned equitable title to patents because of plaintiff's fiduciary duty to assign to corporation); *Great Lakes Press Corporation v. Froom*, 695 F. Supp. 1440 (W.D.N.Y. 1987) (granting partial summary judgment requiring former president of company to assign two patents to company); *Davis v. Alwac International, Inc.*, 369 S.W.2d 797, 802 (Tex. Civ. App.—Beaumont 1963, writ ref'd n.r.e.); *North Branch Products, Inc. v. Fisher*, 131 U.S.P.Q. (BNA) 135 (D.D.C. 1961) (corporation owned equitable title to inventions made by inventor who was shareholder, officer, director, and general manager of corporation), *aff'd*, 312 F.2d 880 (D.C. Cir. 1962), *cert. denied*, 373 U.S. 913 (1963); *compare with National Waste Co. v. Spring Packing Co.*, 200 F.2d 14, 15, 16 (7th Cir. 1952) (mechanic

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did not have confidential relationship to corporation and thus no legal duty existed), *cert. denied*, 395 U.S. 905 (1953).

One early Texas case seemingly indicates that no such fiduciary duty exists. *See North v. Atlas Brick Co.*, 2 S.W.2d 980, 984 (Tex. Civ. App.—El Paso 1928), *reversed on different grounds*, 13 S.W.2d 59 (Tex. Comm'n App. 1929, opinion adopted); *prior proceedings*, 281 S.W.2d 608 (Tex. Civ. App.—El Paso), *modified*, 288 S.W.2d 146 (Tex. Comm'n App. 1926, opinion adopted). The holding in that case may be fact-dependent (the departed officer apparently was a troubleshooter who took over in conjunction with a planned acquisition of the company). *Compare id.*, 281 S.W. at 609 (first court of appeals opinion) (company alleged it hired former president because it had needed new brickmaking methods to survive increasing competition); *with id.* at 610-11 (former president alleged that he assumed that office only in conjunction with agreement to buy all stock in company). The case has never been expressly overruled, but has not noticeably been followed on that particular point. *See Davis*, 369 S.W.2d at 802 (citing but apparently ignoring rationale of *Atlas Brick*).

[5] State Statutory Regulation of Employees' Duty to Assign Invention Rights

Most companies that develop technology require all employees to execute written employment contracts that call for assignment of all inventions related to the company's business. Some forms of contract require assignment of even broader categories of invention.

A number of states, however, limit by statute the types of inventions which an employer can require an employee to assign. California's employee invention-ownership statute includes perhaps the most detailed provisions in some respects. CAL. LAB. CODE §§ 2870-2871. That statute provides that:

(a) Any provision in an employment agreement which provides that an employee shall assign, or offer to assign, any of his or her rights in an invention to his or her employer shall not apply to an invention that the employee developed entirely on his or her own time without using the employer's equipment, supplies, facilities, or trade secret information except for those inventions that either:

(1) Relate at the time of conception or reduction to practice of the invention to the employer's business, or actual or demonstrably anticipated research or development of the employer.

(2) Result from any work performed by the employee for the employer.

(b) To the extent a provision in an employment agreement purports to require an employee to assign an invention otherwise excluded from being required to be assigned under subdivision (a), the provision is against the public policy of this state and is unenforceable.

Id. § 2870.

No employer shall require a provision made void and unenforceable by Section 2870 as a condition of employment or continued employment.

Nothing in this article shall be construed to forbid or restrict the right of an employer to provide in contracts of employment for disclosure, provided that any such disclosures be received in confidence, of all of the employee's inventions made solely or jointly with others during the term of his or her employment, a review process by the employer to determine such issues as may arise, and for full title to certain patents and inventions to be in the United States, as required by contracts between the employer and the United States or any of its agencies.

Id. § 2871 (paragraphing supplied).

Some other states have statutes that are similar in their line-drawing between permissible and impermissible assignment provisions, and in their prohibition against the imposition of such provisions by employers:

Delaware's law does not include California's safe-harbor provisions for employers, in the last quoted paragraph above. *See* DEL. CODE ANN. § 805.

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· Illinois, Minnesota, and Washington go further in their restrictions: they impose an affirmative duty on employers who require invention-assignment covenants to notify their affected employees of the statutory limitations on those covenants. *See* ILL. ANN. STAT., ch. 140, para. 302; MINN. STAT. § 181.78; WASH. REV. CODE § 49.44.140.

· North Carolina's statute expressly places the burden of proof on employees who assert their individual ownership of their work-related inventions. *See* N.C. GEN. STAT. § 66-57.1.

[b] Shop Rights in Employees' Off-Duty Inventions

Even if an employee is not obligated to assign an invention outright to his or her employer, he or she may still be deemed to have granted the employer the right to use the invention for the employer's own purposes (but not necessarily to authorize others to use it). If the inventor implicitly consented to the employer's use, the employee may be deemed to have granted an implied license; or, if the development of the invention was done on company time or using company resources, the employer may be equitably entitled to a "shop right" to use the invention. *See, e.g., United States v. Dubilier Condenser Corp.*, 289 U.S. 178 (1933) (employees owned invention but government-employer had shop right); *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1580-82, (Fed. Cir. 1993) (courts should review "totality of the circumstances" to determine whether fairness dictates that employer get a shop right); *California Eastern Laboratories, Inc. v. Gould*, 896 F.2d 400 (9th Cir. 1990) (when employer sold all of its assets to a purchaser which subsequently distributed the assets to its subsidiaries, the employer's shop right was transferred along with the assets); *Wommack v. Durham Pecan Co.*, 715 F.2d 962 (5th Cir. 1983); *Francklyn v. Guilford Packing Co.*, 695 F.2d 1158 (9th Cir. 1983). Cf. *Mechmetals Corp. v. Telex Computer Prods., Inc.*, 709 F.2d 1287 (9th Cir. 1982) (no shop right).

[c] Be Careful About "Joint Ownership" of Inventions Co-Developed with Other Companies

If employees from two or more companies collaborate in developing an invention, to the point where they are "joint inventors," then each of their respective companies may have a claim, through the respective employees, to a joint ownership interest in any resulting

patent, together with the right to practice and/or license the invention without accounting to any other joint owner. *See* 35 U.S.C. § 262 (joint inventors are joint owners of patent).

Not every invention developed in cooperation with another company will be a joint invention. “[A]t least some quantum of collaboration or connection” is needed for two individuals to be joint inventors. *See Kimberly-Clark Corp. v. Procter & Gamble Distributing Co.*, 973 F.2d 911, 915-17 (Fed. Cir. 1992) (affirming judgment that patent owner was not entitled to priority based on joint invention and patent was thus invalid).

A worker who simply follows instructions given by a person who conceives an invention does not thereby become a joint inventor. *See Sewall v. Walters*, 21 F.3d 411 (Fed. Cir. 1994) (affirming decision of Board of Patent Appeals and Interferences that sole inventor was entitled to a patent).

(If all inventors are not properly named in a patent application, an omitted inventor can file suit to add his or her name and thus become a joint owner. *See* 35 U.S.C. § 256 (correction of inventorship); *cf., e.g., MCV, Inc., v. King-Seeley Thermos Co.*, 870 F.2d 1568 (Fed. Cir. 1989) (purported co-inventor equitably estopped by four-year delay in asserting claim of inventorship).)

Notably, the patent statute expressly provides that each joint owner is entitled to make, use, and sell the patented invention without the consent of and without accounting to the other owner(s). 35 U.S.C. § 262. In addition, a judicially developed patent-law doctrine holds that joint owners (e.g., joint inventors or joint assignees) can each license the patented invention independently of each other. *Willingham v. Star Cutter Co.*, 555 F.2d 1340, 1344 (6th Cir. 1977); *Talbot v. Quaker State Oil Refining Co.*, 104 F.2d 967, 967-68 (3d Cir. 1939); *Miller v. GTE Corp.*, 1991 WL 218509 (S.D. Tex. June 20, 1991); *Bendix Aviation Corp. v. Kury*, 88 F. Supp. 243 (E.D.N.Y. 1950) (citing cases).

(This is in contrast to joint authors of a copyrighted work, who must account to one another for their respective uses of the work. *See, e.g., Oddo v. Ries*, 743 F.2d 630, 632-33 (9th Cir. 1984) (under California law, partners were co-owners of partnership copyright assets; copyright law thus required partners to account to each other for their uses of those assets).)

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Claims of joint ownership of patent rights can have enormous economic significance. The *Burroughs Wellcome* case, for example, involved a dispute over ownership of major biotech patent rights. The Federal Circuit summarized the requirements that must be met by a would-be joint inventor seeking to establish an ownership interest:

Conception is the touchstone of inventorship, the completion of the mental part of invention. It is “the formation in the mind of the inventor, of a *definite and permanent idea* of the *complete and operative invention*, as it is hereafter to be applied in practice.” Conception is complete only when the idea is *so clearly defined in the inventor’s mind* that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.

Burroughs Wellcome Co. v Barr Laboratories, Inc., 40 F.3d 1223, 1227-28 (citations omitted, emphasis and paragraphing edited). The court held that the claimant did not contribute to the conception of the claimed subject matter and thus was not a joint inventor. *Id.*

[d] Common-Law Scrutiny of Invention Assignment Agreements

Invention assignment agreements can additionally be subject to common-law scrutiny for reasonableness, especially when they require employees to assign inventions after the termination of employment.

For example, in the 1988 case of *Ingersoll-Rand Co. v. Ciavatta*, the New Jersey Supreme Court held that, on the facts of the case, a company could not require its former employee to assign an invention conceived after he was terminated, notwithstanding that the invention related directly to the company’s business and that the employment contract required such an assignment. The court set out an extensive scholarly discussion of the public policy factors affecting its decision, *id.* at 886-92, and concluded that it would apply a reasonableness test similar to that used to analyze post-termination noncompetition clauses. *Id.* at 891-92; *see generally* D. ASPELUND & C. ERIKSEN, EMPLOYEE NONCOMPETITION LAW.

On the other hand, in *MAI Basic Four, Inc., v. Basis, Inc.*, 880 F.2d 286, 287-88 (10th Cir. 1989), the court held that an employment contract provision, which required the employee to

assign inventions made during employment or within 90 days thereafter, was *not* a restrictive covenant akin to a covenant not to compete.

[e] Assignment Instruments

A written instrument is required to assign a patent right. *See* 35 U.S.C. § 261, second paragraph. If a written patent conveyance instrument is properly acknowledged, it serves as *prima facie* evidence of the transfer. *See* 35 U.S.C. § 261, third paragraph. If an assignment is to include the right to sue for past infringement, that fact should be expressly recited in the instrument. In addition, the instrument could set forth covenants concerning the assignor's duty to cooperate in protecting and perfecting the assigned rights. A sample form of assignment is included as an appendix at the end of this paper.

[f] Recordation of Patent Assignments

As with most forms of property, assignments of patent rights must be recorded in order to be valid against subsequent good faith purchasers or mortgagees for value. An assignment of patent rights is void against a subsequent purchaser or mortgagee for valuable consideration, without notice, unless it is recorded in the PTO either (a) within three months after its date, or (b) prior to the date of the subsequent purchase or mortgage. *See* 35 U.S.C. § 261, fourth paragraph. The PTO regulations, *see* 37 C.F.R. Part 3, set forth a number of miscellaneous details about recordation:

- Any assignment to be recorded must identify the patent or patent application by serial number.
- All patent assignments to be recorded must be in English. If a U.S. patent is assigned in a non-English language document (or in a long English-language document such as a contract, for that matter), an English-language memorandum of assignment should be prepared, executed, acknowledged, and filed.
- No instrument will be recorded that does not amount to "an assignment, grant, mortgage, lien, encumbrance, or license, or that does not affect title of the patent to which it relates." A memorandum of an assignment that is more fully documented in another paper can thus be filed as an instrument affecting title. Similarly, a memorandum of a security agreement or a UCC-1 financing statement

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apparently can be recorded as a mortgage, lien, or encumbrance; such recordation alone, however, probably would not suffice to perfect a security interest. (See discussion below concerning recordation of security interests.)

- A specific cover sheet and a filing fee of \$40.00 per instrument must be submitted along with any instrument being recorded; multiple counterparts (and/or assignments of multiple patents) are treated as separate instruments.

Documents submitted for recordation in the PTO assignment records are returned to the submitter with a computer printout showing the recordation information.

[g] Perfection of Security Interests in Patents

Some patent assignments will involve the taking of security interests in the patent rights, e.g., to secure payment of earn-outs or royalties. Two cases are known to have addressed the question whether security interests in patents must be perfected by a filing in the PTO. Both have said no: such security interests are perfected in accordance with standard UCC filing procedures, and filing in the PTO is not required. *City Bank and Trust Co. v. Otto Fabric, Inc.*, 83 B.R. 780, 7 U.S.P.Q. (BNA) 1719, 5 U.C.C. Rep. Serv. 2d 1459 (D. Kan. 1988) (federal filing not required to perfect security interest in patents), reversing 55 B.R. 654 (Bankr. D. Kan. 1985); *In re Transportation and Design Technology, Inc.*, 48 B.R. 635 (Bankr. S.D. Cal. 1985) (additionally noting in dicta that perfection of a security interest might still be superseded by a bona fide purchaser for value of the ownership interest if the security interest were unrecorded in the PTO).¹

¹ Security Interest in Patent Need Not Be Registered with PTO, 9th Circuit Rules
Mealey Publications

The holder of a security interest in a patent is not required to register that interest with the U.S. Patent and Trademark Office to perfect it as against a bankruptcy trustee, the 9th U.S. Circuit Court of Appeals ruled. The court affirmed that owners of an interest in a patent developed by Cybernetic Services have priority

§ 3.7 Patent Infringement Analysis

A patent is not self-enforcing; no “technology police” patrol the industrial countryside to monitor compliance with issued patents. The patent is no more than the owner’s ticket to the courthouse, an opportunity to present a case to a federal judge. The case often turns on the details of the infringement analysis.

Infringement Analysis

- Only one claim need be infringed
- Two-step analysis:
 1. Interpretation of the claim language
 2. Application to the accused product / process
 - ◊ The All-Elements Rule
 - ◊ No independent claim infringed → no infringement at all

[a] Only One Claim Need Be Infringed

One claim in a patent can be infringed even if other claims in the same patent are not infringed. Liability comes with infringement of even one claim, as long as the infringed claim or claims are not proved to be invalid (see § 3.8[d]).

over a claim by the trustee appointed to oversee Cybernetic's bankruptcy.

http://www.law.com/cgi-bin/pca_link.cgi?ACG=20010705&NO=994383114

[b] The Two-Step Analytical Approach and the All-Elements Rule

In determining whether a patent claim is infringed, courts follow an approach prescribed by the U.S. Court of Appeals for the Federal Circuit:

An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing.

Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir.) (in banc; holding that construction of a patent claim is a matter of law for the judge, not the jury; citations omitted), *aff'd*, 517 U.S. 370, 116 S. Ct. 1384, 134 L.Ed.2d 577 (1996) (holding that Seventh Amendment does not require jury trial of disputes over proper interpretation of patent claim).

In the first step of the analysis, “the words of the claims are construed independent of the accused product, in light of the specification, the prosecution history, and the prior art.” *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1580 (Fed. Cir. 1991). The court noted, however, that “[o]f course the particular accused product (or process) is kept in mind, for it is efficient to focus on the construction of only the disputed elements or limitations of the claims.” *Id.* Claim construction is discussed in more detail in § 3.7[c].

The second step is referred to as the All Elements Rule: “If an express claim limitation is absent from the accused product, there can be no literal infringement as a matter of law,” *Wolverine World Wide, Inc. v. Nike, Inc.*, 38 F.3d 1192, 1199 (Fed. Cir. 1994), because “[t]o establish infringement, every limitation set forth in a patent claim must be found in an accused product or process exactly or by a substantial equivalent ... [and] the failure to meet a single limitation is sufficient to negate infringement of the claim...”. *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991) (reversing judgment of infringement); *see, e.g., Sun Studs, Inc., v. ATA Equipment Leasing, Inc.*, 872 F.2d 978, 984-86 (Fed. Cir. 1989) (computer-controlled method of processing log in sawmill, including computation step relating to log's profile, found to be infringed by

method including “equivalent” computation step); *see also, e.g., Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 933-39 (Fed. Cir. 1987) (patented apple sorting apparatus relying on “hardwired” logic circuitry not infringed by microprocessor-controlled sorter that performed different functions).

Thus, each claim in a patent is functionally like a checklist of elements. The literal-infringement prong of this analysis is illustrated in the following chart:

HYPOTHETICAL CLAIM	ACCUSED CHAIR	LITERAL INFRINGEMENT ?
“4. A chair comprising	Seat, four legs, back	Yes
“(a) a seat, “(b) four legs, “and	Seat, <i>three</i> legs, back	No
“(c) a back”	Seat, four legs, <i>no</i> back	No

Hypothetical Examples of Literal-Infringement Analysis

The absence of literal infringement does not necessarily end the inquiry. A claim that is not literally infringed may still be infringed under the doctrine of equivalents if every missing element of the claim has a “substantial equivalent” in the accused product or process. *See Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 117 S. Ct. 1040 (1997) (holding that equivalence must exist for each claim element and not for the invention as a whole).

Under what at least appears to be the current state of Federal Circuit law, with proper proof an accused method might be found to infringe if it combines two or more method steps into a single “equivalent” step. *Sun Studs*, 872 F.2d at 987-90 (exact one to one correspondence between claim elements and accused device not necessary). If any of the steps in the claim is not satisfactorily demonstrated to be present in the accused method, however, the patent owner loses, at least as far as that claim is concerned.

(The U.S. Court of Appeals for the Federal Circuit hears all appeals from district courts in cases “arising under” the patent laws.

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See 28 U.S.C. § 1295(a)(1); *Christianson v. Colt Industries, Inc.*, 486 U.S. 800, 108 S. Ct. 2166 (1988) (explaining meaning of “arising under the patent laws”).)

Note that the burden of proof of infringement is always on the patent owner. See, e.g., *Under Sea Industries, Inc. v. Dacor Corp.*, 833 F.2d 1551, 1555 (Fed. Cir. 1987); *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758 (Fed. Cir. 1984). This is in contrast to the burden of proving invalidity, which is always on a challenger to validity. See § 3.8[d].

[c] The Importance of Claim Construction

In many if not most patent infringement lawsuits, the most important single phase of the case is the determination of the exact legal meaning of the claim or claims being asserted by the patent owner. Often there is little or no dispute about what the accused product is or about what the accused method does. That means that “claim construction,” i.e., interpretation of the claim language, may essentially decide the lawsuit one way or another —the question of infringement is ordinarily a factual one for the jury, but if the relevant material facts are not genuinely in dispute, the question of literal infringement “collapses to one of claim construction and is thus amenable to summary judgment.” *Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1578 (Fed. Cir. 1996) (affirming summary judgment of noninfringement).

[1] The Ordinary Meaning of the Claim Language Normally Controls

The starting point of any patent claim construction is the ordinary meaning of the claim language itself, to those in the field of the invention. “The appropriate starting point ... is always with the language of the asserted claim itself.” *Phonometrics, Inc. v. Northern Telecom Inc.*, 133 F.3d 1459, 1464, 45 USPQ2d 1421 (Fed. Cir. 1998) (affirming summary judgment of noninfringement of patent for “[a]n electronic solid state long-distance telephone call cost computer apparatus for computing and recording the cost of each long-distance telephone call initiated from a given calling telephone”) (citations omitted). “It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such a person is deemed to read the words used in the patent documents with an understanding of their meaning in the

field, and to have knowledge of any special meaning and usage in the field.” *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477, 45 USPQ2d 1429 (Fed. Cir. 1998) (affirming judgment of noninfringement). “[T]he words of a claim ‘will be given their ordinary meaning, unless it appears that the inventor used them differently.’”

[2] Departures from the Ordinary Meaning
Must Be Clearly Stated in the Patent.

An inventor is permitted to define his (or her) own meanings for words, as long as he does so clearly. As the courts sometimes put it, a patent applicant is free to be his or her own lexicographer, but “any special definition given to a word must be clearly defined in the specification.” *Markman*, 52 F.3d at 980 (citations omitted). Any such re-definition of a word or phrase “must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention.” *Multiform Desiccants, Inc.*, 133 F.3d at 1476. “Without an express intent to impart a novel meaning to claim terms, an inventor’s claim terms take on their ordinary meaning.” *Sage Products, Inc. v. Devon Industries, Inc.*, 126 F.3d 1420, 1423, 44 USPQ2d 1103 (Fed. Cir. 1997) (affirming summary judgment of noninfringement) (citation and internal quotation marks omitted).

[3] “Intrinsic” Evidence Takes
Priority Over “Extrinsic” Evidence

In interpreting a patent claim, the first evidence to be considered is the “intrinsic” evidence, namely the words of the patent itself and its prosecution history (i.e., the written record of the examination proceedings in the Patent and Trademark Office). If a patent specification does not explain the meaning of a claim element, then dictionaries, technical treatises, competent expert testimony from those skilled in the art, and similar evidence can be used to clarify the meaning. Such “extrinsic” evidence, however – not even the testimony of experts in the field – cannot be used to contradict a meaning that is clearly revealed by the intrinsic evidence. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 n.6, 39 USPQ2d 1573 (Fed. Cir. 1996) (reversing and remanding judgment of noninfringement).

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[4] Claims Are Not Necessarily Limited to the Disclosed Embodiments

The scope of an inventor's patent rights is not necessarily limited to the embodiments of the invention disclosed in the written-description portion of the patent. But those embodiments *can* be used in determining the inventor's intended meaning of the claim language. "Although claims are not necessarily restricted in scope to what is shown in a preferred embodiment, neither are the specifics of the preferred embodiment irrelevant to the correct meaning of claim limitations." *Phonometrics, Inc.*, 133 F.3d at 1466.

[5] Patent Owners Draft the Claim Language — And So Must Live With It

Patent owners are free to use claim language of their choosing, but they must live with the language that they do choose. "If [the patent owner], who was responsible for drafting and prosecuting the patent, intended something different, it could have prevented this result through clearer drafting. . . . It would not be appropriate for us now to interpret the claim differently just to cure a drafting error made by [the patent owner]. That would unduly interfere with the function of claims in putting competitors on notice of the scope of the claimed invention." *Hoganas AB*, 9 F.3d at 951.

[6] Patent Owners Also Must Live With the Arguments and Amendments They Make During Prosecution

A patent owner cannot have its cake and eat it too; if it argues to the patent examiner that the claims should be interpreted in a particular way so that they will not be invalidated by a prior-art reference, then it (the patent owner) is stuck with that particular interpretation later on and cannot change the interpretation just because it wants to. *Warner-Jenkinson Co.*, 117 S. Ct. at 1049. As the Supreme Court said more than a century ago in a famous turn of phrase, a patent claim is not a "nose of wax, which may be turned and twisted in any direction." *White v. Dunbar*, 119 U.S. 47 (1886).

"Arguments and amendments made during the prosecution of a patent application and other aspects of the prosecution history, as well as the specification and other claims, must be examined to determine the meaning of terms in the claims. The prosecution history limits the interpretation of claim terms so as to exclude any

interpretation that was disclaimed during prosecution. Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.” *Southwall Technologies, Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995) (citations omitted)

The patent attorney’s comparison of a prior-art reference to the claimed invention can result in a limiting interpretation of the claim language. For example, in the *Wang v. AOL* case, “[i]n an Information Disclosure Statement filed by Wang during the prosecution of the parent application, Wang distinguished a reference (Fleming) describing the NAPLPS system by stating that the reference ‘encodes pictorial information ... on the pel [picture element] level, rather than on the character level.’” The Federal Circuit held that this language reinforced an interpretation of the Wang claims as being limited to character-based systems. *Wang Laboratories, Inc., v. America Online, Inc.*, 197 F.3d 1377, 1383-84 (Fed. Cir. 1999) (affirming summary judgment that AOL and Netscape Web browsers did not infringe).

Any amendment *could* result in narrowing the claims, but that will not necessarily be the result. In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, ___ U.S. ___, 122 S.Ct. 1831 (2002), the Supreme Court unanimously held that:

the patentee should bear the burden of showing that the amendment does not surrender the particular equivalent in question.... The patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents.

A patentee’s decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim.... There are some cases, however, where the amendment cannot reasonably be viewed as surrendering a particular equivalent. The equivalent may have been unforeseeable at the time of the application; the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or there may be some other reason

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suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. In those cases the patentee can overcome the presumption that prosecution history estoppel bars a finding of equivalence.

This presumption is not, then, just the complete bar by another name. Rather, it reflects the fact that the interpretation of the patent must begin with its literal claims, and the prosecution history is relevant to construing those claims.

When the patentee has chosen to narrow a claim, courts may presume the amended text was composed with awareness of this rule and that the territory surrendered is not an equivalent of the territory claimed. In those instances, however, the patentee still might rebut the presumption that estoppel bars a claim of equivalence. *The patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent.*

Festo, 122 S.Ct. at 1842 (paragraphing and emphasis added).

[7] If Two Meanings of the Words in a Claim
are Equally Reasonable, the Narrower Meaning
Might Have to Be Used

Sometimes a claim element could have two possible meanings, but the specification is not clear which meaning is the right one. When a word in a claim can equally well be given either of two meanings, the court might be required to use the narrower meaning, because that serves the purpose of requiring a claim to give fair notice to competitors. “Where there is an equal choice between a broader and a narrower meaning of a claim, ... we consider the notice function of the claim to be best served by adopting the narrower meaning.” *Athletic Alternatives, Inc.*, 73 F.3d at 1581.

**[8] Claims Are Construed to Sustain
Their Validity -- If Possible**

Where possible, courts try to construe claims so that it will not be necessary to hold them invalid. But a court cannot redraft a claim; the claim must stand or fall as written. “Although we construe claims, if possible, so as to sustain their validity, it is well settled that no matter how great the temptations of fairness or policy making, courts do not redraft claims.” *Quantum Corp. v. Rodime, PLC*, 65 F.3d 1577, 1584 (Fed. Cir. 1995) (affirming judgment of invalidity of patent claims that had been improperly broadened in reexamination).

**[9] Claim Differentiation: Differences in
Language are Presumed to be Significant**

“There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant. Where some claims are broad and others narrow, the narrow claim limitations cannot be read into the broad whether to avoid invalidity or to escape infringement.” *United States v. Telectronics, Inc.*, 857 F.2d 778, 783-84 (Fed. Cir. 1988); *see also Wang Laboratories, Inc., v. America Online, Inc.*, 197 F.3d 1377, 1384 (Fed. Cir. 1999) (affirming summary judgment that AOL and Netscape Web browsers did not infringe Wang-owned patent for videotex frame processing system; claim differentiation did not support Wang’s desired interpretation of claim language).

**[d] Special Topic: Means-Plus-Function
Language in Claims**

The patent statute permits an element in a claim to be drafted as “a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure,

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material, or acts described in the specification and equivalents thereof." 35 U.S.C. § 112, paragraph 6.

Construction of "Means Plus Function" Claim Language

- Not always labeled with the word "means"
- Covers only identical *function*
- Covers only (i) corresponding *structure* clearly identified in patent specification and (ii) "equivalents" to that structure

Examples of means-plus-function claim elements are found in claim 1 of the patent involved in the *State Street Bank* case, reproduced below. The patent in question is Boes, U.S. Patent No. 5,193,056, issued March 9, 1993. In the claim language, italicized bracketed material was added by the Federal Circuit to indicate what structure was identified in the patent specification as performing the stated function:

1. A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:
 - (a) computer processor means [*a personal computer including a CPU*] for processing data;
 - (b) storage means [*a data disk*] for storing data on a storage medium;
 - (c) first means [*an arithmetic logic circuit configured to prepare the data disk to magnetically store selected data*] for initializing the storage medium;
 - (d) second means [*an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases or decreases based on specific input, allocate the results on a percentage basis, and store the output in a separate file*] for processing data regarding assets in the portfolio and each of the funds from a previous day and data

regarding increases or decreases in each of the funds, *[sic, funds']* assets and for allocating the percentage share that each fund holds in the portfolio

- *A means-plus-function claim element is not always signaled by the word “means.”* A claim element that recites a function might — or might not — be treated as a means-plus-function element, and thus restricted in scope under section 112 of the patent statute, regardless whether it uses the actual word “means.” The courts decide this question on a case-by-case basis after looking at the patent and its prosecution history. *See Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996) (citing cases).
- *Means-plus-function language requires identical function.* If a patent owner wishes to prove infringement of a claim containing means plus function elements, then for each such element, the patent owner must show that the accused data processing system performs the identical function recited in the claim limitation language (e.g., “processing data” from subparagraph (a) in the example above). If the accused apparatus does not perform that function, then “[a]s a matter of law, under the proper claim interpretation, there is no literal infringement.” *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1389 (Fed. Cir. 1992) (affirming summary judgment of noninfringement); *see also WMS Gaming, Inc. v. Int'l Game Technology*, 184 F.3d 1339, 1352-53 (Fed. Cir. 1999) (reversing trial court's holding of literal infringement because microprocessor in accused device did not perform identical function to that claimed in patent, but affirming holding of infringement under the doctrine of equivalents).
- *Means-plus-function claim language also requires identical or equivalent structure.* A means-plus-function element does not cover every possible means for carrying out the function in question. The Court of Appeals for the Federal Circuit has described section 112, paragraph 6 of the statute as having a “string attached.” The string is that the statute restricts the coverage of the means-plus-function claim language to a) the structure, material, or acts described in the specification and b) equivalents of that structure, material, or acts. *See, e.g., Valmont Industries, Inc. v. Reinke Mfg. Co., Inc.*, 983 F.2d 1039, (Fed. Cir. 1993) (reversing judgment of infringement). Equivalence under section 112 paragraph 6 is

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similar to, but not identical to, equivalence under the doctrine of equivalents, discussed immediately below.

- *The court, not the jury, examines the claimed function and the corresponding structure.* In its *WMS Gaming* opinion, the Federal Circuit held that “[d]etermining the claimed function and the corresponding structure for a claim limitation written in means-plus-function format are both matters of claim construction. They therefore present issues of law that we review *de novo*.¹⁰” *WMS Gaming*, 184 F.3d at 1347 (reversing trial court’s holding of literal infringement, but affirming holding of infringement under the doctrine of equivalents).

- *A programmed computer can constitute the “means” for performing a claimed function.* The *WMS Gaming* court also held that “[i]n a means-plus-function claim in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is *not* the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.” *WMS Gaming*, 184 F.3d at 1349 (emphasis added, citation omitted). Consequently, a computer programmed to perform an algorithm (the “accused algorithm”) that is different from the corresponding algorithm disclosed in the patent (the “patent’s algorithm”) does not constitute identical structure to the structure disclosed in the patent. *See id.* at 1350; *see also Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1273 (Fed. Cir. 1999) (holding that patent owner was not entitled to summary judgment of literal infringement, but vacating and remanding summary judgment of noninfringement on other grounds; accused software-based device “constitutes a different ‘structure’ than the software disclosed in the ‘364 patent because it uses a different algorithm to perform the recited function”).

If, however, the differences between the accused algorithm and the patent’s algorithm are insubstantial, the accused structure may still literally infringe the patent claim in question, at least if it performs the identical function recited in the means-plus-function claim element. *See WMS Gaming*, 184 F.3d at 1350-52.

- *An “after-arising” structure might not be capable of being an “equivalent,” at least not in means-plus-function analysis.* The Federal Circuit has twice suggested, apparently in dicta, that a structural equivalent of a means-plus-function claim element must have been available at the time of the issuance of the patent

containing the claim. In other words, a structure that did not exist at the time of issuance of the patent might not be able to be a section-112 equivalent, because public policy requires that the meaning of the means-plus-function claim language must be fixed as of the time that the patent was issued. *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1309-11 (Fed. Cir. 1998) (reversing summary judgment of infringement and remanding with instructions to grant summary judgment of noninfringement); *see also Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1320-21 & n.2 (Fed. Cir. 1999).

(On the other hand, an after-arising structure can still be an equivalent under the doctrine of equivalents. *See* § 3.7[e].)

[e] Infringement Under the Doctrine of Equivalents

Even if a patent claim is not literally infringed — because one or more claim elements is missing from the accused product or process — it may still be infringed if an “equivalent” of each missing claim element can be found in the accused product or process. *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 117 S. Ct. 1040, 1049.

The Doctrine of Equivalents

- Each missing claim element requires an equivalent
- Interchangeability can indicate equivalence
- Substantial identity in function, way, and result can indicate equivalence
- A patented accused product might *not* be an equivalent

[1] General Principles

The doctrine of equivalents was created by the courts, not by Congress, to prevent an infringer from escaping liability because of insubstantial differences with the literal claimed subject matter. The doctrine serves “to balance the purpose of fairness to inventors lest the patent be unjustly circumvented, against the purpose of patent claims to state clear boundaries of the patent grant, in fair

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notice of its scope.” *Multiform Dessicants, Inc.*, 133 F.3d at 1480 (citation omitted).

- *An equivalent must be proved for each missing element in a claim.* The Supreme Court has held that “the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement.” The Court ruled that to resolve that conflict, “the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.” *Warner-Jenkinson*, 117 S. Ct. at 1049.

- *Known interchangeability may be important in determining equivalence.* “An important factor [in determining whether there is an equivalent to a claim element] is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was.” *Warner-Jenkinson*, 117 S. Ct. at 1047 (citation omitted). The Court emphasized that, in applying this test, “a skilled practitioner’s knowledge of the interchangeability between claimed and accused elements is not relevant for its own sake, but rather for what it tells the fact-finder about the similarities or differences between those elements.” *Id.* at 1053.

In the software area, the Federal Circuit has held on at least two occasions that hardware and software can be, but need not be, interchangeable. *Compare Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 933-39 (Fed. Cir. 1987) (patented apple sorting apparatus relying on “hardwired” logic circuitry not infringed by microprocessor-controlled sorter that performed different functions) with *Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1270 (Fed. Cir. 1999) (vacating and remanding summary judgment of noninfringement; fact question existed as to whether software-based system component for selecting garage-door transmitter codes was equivalent to patented mechanically-based component).

According to the Supreme Court, the proper time for evaluating equivalency – and thus the proper time for assessing knowledge of interchangeability between elements – is at the time of infringement, not at the time the patent was issued; the substitution of a later-developed element does not insulate the accused product or process from a finding of equivalence. *See Warner-Jenkinson*, 117 S.Ct. at 1052-53.

• *Identity of function, way, and result can indicate equivalence.* “[T]he substantial equivalent of a thing, in the sense of the patent law, is the same as the thing itself; so that if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape.” *Warner-Jenkinson*, 117 S. Ct. at 1052 (citation omitted). According to one Federal Circuit panel, courts must take care not to merge “function” and “way.” *Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1271 (Fed. Cir. 1999) (vacating and remanding summary judgment of noninfringement). One judge’s “way,” however, might be another judge’s “function.”

• *“Pioneering” inventions and the doctrine of equivalents.* Patent claims for “pioneering” subject matter may be entitled to a broad range of equivalents. At the other end of the spectrum, however, claims representing only narrow improvements in an already crowded art will be entitled to a correspondingly narrow range of equivalents. *See generally, e.g., Perkin-Elmer Corp. v. Westinghouse Electric Corp.*, 822 F.2d 1528, 1532 (Fed. Cir. 1987) (affirming judgment of noninfringement), and cases cited therein.

“Pioneering” Inventions

- “a distinct step in the progress of the art, distinguished from a mere improvement or perfection of what had gone before”
- great interest among others in the field
- accolades, awards, honors
- commercial success
- entitled to broad scope of equivalents

The pioneering status of an invention was not mentioned as a relevant factor in the *Warner-Jenkinson* majority opinion by the Federal Circuit. Judge Lourie’s dissenting opinion, however, pointed out that pioneering status “was mentioned by the [Supreme] Court in *Graver [Tank]* and must be considered when relevant.” *Warner-Jenkinson*, 62 F.3d at 1549 (Lourie, J., dissenting). The subsequent Supreme Court opinion in *Warner-Jenkinson* indicated that the Court’s 1950 *Graver Tank* opinion is still good law. *See Warner-*

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Jenkinson, 117 S. Ct. at 1052 (citing *Graver Tank*). So it is distinctly possible that a court would look at whether an invention was “pioneering” in determining infringement under the doctrine of equivalents.

Just what is a pioneering invention? A century ago the Supreme Court characterized a pioneering invention as one that represented “a distinct step in the progress of the art, distinguished from a mere improvement or perfection of what had gone before.” *Texas Instruments, Inc. v. United States Int'l Trade Com'n*, 846 F.2d 1369, 1370 (Fed. Cir. 1988), quoting *Westinghouse v. Boyden Power Brake Co.*, 170 U.S. 537, 562, 18 S. Ct. 707, 718, 42 L. Ed. 1136 (1898). The Court of Appeals for the Federal Circuit gave an example of what makes a “pioneering” invention in a case involving fiber optic technology and a patent owned by Corning Glass Works:

Dr. Maurer first publicly reported the achievement of a 20 db/km optical waveguide fiber at the Conference on Trunk Telecommunications by Guided Waves held in London, England. That announcement created enormous interest and was the subject of many articles in both technical and general publications. The inventors' advancement in technology won them accolades from various societies and institutes, for which they were presented with many prestigious awards and honors. In addition, the invention of the '915 patent has achieved impressive commercial success on a worldwide basis. The district court determined that “[t]he 915 patent clearly covers a basic, pioneering invention.”

Corning Glass Works v. Sumitomo Elec. U.S.A., Inc., 868 F.2d 1251, 1255 (Fed. Cir. 1989).

- *If the accused device is itself patented, that can (but need not) indicate non-equivalence.* The fact that a device accused of infringing a patent is itself patented might – but does not necessarily – mean that the device does not infringe the first patent. If the patent examiner determined that the accused device was patentable after reviewing the first patent, that can indicate that the accused device is substantially different from the claimed subject matter of

the first patent. *Zygo Corp.* 79 F.3d at 1570 (reversing finding of infringement under the doctrine of equivalents).

[2] Limitations on the Doctrine of Equivalents

The law imposes certain restrictions on a patent owner's ability to assert infringement under the doctrine of equivalents. Some of the principal limitations are discussed in this section.

Limitations on the Doctrine of Equivalents

- Patent owner cannot have it both ways
- The doctrine of equivalents cannot entirely eliminate a claim element
- Foreseeable variations of the claimed subject matter are not "equivalent"
- Embodiments disclosed but not claimed are dedicated to the public and cannot be "equivalents"
- The prior art limits the permissible scope of equivalents

• *The doctrine of equivalents cannot undo a claim amendment.* Because of the public-notice function of patent claims, if a patent applicant amended a claim during the examination of the patent application, the law "place[s] the burden on the patent-holder to establish the reason for an amendment required during patent prosecution. ... Where no explanation is established, however, prosecution history estoppel would bar the application of the doctrine equivalents as to that element." *Warner-Jenkinson*, 117 S. Ct. at 1051.

• *The doctrine of equivalents cannot undo an argument the inventor made to the patent examiner.* A patent owner cannot assert that something is equivalent to a claim element if the inventor previously argued otherwise to the patent examiner. *See, e.g., Southwall Technologies, Inc.*, 54 F.3d at 1583-84.

• *The doctrine of equivalents cannot be used to eliminate a claim element.* "It is important to ensure that the application of the

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doctrine [of equivalents], even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.” *Warner-Jenkinson*, 117 S. Ct at 1049. “[T]he doctrine of equivalents is not a license to ignore or erase ... structural and functional limitations of the claim limitations on which the public is entitled to rely in avoiding infringement.” *Athletic Alternatives*, 73 F.3d at 1582 (internal quotation marks and citation omitted).

- *Foreseeable but unclaimed variations might be ineligible to be considered “equivalents” of the claimed subject matter.* If variations on a claim element are foreseeable, a patent owner and its patent attorney are responsible for drafting the claim language to encompass those variations. “[A]s between the patentee who had a clear opportunity to negotiate [with the patent examiner to obtain] broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alternative of its claimed structure.” *Sage Products, Inc.*, 126 F.3d at 1425.

(Other Federal Circuit panels have distinguished *Sage Products* on this point, however, so the efficacy of this doctrine may be questionable. For example, one panel held that “the proposed application of the doctrine in *Sage Products* would have utterly written out of the claim not one, but at least two (maybe more) express limitations of the claim.” *Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1271 (Fed. Cir. 1999) (vacating and remanding summary judgment of noninfringement).)

- Embodiments disclosed but not claimed are dedicated to the public and cannot be “equivalents.” In 2002, the en banc Federal Circuit resolved a seeming split between two prior panel decisions. In essence, the court held that, if a patent application discloses variations A, B, and C of an invention, but only claims variations A and B, then variation C is dedicated to the public and cannot be covered by the doctrine of equivalents. “[W]hen a patent drafter discloses but declines to claim subject matter, as in this case, this action dedicates that unclaimed subject matter to the public. Application of the doctrine of equivalents to recapture subject matter deliberately left unclaimed would conflict with the primacy of the claims in defining the scope of the patentee's exclusive right.” *Johnson & Johnston Associates Inc. v. R.E. Service Co., Inc.*, 285 F.3d 1046, 1054 (Fed. Cir. 2002) (en banc) (citations and internal quotation marks omitted).

- *The prior art limits the permissible scope of equivalents.* The prior art restricts the scope of equivalency that a patent owner can assert in alleging infringement under the doctrine of equivalents. One way of determining the extent of such restriction is to draft a hypothetical patent claim, sufficient in scope to literally cover the accused product. Such a hypothetical claim is sometimes referred to as a “*Wilson Sporting Goods* claim,” after the name of the case in which the Court of Appeals for the Federal Circuit first used that term. “The pertinent question then becomes whether that hypothetical claim could have been allowed by the PTO over the prior art. If not, then it would be improper to permit the patentee to obtain that coverage in an infringement suit under the doctrine of equivalents.” *Conroy v. Reebok Int'l Ltd.*, 14 F.3d 1570, 1576 (Fed. Cir. 1994).

[3] The Doctrine of Equivalents and Means-Plus-Function Claims

In some circumstances, but not in others, a means-plus-function claim that is not literally infringed can still be infringed under the doctrine of equivalents:

- The patent owner is likely to be precluded from asserting infringement under the doctrine of equivalents if the lack of literal infringement is due to the accused device’s use of a *structure* that is more than insubstantially different from the structure described in the patent; *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1309-11 (Fed. Cir. 1998) (reversing summary judgment of infringement and remanding with instructions to grant summary judgment of noninfringement).
- On the other hand, if the lack of literal infringement is due to the accused device using identical or equivalent structure to perform a different function than is recited in the means-plus-function claim, then infringement can still exist under the doctrine of equivalents if the different function is nevertheless an equivalent of the function recited in the claim. *WMS Gaming, Inc. v. Int'l Game Technology*, 184 F.3d 1339, 1352-54 (Fed. Cir. 1999) (reversing trial court’s holding of literal infringement, but affirming holding of infringement under the doctrine of equivalents).

§ 3.8 Dealing With Potential Infringement Issues

**[a] Your Company's Patented Invention
May Still Infringe Another Company's Patent**

An invention can be patentable in itself, yet still infringe on someone else's patent. This could result in a marketplace stalemate; frequently, patent owners in this situation will grant each other some kind of cross-license.

**[b] Avoid "Willful" Infringement –
Check Out Potential Problem Patents**

A company that learns that it might be affected by a third-party patent should promptly investigate the situation, very possibly using outside patent counsel to maintain the attorney-client privilege as much as possible. Studied ignorance is generally not a good idea, because a company can be a "willful" infringer without even knowing it: The Federal Circuit has held repeatedly that one who becomes aware of a patent has an affirmative duty to use due care to avoid infringing a valid claim (e.g., by obtaining a competent opinion of counsel); failure to comply with that duty can constitute "willful" infringement, leading to an award of as much as treble damages. *See* 35 U.S.C. § 284 (court may increase damages up to three times amount found or assessed); *cf. Modine Mfg. Co. v. Allen Group, Inc.*, 917 F.2d 538, 543 (Fed. Cir. 1990) (affirming denial of enhanced damages notwithstanding jury finding of willful infringement, and holding that statute authorizes but does not mandate increased damages).

Suppose that a company makes a good-faith attempt to "design around" a third-party patent. Later, the company wins on the issue of literal infringement, i.e., its accused product or service is held not to literally infringe the patent (see § 3.7[b]). The accused product or service, however, also is held to infringe under the doctrine of equivalents (see § 3.7[e]).

Is this company a willful infringer because it intentionally designed around the third-party patent? Perhaps not. In *WMS Gaming*, the Federal Circuit reversed a finding of literal infringement and affirmed a finding of infringement under the doctrine of equivalents. The appellate court, vacating and

remanding a holding of willful infringement, reminding the district court that “[w]hile ‘it is not a rule of law that infringement that is not literal can never be sufficiently culpable to warrant enhanced damages[...] avoidance of literal infringement is a fact to be considered’ in determining whether there has been willful infringement.” *WMS Gaming, Inc. v. Int’l Game Technology*, 184 F.3d 1339, 1354-55 (Fed. Cir. 1999) (citation omitted). The Federal Circuit also noted pointedly that “[w]hen the district court reconsiders its finding of willful infringement, it should bear in mind that the patent law encourages competitors to design or invent around existing patents.” *Id.* at 1355 (citations omitted).

**[c] Watch Out for Internal Emails
About Third-Party Patents**

Too often, a company’s senior management first learns about a third party’s patent from an engineer, software developer, or other “techie” who read about it in a newsfeed, saw it on a Web site, etc. Thinking that s/he is being helpful, the techie sends an email to his manager describing the third-party patent and stating firmly that “we clearly infringe this patent.” Four points will be of keen interest to the company’s counsel:

- (i) In sending the email, the techie probably did not read the claims of the patent, and therefore is not really in a position to know whether the company is infringing the patent.
- (ii) Nevertheless, the email very well might not be subject to the attorney-client privilege. Depending on whether it was sent as part of a request for legal advice, it might be discoverable in litigation.
- (iii) The email also could well be admissible against the company as a party admission against interest. If so, it probably would be Exhibit B for the third-party patent owner (Exhibit A, of course, being the patent itself).
- (iv) The patent owner’s trial counsel would almost certainly “billboard” the email to the jury at every conceivable opportunity.

[d] The Difficulty of Challenging the Validity of a Claim in an Issued Patent

A company concerned about another party's patent will usually want to challenge the validity of the patent. This section outlines some of the main legal principles governing such challenges.

[1] A Patent is Presumed Valid (Because It Was Issued by the Government)

In infringement litigation, a patent owner need not prove that the patent is valid, because by statute it is presumed to be valid, and each claim is presumed valid independently of the validity of any other claims. *See* 35 U.S.C. 283, first paragraph. Moreover, the burden of establishing the invalidity of a patent claim is expressly placed, not on the patent owner as plaintiff, but on the party asserting such invalidity. *See id.*

The Court of Appeals for the Federal Circuit has held that a party seeking to establish that a claim is invalid must prove facts by clear and convincing evidence – not merely by a preponderance of the evidence – to support a conclusion that the claim is invalid. *See, e.g., American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359-60 (Fed. Cir. 1984) .

The same court has noted that, where the PTO has considered a piece of prior art, and has issued a patent notwithstanding that prior art, the courts owe some deference to the PTO's decision. *See Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1572 (Fed. Cir. 1992).

[2] But, the Courts Have the Final Say About Patentability

It is the courts, however, that are the final arbiters of patent validity. Although courts may take note of, and benefit from, the examination proceedings before the patent examiner, the question of patentability is ultimately for the courts to decide, without deference to the rulings of the patent examiner. *See Quad Environmental Technologies Corp. v. Union Sanitary District*, 946 F.2d 870, 876 (Fed. Cir. 1991).

The PTO's search library is far from perfect; the patent examiner might well have been unaware of important prior art. This is especi-

ally true in the software field, where much prior art is not documented in patents or printed publications. Consequently, infringement defendants will usually spend a great deal of time and money to scour every available source of prior art.

If a challenger to the validity of a patent produces prior art or other evidence not considered in the PTO, there is no reason to defer to the PTO so far as that prior art or other evidence is concerned. In fact, new prior art not considered by the patent examiner may so clearly invalidate a patent that the challenger's burden is fully sustained merely by proving the existence of the prior art. See *American Hoist & Derrick Co.*, 725 F.2d at 1359-60 (Fed. Cir. 1984); *see also WMS Gaming, Inc. v. Int'l Game Technology*, 184 F.3d 1339 (Fed. Cir. 1999) (affirming judgment that patent was not invalid; two of three prior-art references cited at trial had not been considered by the patent examiner)..

A patent claim can be found to be invalid even if the prior art produced by the challenger is not more significant than the prior art considered by the PTO, *see Surface Technology, Inc. v. U.S. Int'l Trade Comm'n*, 801 F.2d 1336, 1339-40 (Fed. Cir. 1986), or for that matter even if the exact prior art in question was actually considered by the patent examiner. *See, e.g., Celeritas Technologies, Inc. v. Rockwell Int'l Corporation*, 150 F.3d 1354, 1360-61 (Fed. Cir. 1998) (reversing in pertinent part denial of JMOL; holding that no reasonable jury could have found that patent claims were not anticipated by prior-art reference, even though reference had been considered by patent examiner). In part, this is because it is not the examiner's technical expertise (which may or may not be considerable) that gives his (or her) decisions a presumption of correctness; it is the authority duly vested in him by his appointment as a patent examiner. *See Western Electric Co. v. Piezo Technology, Inc.*, 860 F.2d 428, 433 (Fed. Cir. 1988).

Invalidation of a patent is a one-way trap door: once a patent claim is held invalid in a final judgment, the patent owner is estopped from ever denying its invalidity against anyone else (unless he shows that he did not have a full and fair opportunity to litigate). *See Blonder-Tongue Laboratories, Inc., v. University of Illinois Foundation*, 402 U.S. 318, 333-34 (1971). As noted above, different claims in the same patent live or die independently, however, so the loss of one claim in a patent would not necessarily be fatal to all claims. *See* 35 U.S.C. § 282.

§ 3.8

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Infringers are under no such handicap. True, if one infringer fails to prove invalidity, he may be estopped from rearguing the matter unless new evidence is produced, under conventional principles of res judicata. Other infringers are not estopped, however, and can raise the same or new challenges to the patent. (As a practical matter, however, a patent claim that has survived litigation against an adequately-defended opponent is likely to be treated with more respect by courts than an untested claim.)

[e] Be Aware of the Strong Remedies for Patent Infringement

The end results of a successful patent lawsuit can be gratifying to the patent owner and disastrous for the defendant. If held liable for patent infringement, the defendant can be subjected to some or all of the following remedies:

[1] Injunction Against Further Infringement

An infringer may be subject to an injunction against further infringement – possibly putting the infringer out of business. *See* 35 U.S.C. § 283. As Barnes & Noble found out the hard way, courts can grant *preliminary* injunctive relief in patent cases. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 73 F.Supp.2d 1228 (W.D. Wash. 1999) (granting preliminary injunction); *cf. Chrysler Motors Corp. v. Auto Body Panels of Ohio, Inc.*, 908 F.2d 951, 953-54 (Fed. Cir. 1990) (affirming denial of preliminary injunction where trial court found patented invention obvious); *Illinois Tool Works, Inc., v. Grip-Pak, Inc.*, 906 F.2d 679, 682 (Fed. Cir. 1990) (affirming denial of preliminary injunction; stressing that irreparable harm is presumed, but only rebuttably).

[2] Damages – Possibly Including Treble Damages

The infringer may be ordered to pay damages. The damages are potentially equal to the patent owner's lost profits (if proved). *See generally Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995) (in banc); *see also, e.g., Kalman v. Berlyn Corp.*, 914 F.2d 1473, 1484 (Fed. Cir. 1990) (enumerating factors to be proved by patentee to be entitled to lost profits).

By statute, damages are not less than a reasonable royalty. *See* 35 U.S.C. § 284; *see generally, e.g., Trell v. Marlee Electronics Corp.*,

912 F.2d 1443, 1445 (Fed. Cir. 1990); *Polaroid Corp. v. Eastman Kodak Co.*, 16 USPQ (BNA) 1481 (D. Mass 1990) (total award, based on lost profits and reasonable royalty plus prejudgment interest, in excess of \$900 million).

As noted in § 3.8[b], the damage award may be increased up to treble damages in the case of “willful” infringement or in other exceptional circumstances. Individuals involved in the infringement can be subject to personal liability in some circumstances, as discussed in § 3.8[f].

[f] Consider the Potential for Personal Liability

Individuals who direct or actively take part in the infringing activities could be jointly and severally liable for the infringement. At this writing the law is not entirely settled on this point. The Federal Circuit has considered various theories of personal liability, including piercing the corporate veil, inducement of infringement under 35 U.S.C. § 271(b), and the doctrine that joint tortfeasors are jointly and severally liable.

Selected cases:

Al-Site Corp. v. VSI Intern., Inc., 174 F.3d 1308, 1331-32 (Fed. Cir. 1999): The Federal Circuit reversed a judgment holding a corporate officer personally liable for patent-infringement damage award. The court stated that for personal liability to attach, there must be evidence to justify piercing the corporate veil.

Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1575-75 (Fed. Cir. 1996): The court affirmed a judgment holding the founder / CEO / chief engineering officer of an infringing corporation personally liable for inducing corporation’s infringement.

Manville Sales Corp. v. Paramount Systems, Inc., 917 F.2d 544, 552 (Fed. Cir. 1990): The court reversed a judgment holding a corporate officer personally liable for patent-infringement damage, on grounds that there was insufficient evidence to justify piercing the corporate veil.

Fromson v. Citiplate, Inc., 886 F.2d 1300, 1304: The court affirmed allowing amendment of pleadings to add individuals as defendants on an inducement-of-infringement theory.

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§ 3.9

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§ 3.9 Appendix: Sample Patent Assignment

[The following sample patent application assignment can be readily adapted for use in assigning an issued patent, e.g., by including "Permitted Exceptions" language.]

[Caption of patent application, or "State of ____/County of ____"]

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned do hereby:

SELL, ASSIGN AND TRANSFER TO ASSIGNEE, INC., a corporation of the state of Delaware having a place of business at 123 Main Street, Anywhere, U.S.A., the entire right, title and interest for the United States and all foreign countries in and to:

1. any and all improvements which are disclosed in the above-captioned application for United States Letters Patent, which has been executed by the undersigned concurrently herewith;
2. the above-referenced application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or may be subsequently filed, in the United States and/or in any and all other countries, on any of such improvements;
3. all original and reissued patents which have been or may subsequently be issued in the United States or in any foreign country on such improvements;
4. and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the ASSIGNEE;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

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§ 3.9

COVENANT that, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this assignment, the undersigned will:

- a) execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements;
- b) execute all rightful oaths, declarations, assignments, powers of attorney and other papers;
- c) communicate to the ASSIGNEE all facts known to the undersigned relating to such improvements and the history thereof; and
- d) generally do everything possible which the ASSIGNEE shall consider desirable for vesting title to such improvements in the ASSIGNEE, and for securing, maintaining and enforcing proper patent protection for such improvements;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to and in favor of the successors, assigns and nominees of the ASSIGNEE.

[Signature and acknowledgement]

CHAPTER 4

Trade-Secret Protection for Software

D. C. Toedt

From 1989 through 1993, this book included two chapters on trade-secret law. Chapter 3 was adapted from a highly regarded treatise-type CLE paper on trade-secret protection (as well as other intellectual-property subjects) by Gale R. "Pete" Peterson of Cox & Smith in San Antonio. Chapter 4 was an informative and entertaining overview of trade secrets in the workplace by Michael F. Bailey and Lawrence G.D. Scarborough of Brown & Bain in Phoenix, previously published in THE COMPUTER LAWYER. This paper replaces those two chapters, drawing in a few places (with permission) on Pete Peterson's article. My thanks to Messrs. Peterson and Bailey & Scarborough for their previous contributions. — DCT

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§ 4.1 Introduction: Trade Secret Cases as Fact-Intensive, Equity-Laden Disputes

In theory, the legal standards for proving misappropriation of a trade secret are fairly well settled.¹ Application of those standards can be problematic, however. Equities can have a strong influence on a trier of fact's findings—and the court's conclusions of law as well—in virtually every aspect of a dispute. Small differences in fact can result in large differences in outcome.

§ 4.2 Principal Sources of Trade-Secret Law

[a] The Restatements' Multifactor Definitions

The Restatement (First) of Torts, still relied on in many jurisdictions,² sets out perhaps the most-quoted attempt to define a trade secret.³ That definition is not exactly precise, however:

A trade secret may consist of any formula, pattern, device or compilation of information [1] which *is used* in one's business and [2] which gives him an opportunity to obtain an advantage over competitors who do not know or use it.⁴

The 1995 Restatement (Third) of Unfair Competition uses a slight but potentially-significant variation on that language:

A trade secret is any information [1] that *can be used* in the operation of a business or other enterprise and [2] that is

¹ Additional information can be found in two well-known treatises that are often cited by the courts. *See generally* ROGER M. MILGRIM, MILGRIM ON TRADE SECRETS, and MELVIN F. JAGER, TRADE SECRETS LAW.

² *See, e.g., Integrated Cash Management Services, Inc., v. Digital Transactions, Inc.*, 920 F.2d 171, 173, 17 USPQ2d (BNA) 1054 (2d Cir. 1990) (citing cases), *affirming* 732 F. Supp. 370, 13 USPQ2d (BNA) 1397 (S.D.N.Y. 1989) (granting six-month "lead time" injunction against former employees of cash-management software development company on grounds that company's uses of particular combination of nonsecret utility programs constituted a trade secret); *E.I. duPont deNemours & Co., Inc. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970) (affirming judgment against pilots who flew aerial reconnaissance mission over plaintiff's chemical plant while it was under construction, apparently on behalf of a competitor of plaintiff), *cert. denied*, 400 U.S. 1024 (1971).

³ "The most comprehensive and influential definition of a trade secret is that set out in § 757, comment b of the Restatement of Torts (1939)" *Integrated Cash Management*, 920 F.2d at 173 (citations omitted).

⁴ RESTATEMENT OF TORTS, § 757, comment b (1939) (emphasis and bracketed numbering added).

sufficiently valuable and secret to afford an actual *or potential* economic advantage over others.⁵

Either definition leaves a good deal of room to argue about the comparative significance of particular facts. The Restatement (First) of Torts therefore sets forth six illustrative factors for courts to consider:

(1) the extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and to his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.⁶

The Restatement (Third) of Unfair Competition contains similar verbage in its comments.

Any particular dispute is likely to be rife with potential issues of fact on some or all of the just-quoted factors.

[b] Sharper Focus Under the Uniform Trade Secret Act

The definition of a trade secret may be somewhat more focused in jurisdictions that have adopted one or another variation on the Uniform Trade Secret Act. The UTSA's definition focuses primarily on whether reasonable *efforts* to keep the information confidential have been exerted (whereas such efforts might be but one factor to consider in a Restatement jurisdiction). For example, California's version of the UTSA defines a trade secret as:

information, including a formula, pattern, compilation, program, device, method, technique, or process, that:

(1) Derives independent economic value, *actual or potential*, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and

(2) *Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.*⁷

Even under the UTSA, reasonable *efforts* alone will not always suffice. Some states' versions of the UTSA still seem to call explicitly for at least some proof of actual secrecy and not just of secrecy measures; for example:

⁵ THIRD RESTATEMENT OF UNFAIR COMPETITION, § 39 (1995) (bracketed numbering and emphasis added).

⁶ RESTATEMENT OF TORTS, § 757, comment b (1939).

⁷ CAL. CIV. CODE § 3426.1(d) (West Supp. 1993).

- The Maryland and Virginia statutes define “trade secret” as information that derives economic advantage from “not being generally known to, *and not being readily ascertainable by proper means by*, other persons who can obtain economic value from its disclosure or use”⁸
- Illinois’s UTSA definition requires that the information in question be “*sufficiently secret to derive economic value*” from not being generally known.⁹

§ 4.3 Trade Secret = Secrecy + Economic Advantage

Perhaps the greatest part of a trade-secret plaintiff’s burden of proof is establishing that a trade secret exists.¹⁰ As a practical matter, that burden is largely the same whether the governing law is based on the Restatement of Torts, on some variation of the Uniform Trade Secrets Act, or on some other state statute. The putative trade-secret proprietor must show:

- that the alleged secret in fact was at least somewhat secret, i.e., that it was not generally known—absolute secrecy is not required.¹¹ Proof of reasonable efforts to maintain secrecy is usually accepted as a proxy for proof of secrecy itself (absent a counter-showing that the information in question is not secret), as discussed in more detail below; and
- that the putative secret afforded an actual or at least a potential economic advantage to the proprietor. In assessing the value of certain information, “an aggrieved plaintiff need not show that the information it seeks to protect is vital to its business, but only that the information

⁸ MD. COM. LAW II CODE ANN. § 11-1201(e); VA. CODE ANN. § 59.1-336.

⁹ ILL. REV. STAT. ch. 140, ¶ 352(d)(1).

¹⁰ The question whether a trade secret exists may be one of fact or of law depending on the jurisdiction. *Compare, e.g., Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 848, 28 USPQ2d (BNA) 1503 (10th Cir. 1993) (noting that what constitutes a trade secret under Colorado law is a question of fact; refusing to reverse trial-court finding that mathematical constants used in plaintiff’s software for determining proper size for industrial belts were trade secrets) *with Trandes Corp. v. Atkinson*, 996 F.2d 655, 661, 27 USPQ2d (BNA) 1014 (4th Cir. 1993) (noting that in Maryland, existence of trade secret is conclusion of law based upon applicable facts; affirming judgment on jury verdict of trade-secret misappropriation).

¹¹ See, e.g., *Trandes Corp. v. Atkinson*, 996 F.2d 655, 661, 27 USPQ2d (BNA) 1014 (4th Cir. 1993) (affirming jury verdict of trade-secret misappropriation); *Q-Co Industries, Inc. v. Hoffman*, 625 F. Supp. 608, 617 (S.D.N.Y. 1985) (holding that secrecy component of a trade secret was not compromised when only the object code version of plaintiff’s software was distributed to customers; denying preliminary injunction because defendant was not ready to distribute software).

would provide the unauthorized user of it with an unfair competitive advantage which it would not otherwise have enjoyed."¹²

As a preliminary matter, however, a trade-secret plaintiff may be required to identify the alleged trade-secret information early on, perhaps even before the dispute arises. Credibility is always enhanced when a plaintiff is selective about what it asserts is a trade secret. Possibly of more importance, however, there is some authority that an employer must "inform employees what information is considered confidential"¹³ to help employees and courts determine what is a protectable trade secret and what is unprotectable general knowledge and experience.

PRACTICE POINTER: Employment agreements and employee handbooks often state that all information developed by the company or at company expense is to be treated as proprietary unless shown by documentary evidence to be available from other sources, e.g., in printed publications or from third parties not having an obligation of confidence to the company.

(In another case, however, the court noted that "each salesman knew without having to be told that the information was proprietary . . ."¹⁴)

In court a plaintiff's failure to identify the allegedly secret information may be fatal to its claim.¹⁵ Although a plaintiff need not disclose all of the

¹² *Anacomp, Inc. v. Shell Knob Services, Inc.*, 1994 U.S. Dist. LEXIS 223 (S.D.N.Y. 1994), *citing Computer Assoc. Int'l, Inc. v. Bryan*, 784 F. Supp. 982, 987-88 (E.D.N.Y. 1992) and *quoting Ecolab, Inc. v. Paolo*, 753 F. Supp. 1100, 1111 (E.D.N.Y. 1991); *see also Sikes v. McGraw-Edison Co.*, 671 F.2d 150, 151 (5th Cir. 1982); *Hyde Corp. v. Huffines*, 314 S.W.2d 763 (Tex. 1958).

¹³ *Webster Eng'g & Mfg. Co. v. Francis*, 1993 U.S. Dist. LEXIS 14346 (D. Kan. 1993) (granting motion by defendants, who allegedly had been joint venturers with plaintiff, for partial summary judgment that plaintiff had failed to show that information developed by defendants during the venture was a trade secret), *citing Electro-Craft Corp. v. Controlled Motion, Inc.*, 332 N.W.2d. 890, 902-03 (Minn. 1983); *see also George S. May Int'l Co. v. International Profit Assoc.*, 1993 Ill. App. LEXIS 1828 (Ill. App. 1993) (affirming denial of preliminary injunction; plaintiff, a small-business consulting firm, had failed to identify to employees the specific proprietary information contained in its survey forms, special analytical methods, manuals, and computer programs, which also included numerous public-domain items).

¹⁴ *One Stop Deli, Inc. v. Franco's Inc.*, 1993 U.S. Dist. LEXIS 17295 (W.D. Va. 1993) (granting preliminary injunction against defendant's use of trade-secret information brought with them by defecting employees of plaintiff).

¹⁵ *See, e.g., MAI Systems Corp. v. Peak Computers, Inc.*, 991 F.2d 511, 522-23, 26 USPQ2d (BNA) 1458 (9th Cir. 1993) (citing cases; reversing summary judgment that third-party maintenance provider had misappropriated computer manufacturer's trade secrets in diagnostic software, but affirming summary judgment of copyright infringement in respect of provider's copying of diagnostic

details of its trade secrets, it must do more than merely allege that it had a secret.¹⁶ (Such disclosures usually will be made pursuant to a protective order so that the judicial proceedings themselves do not destroy the secrecy of the information in question.¹⁷)

§ 4.4 Candidates for Trade Secret Protection

The Restatement lists a number of categories of possible trade-secret information:

[The trade secret] may be a formula for a chemical compound, a process of manufacturing, testing or preserving materials, a pattern for a machine or other device, or a list of customers * * * Generally, it relates to the production of goods, as for example, a machine or formula for the production of an article. It may, however relate to the sale of goods or to other operations within the business such as a code for determining discounts, rebates or other concessions in a price list or catalog, or a list of a specialized customers or a method of bookkeeping or other office management.¹⁸

(..continued)

software into RAM to use it); *Trandes Corp.*, 996 F.2d at 661-62 (holding that plaintiff had failed to introduce evidence, as opposed to conclusory allegations, showing that the specific engineering formulas and methods of calculation embodied in its Tunnel System software and the structure and organization of the software were trade secrets; affirming judgment on jury verdict of trade-secret misappropriation on alternate ground that source code and “object” [executable] code of the software itself constituted trade secrets); *AMP, Inc. v. Fleischhacker*, 823 F.2d 1199, 1203 (7th Cir. 1987) (failure to identify specific trade secrets precluded injunctive relief against threatened disclosure); *Julie Research Lab., Inc. v. Select Photographic Eng'g, Inc.*, 810 F. Supp. 513, 519 (S.D.N.Y. 1992) (plaintiff bears burden of defining or identifying in detail its trade secrets); *qad, Inc. v. ALN Assocs., Inc.*, 18 USPQ2d (BNA) 1122, 1124 (N.D. Ill. 1990) (recounting how the persistent failure to identify trade secrets had resulted in dismissal of claim).

¹⁶ E.g., *Trandes Corp.*, 996 F.2d at 661.

¹⁷ Compare *Gates Rubber Co. v. Bando Chemical Indus. Ltd.*, 9 F.3d 823, 848-49, 28 USPQ2d (BNA) 1503 (10th Cir. 1993) (holding that “plaintiff’s inadvertent and inconsequential disclosure” of secret information at trial and its delay in sealing the record did not destroy trade-secret status, where plaintiff’s counsel monitored the presence of observers in the courtroom and, after the permanent injunction hearing, moved to seal the record, and where defendant failed to show that others gained access to secret information as a result of disclosures during trial) with *Littlejohn v. BIC Corp.*, 851 F.2d 673, 680 (3d Cir. 1988) (failure to seek an order sealing record constitutes waiver of confidentiality interests).

¹⁸ RESTATEMENT, *supra* note 4.

The Third Circuit's 1985 *SI Handling Systems* opinion¹⁹ provides an extensive catalog of possible trade secrets, including:

- testing procedures;
- tolerances (described as trade secrets par excellence because they cannot be obtained by even the most precise measurements);
- confidential design specifications;
- technical data in the form of efficiency factors gained from component experience;
- a nonstandard design number used in making calculations for system designs;
- market research data;
- the contents of pending patent applications;
- possible methods for avoiding infringement of a patent;
- empirical formulæ; and
- know-how to the extent it has been recorded for repetitive use.

[a] Combinations of Information Can Be Trade Secrets

Combinations of particular items of public-domain information are often valuable trade secrets. As stated by the Second Circuit, “[a] trade secret can exist in a combination of characteristics and components, each of which, by itself, is in the public domain, but the unified process, design and operation of which, in unique combination, affords a competitive advantage and is a protectable [trade] secret.”²⁰ Even when the particular information items themselves are in the public domain, the non-secret nature of the individual components would not prevent the combination of components from being protected as a trade secret.

[b] Customer Lists: Sometimes Yes, Sometimes No

Customer lists might be eligible for trade secret protection in proper circumstances, but no reliable black-letter rules are available to help predict what those circumstances will be.

In *MAI Systems v. Peak Computer*, for example, a former employee of a computer system manufacturer did not take a physical copy of customer database to his new job. He did, however, use trade-secret knowledge of customer identities to visit customers and solicit computer-maintenance busi-

¹⁹ *SI Handling Systems, Inc. v. Heinsley*, 753 F.2d 1244, 1262 (3d Cir. 1985).

²⁰ *Integrated Cash Management*, 920 F.2d at 174 (internal quotation and citation omitted).

ness for his new employer, in competition with the former employer. The Ninth Circuit agreed that the customer database was a trade secret and that the defendants had misappropriated it.²¹ It has also been held that a list of actual customers for an unusual process, where those customers have been educated and converted to accept the benefits of the unusual process, will qualify for trade secret status.²²

On the other hand, the Third Circuit indicated in its *SI Handling Systems* survey that identification of which customers might need a product or service has generally been found *not* to be appropriate for trade secret protection.²³

[c] Not Everything Will Qualify for Trade-Secret Protection

Defendants normally try to rebut allegations of trade-secret status with evidence that the alleged secret is well-known or commonplace. By and large, such a rebuttal can be a tough sell, but sometimes it can be successful.

In its *SI Handling* catalog of potential trade secrets,²⁴ the Third Circuit observed in dicta that a number of matters might *not* be eligible for trade secret protection, including [depending on the jurisdiction and specific circumstances, of course]:

- general knowledge relating to the existence of alternative parts suppliers at lower costs;
- knowledge of long lead times for parts supply;
- knowledge of the decision makers within a client;
- identification of a particular customer's need for a product;
- general employee ability and experience: "If this were not so an apprentice who had worked up to the stages of journeyman and master

²¹ *MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511, 521-22, 26 USPQ2d (BNA) 1458 (9th Cir. 1993), *cert. dism'd*, ___ U.S. ___, 114 S. Ct. 671 (1994) (affirming in pertinent part a summary judgment of trade-secret misappropriation by former employee of plaintiff and new employer); *see also Surgidev Corp. v. Eye Technology, Inc.*, 828 F.2d 452 (8th Cir. 1987) (holding that identity of high-volume users was appropriate subject for trade-secret protection).

²² *Webcraft Technologies, Inc. v. McCraw*, 674 F. Supp. 1039 (S.D.N.Y. 1987). *See also Keystone Life Insurance Co. v. Marketing Management, Inc.*, 687 S.W.2d 89 (Tex. App.—Dallas, 1985, no writ) (customer list obtained under confidentiality obligations is protected).

²³ *SI Handling Systems*, 753 F.2d at 1262.

²⁴ *SI Handling Systems*, 753 F.2d at 1262.

workman could never become an entrepreneur on his own behalf. Any such system of quasi-serfdom has long since passed away.”²⁵.

Information perceived to be easily duplicated or readily available elsewhere (e.g., from publicly available sources) is unlikely to be treated as a trade secret. In its 1992 *Computer Care* opinion,²⁶ the Seventh Circuit reversed a preliminary injunction that was based on a trial-court finding that five elements of the plaintiff’s computerized automobile repair reminder system qualified as trade secrets. The plaintiff’s putative trade secrets included (1) the use of twelve different car repair services to “trigger” reminder letters, rather than the one or two basic services used by the competition; (2) offering dealers the option of “adjustable service cycles” rather than the manufacturer’s recommended service cycle; (3) tracking car owners by a method other than license plate number or Vehicle Identification Number (VIN); (4) sending car owners a second reminder letter if they did not respond to the first one; and (5) automatically putting the names of car owners who did not respond after two reminder letters in “inactive status.”²⁷

Not at all impressed with the five allegedly secret elements, the appellate court observed that under Illinois law, “the key to ‘secrecy’ is the ease with which information can be developed through other proper means: if the information can be readily duplicated without involving considerable time, effort or expense, then it is not secret.”²⁸ The Seventh Circuit held that the plaintiff failed to demonstrate that any of its alleged trade secrets were not either “within the realm of general skills and knowledge” in the car service industry or “readily duplicated without involving considerable time, effort or expense.”

In the *Avtec* case, on the other hand, the defendants argued that the disputed software for simulating satellite orbits “contains such elemental concepts of mathematics that it could have been independently discovered by reverse engineering.”²⁹ The district court did not buy it; the court held that re-

²⁵ *Id.*, 753 F.2d at 1262, quoting *Midland Ross Corp. v. Yokana*, 293 F.2d 411, 412 (3d Cir. 1961) (applying New Jersey law).

²⁶ *Computer Care v. Service Systems Enterprises, Inc.*, 982 F.2d 1063, 1072-75, 25 USPQ2d (BNA) 1020 (7th Cir. 1992) (reversing preliminary injunction prohibiting imitator of plaintiff’s computerized car-repair reminder system from using alleged trade secrets, on grounds that none of the putative trade secrets were eligible for protection; but affirming preliminary injunction against misappropriation of plaintiff’s trade dress in advertising brochures).

²⁷ *See id.* at 1072.

²⁸ *Id.* at 1072 (citations and internal quotation marks omitted).

²⁹ *Avtec Systems, Inc. v. Peiffer*, 805 F. Supp. 1312, 1319, (E.D. Va. 1992) (holding that employer owned trade secret in software even though former employee had developed it on his own time with his own computer and owned the copyright therein), *vacated on other grounds and remanded*, 21 F.3d 568, 30 USPQ2d 1365 (4th Cir.) (holding that district court had improperly evaluated whether program

gardless of how the software could have been reverse engineered, there was no showing that the software itself had been publicly disclosed.³⁰

[d] Employee Defendants May Have Their Own Rights in Allegedly Trade-Secret Information

Many trade-secret lawsuits are brought against former employees for alleged misuse of information learned during employment. Under some circumstances, however, an employee may have an equal interest in developments s/he made during employment:

- In its *SI Handling* survey, the Third Circuit noted in dicta that an employer may not be able to assert trade-secret rights in developments by former employees during their employment, at least to the extent those developments were not disclosed to the former employer.³¹
- Likewise, in the *Structural Dynamics* case, the district court observed that when trade-secret information is the result of an employee's initiative and not that of the employer, the employee may have an equal interest in the information in the absence of contractual provisions to the contrary (although the court found that the employees had breached other covenants of confidentiality and noncompetition).³²

While the district court in *Avtec*³³ initially took the opposite view, i.e., that an employer owned trade-secret rights in software created off-duty by a former employee, the Fourth Circuit vacated and remanded the decision, whereupon the district court reversed itself. A former employee of the plaintiff company Avtec, on his own initiative and using his own computer during nonworking hours,³⁴ had developed a satellite orbit simulation program, in part using knowledge of orbital mechanics that he gained while

(..continued)

was a work made for hire), *on remand* 1994 U.S. Dist. LEXIS 16946 (E.D. Va. Sept. 12, 1994) (holding that copyright in program was owned by former employee and that employer did not have trade secret rights).

30 *Id.*

31 *SI Handling Systems*, 753 F.2d at 1262.

32 *Structural Dynamics Research Corp. v. Engineering Mechanics Research Corp.*, 401 F. Supp. 1102, 1111 (E.D. Mich. 1975) (holding that employees had breached express confidentiality and noncompetition agreements), *cited with approval*, *Plains Cotton Cooperative Association v. Goodpasture Computer Service, Inc.*, 807 F.2d 1256 (5th Cir.) (affirming denial of preliminary injunction), *cert. denied*, 484 U.S. 821, 108 S. Ct. 80 (1987); cf. *Wexler v. Greenberg*, 160 A.2d 430 (Pa. 1960) (holding that in absence of express covenant, chemist had right to disclose and use formulæ developed during employment because they were part of his technical knowledge and skill)

33 See note 29.

34 *Avtec*, 805 F. Supp. at 1318-19.

working for the company. Evidently impressed, Avtec began using the program in client demonstrations to, e.g., the U.S. Air Force and NASA and touted the program to potential clients as a reason to use the company's services.

Unbeknownst to Avtec, the employee licensed an improved version of the program to a co-defendant, which began marketing the program on a stand-alone basis and paying royalties to the employee. Several years later the employee used the old version of the program for a demonstration intended to land a NASA contract for Avtec; the improved version included features specifically requested by NASA, but the old version did not, and Avtec did not get the contract.

In a decision primarily concerned with whether the computer program was a work made for hire under the copyright laws, the district court held that the former employee owned the copyright in the program but that Avtec owned trade-secret rights.³⁵ It also held that the former employee's failure to disclosure a new version to Avtec was a breach of fiduciary duty.³⁶

The Fourth Circuit disapproved of the lower court's trade-secret holding.³⁷ The appellate court held that if the former employee owned the copyright in the program, then Avtec had only a nonexclusive, revocable license to use the program.³⁸ The court remarked that the former employee "rightly question[ed] a judgment that, in effect, imposes liability upon a copyright owner for 'misappropriating' his own work," and held that "a nonexclusive use license in copyrighted material can[not] support the reasonable expectation or right of secrecy necessary to predicate a claim that the identical material is a trade secret"³⁹ On remand, the district court held that Avtec did not have trade-secret rights.⁴⁰

A court might elect not to confront the ownership issue head-on, but instead to take the issue into account in making its ultimate fact findings. The district court did so explicitly in *Micro Consulting v. Zubeldia*:⁴¹ after

³⁵ *Id.*, 805 F. Supp. at 1320.

³⁶ *Id.*, 805 F. Supp. at 1320-21. The court also held that Avtec had no ownership rights in the program's *copyright* because the former employee did not write the program within the scope of his employment. *Id.* at 1318-19; *see also* 1994 U.S. Dist. LEXIS 16946 at *7-10 (same).

³⁷ *See* 21 F.3d at 575.

³⁸ *Id.* at 575 n.12.

³⁹ *Id.* Section 106 of the Copyright Act states that subject to certain limitations, "the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:"

⁴⁰ *See* 1994 U.S. Dist. LEXIS 16946 at *25.

⁴¹ *Micro Consulting, Inc., v. Zubeldia*, 813 F. Supp. 1514, 1535-36.

discussing the need to balance the employer's trade-secret rights against former employees' right to use their general skill and knowledge even in competition with the employer, the court held that the plaintiff employer had failed to prove wrongful use of trade-secret source code and program structure of the plaintiff's software by a former principal of the plaintiff.

[e] Some Software Features That Might Be Trade Secrets

Various aspects of computer software *per se* have often been successfully argued to constitute trade secrets. Examples include:

- the software itself in source code or "object" (executable) code form,⁴²
- mathematical constants and empirical formulæ used in software,⁴³ assuming of course that those items do not impress the factfinder as being public knowledge;⁴⁴

⁴² *E.g., Trandes Corp. v. Atkinson*, 996 F.2d 655, 663-64, 27 USPQ2d (BNA) 1014 (4th Cir. 1993) (affirming jury verdict of trade-secret misappropriation on alternate grounds that source code and object code of plaintiff's programs were trade secrets); *Q-Co Industries, Inc. v. Hoffman*, 625 F. Supp. 608, 617-618 (S.D.N.Y. 1985) (holding that secrecy component of a trade secret is not compromised when only the object code version of the software is distributed to customers, but denying preliminary injunction because of absence of imminent distribution and thus no immediate threat of irreparable harm); *Barr-Mullin, Inc. v. Browning*, 424 S.E.2d 226, 229-30 (N.C. Ct. App. 1993) (agreeing with trial court that plaintiff's lumber optimization software did not lose its trade-secret status because of distribution in "object [executable] code" format, but remanding preliminary injunction for reconsideration of bond requirement)

⁴³ *E.g., Gates Rubber Co. v. Bando Chemical Indus. Ltd.*, 9 F.3d 823, 848, 28 USPQ2d (BNA) 1503 (10th Cir. 1993) (declining to find clear error in trial court finding that mathematical constants used in plaintiff's software for determining proper rubber belts for use with industrial machinery were trade secrets; affirming in pertinent part a judgment of trade-secret misappropriation against former employee); *SI Handling Sys., Inc. v. Heisley*, 753 F.2d 1244, 1261 (3d Cir. 1985) (empirical formulæ).

⁴⁴ See, e.g., *Rivendell Forest Prods., Ltd. v. Georgia-Pacific Corp.*, 824 F. Supp. 961, 966, 26 USPQ2d (BNA) 1543 (1993) (granting defendant's motion for summary judgment that no trade secret existed in the only two features common to both plaintiff's and defendant's software for lumber price quotation because both features were "functional constraints of the lumber industry"), *reversed and remanded*, 28 F.3d 1042, 31 USPQ2d (BNA) 1472 (10th Cir. 1994) (holding that trade secret could consist of selected items of publicly known information and that plaintiff had shown existence of genuine issue of material fact); *Ashland Management, Inc. v. Janien*, 29 USPQ2d (BNA) 1060 (N.Y. Ct. App. 1993) (refusing to reverse trial court finding, namely that mathematical formulæ used in stock-selection program were *not* trade secret because six financial criteria used in formulæ were public knowledge, and affirming judgment in favor of defendant, including award of lost profits to him).

- the architecture—"the way in which the various components fit together as building blocks in order to form the unique whole"—of specific implementations even of commonplace software concepts,⁴⁵ again assuming that such aspects are not themselves found to be commonplace.⁴⁶

§ 4.5 What Security Measures are “Reasonable”?

[a] Comparatively Little is Required

Under either the Restatement analysis or the UTSA approach, reasonable security measures are required of a party seeking to establish and enforce trade-secret rights. “Heroic measures, however, are not required. Whether reasonable steps have been taken depends on the circumstances of each case, including the nature of the information sought to be protected and the conduct of the parties.”⁴⁷ As noted in the legislative history of the Uniform Trade Secrets Act:

⁴⁵ E.g., *Integrated Cash Management Services, Inc., v. Digital Transactions, Inc.*, 920 F.2d 171, 173, 17 USPQ2d (BNA) 1054 (2d Cir. 1990) (agreeing with trial-court finding that the manner in which plaintiff’s generic utility programs interacted to permit easy customization for specific clients was not generally known); see also, e.g., *Continental Data Sys., Inc. v. Exxon Corp.*, 638 F. Supp. 432, 443 (E.D. Pa. 1986) (holding that “decisions to include and exclude elements from a larger pool of data” in software designed for personal-injury attorneys resulted in a protectable compilation of information); *Q-Co Industries, Inc. v. Hoffman*, 625 F. Supp. 608, 617 (S.D.N.Y. 1985) (teleprompter software); *Dickerman Asocs., Inc. v. Tiverton Bottled Gas Co.*, 594 F. Supp. 30, 35-36 (D. Mass. 1984); *J & K Computer Systems, Inc. v. Parrish*, 642 P.2d 732 (Utah 1982) (rejecting defendant’s contention that all accounts-receivable programs included same concepts as plaintiff’s software).

⁴⁶ See, e.g., *Comprehensive Technologies Int’l, Inc. v. Software Artisans, Inc.*, 3 F.3d 730, 736-37, 28 USPQ2d (BNA) 1031 (affirming judgment for defendants; holding that plaintiff had failed to show that its database organization, access techniques, and identifiers were not themselves publicly available; noting trial-court finding that arrangement and interaction of functions of plaintiff’s programs were “common to all computer programs of this type”), vacated, 1993 U.S. LEXIS 28601 (4th Cir 1993); cf. *Koontz v. Jaffarian*, 617 F. Supp. 1108, 1115 (E.D. Va. 1985) (holding that labor estimating manual used by electrical contractors, and computer program implementing the manual, was based on a method that was “a matter of public knowledge, not a secret”), aff’d, 787 F.2d 906 (4th Cir. 1986); *Fishing Concepts, Inc. v. Ross*, 226 USPQ (BNA) 692 (D. Minn. 1985) (holding that plaintiff’s computer programs which generated mailing list and letters in response to inquiries about fishing trips were not a trade secret).

⁴⁷ *Data General Corp. v. Grumman Systems Support Corp.*, 825 F. Supp. 340, 359-60, (D. Mass. 1993) (denying motion for judgment notwithstanding \$27.4 million verdict against defendant for misappropriation of trade secrets, which trial judge

[Reasonable] efforts to maintain secrecy have been held to include *[1]* advising employees of the existence of the trade secret, *[2]* limiting access to a trade secret on “need to know basis,” and *[3]* controlling plant access. . . . [Reasonable] use of a trade secret including *controlled* disclosure to employees and licensees is consistent with the requirement of relative secrecy.⁴⁸

Courts typically look to these and similar factors in assessing secrecy claims.⁴⁹ Even in UTSA jurisdictions many courts will look at other factors, e.g., those listed in the Restatement.⁵⁰

[b] Illustrations of Reasonable Security Measures

Reasonable security measures might include one, many, or all of the items on the following nonexhaustive list (listed in no particular order):

- Confidentiality agreements (“NDAs”) with those having access to the trade-secret information. A detailed confidentiality clause can be found in Article 703 of the Model Software License Provisions, Working Draft 3.0, by the Committee on Computer Programs of the ABA’s Section of Intellectual Property Law,⁵¹ reproduced as Chapter 18 of this book (although in many circumstances a short and simple nondisclosure clause may do just as well).

PRACTICE POINTER: Although employees are normally bound by a duty to preserve trade secrets of their employers without the

(..continued)

increased by \$9 million because of willful misappropriation), *aff'd in pertinent part*, 36 F.3d 1147 (1st Cir. 1994)

⁴⁸ *S.O.S., Inc. v. Payday, Inc.*, 886 F.2d 1081, 1089 n.12, 12 USPQ2d (BNA) 1241 (9th Cir. 1989) (emphasis and bracketed numbering supplied) (quoting California legislative committee notes; reversing and remanding summary judgment granted in favor of defendant software licensee, accused of exceeding its license).

⁴⁹ See, e.g., *Surgidev Corp. v. Eye Technology, Inc.*, 828 F.2d 452, 455 (8th Cir. 1987) (holding that trade-secret proprietor had taken reasonable precautions); *MAI Systems Corp. v. Peak Computer, Inc.*, 1992 U.S. Dist. LEXIS 21829 (C.D. Cal. 1993) (employee confidentiality agreements, need-to-know access, password protection), *aff'd*, 991 F.2d 511, 26 USPQ2d (BNA) 1458 (9th Cir. 1993), *cert. dism'd*, __ U.S. __, 114 S. Ct. 671 (1994).

⁵⁰ See e.g., *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 848, 28 USPQ2d (BNA) 1503 (10th Cir. 1993) (citing Restatement factors as providing guidance under Colorado UTSA; affirming trial court judgment that trade secrets had been misappropriated).

⁵¹ The author chaired the committee and was principal drafter of the Model Software License Provisions.

necessity of a formal confidentiality agreement,⁵² a signed agreement makes a very useful exhibit in litigation and may increase the chances of obtaining a preliminary injunction;

- Confidentiality legends on written materials—without overdoing it (indiscriminate use of confidentiality legends on nonconfidential information might cause a boy-who-cried-wolf reaction in a judge or jury);
- Employee handbooks and brochures stating company confidentiality policy;
- Compartmentalization of sensitive information, with access restricted to those with need to know;
- Exit interviews and termination agreements to remind departing employees of their confidentiality obligations;
- Physical security such as:
 - locked buildings and perhaps locked offices if sensitive information is stored therein;
 - sign-in requirements for visitors;
 - card keys (which can have the added benefit of indicating who obtained access to what areas at what time);
 - identification badges for employees;
 - security guards during nonworking hours;
- Password protection for sensitive computer files—most computer networks require a password even to log on, which provides still more protection.

By way of illustration, security measures were found to be adequate in all of the following cases (text adapted from descriptions in opinions):

Computer Associates v. Bryan: CA employees were required to sign confidentiality agreements as condition of employment; departing employees signed ‘termination agreements’ to keep secret CA’s proprietary or confidential information gained during employment; employees in CA’s Garden City headquarters were required to wear identification badges containing their name and photograph; entrance to the building was restricted by magnetic card procedure and certain internal facilities were kept locked;

⁵² See, e.g., *Computer Assoc. Int'l, Inc. v. Bryan*, 784 F. Supp. 982, 988 (E.D.N.Y. 1992) (granting preliminary injunction against former employee found to have misappropriated trade secrets in CA-ESTIMACS software for estimating resources required for software development projects; “a former employee can be prohibited from taking trade secrets from his former employer whether or not there exists an employment contract which prohibits competition”).

visitors were required to sign in at the front desk and to be escorted through building by CA employee; security guards were on duty in the evening hours.
53

Trandes Corp. v. Atkinson: The plaintiff licensed only two complete versions of its “Tunnel System” software’s object code; it extracted promises from both recipients that they would neither copy nor transfer the program, nor use the program for any purpose other than their own construction or engineering projects; source code was never released; password protection was used on the software for enhanced security; an advertisement in an engineering publication offering demonstration copies generated only a few inquiries and did not result in actual shipment of any copies.⁵⁴

Continental Data Systems v. Exxon: Orally cautioning prospective customers that a computer program manual was confidential was sufficient under the circumstances to establish secrecy.⁵⁵ (David vs. Goliath “atmospherics” may have entered into the court’s thinking; it is likely that few companies knowingly rely on oral cautions alone to protect their trade secrets.)

Data General v. Grumman Systems Support: Data General required employees to sign confidentiality agreements which prohibited the unauthorized disclosure of confidential or proprietary information; completed termination checklists, which specifically covered software, when an employee left the company; distributed a company brochure detailing the company’s policy on protecting confidential and proprietary information, including software; deployed security guards; required visitors to sign in when visiting and prohibited unescorted visits; restricted employee access to the area in which MV/ADEX was developed; labeled MV/ADEX tapes as “property of Data General”; displayed a copyright notice on the exterior of MV/ADEX tapes and on the first display screen of the program itself; did not distribute MV/APEX source code outside of Data General; and required customers to sign an agreement which, among other things, prohibited unauthorized disclosure to third parties.⁵⁶

⁵³ *Id.* at 1000.

⁵⁴ *Trandes Corp. v. Atkinson*, 996 F.2d 655, 663-64, 27 USPQ2d (BNA) 1014 (4th Cir. 1993) (affirming judgment on jury verdict of trade-secret misappropriation; rational jury could conclude that plaintiff took reasonable precautions to keep its Tunnel System object code secret).

⁵⁵ *Continental Data Systems, Inc. v. Exxon Corporation*, 638 F. Supp. 432 (E.D. Pa. 1986).

⁵⁶ *Data General Corp. v. Grumman Systems Support Corp.*, 825 F. Supp. 340, 359-60, (denying motion for judgment notwithstanding jury verdict imposing \$27 million damage award for trade-secret misappropriation by defendant third-party maintenance organization, found to have used plaintiff computer manufacturer’s diagnostic software without authorization), *aff’d in pertinent part*, 36 F.3d 1147 (1st Cir. 1994).

[c] Strategic Considerations in Designing a Security Program

The reasonableness of security measures often lies in the eye of the beholder. No firm rules can determine with certainty whether a particular security measure should be used, but the following questions may provide some guidance:

1. From a purely business perspective, are the benefits of the security measure in question likely to be worth the cost in time and money? Will it materially contribute to the company's long-term bottom line by providing safeguards appropriate to the information in question? Will it help persuade a judge or jury that the company took a sensible approach to protecting its proprietary information?
 - For a company's "crown jewels" of trade-secret information, it may be entirely appropriate to put serial numbers on each copy of the information, keep the copies under tight lock-and-key control, and enforce strict sign-out requirements.
 - On the other hand, for the company's in-house telephone directory a simple confidentiality legend may be sufficient; in some circumstances anything more might make the proprietor appear slightly ridiculous, which is never a good thing in litigation.
2. Will the security measure in question "raise the bar" higher than it needs to be? A trade-secret proprietor that announces, but then fails to enforce, a needlessly ambitious security program may be setting itself up for a fall—more modest security measures consistently enforced may fare much better in litigation.

[d] Licensing Generally Does Not Negate Secrecy Efforts

Licensing a product which contains a "secret" internal element, under an agreement requiring the licensee not to disassemble the product, has been held, in Texas at least, sufficient to protect the secrecy of the "secret" element.⁵⁷ In the field of computer software, it has been held that software leased and retained on the computer equipment, under contractual obligations of secrecy, retained their trade secret status.⁵⁸ Similarly, programs

⁵⁷ *K & G Oil Tool & Service Co. v. G & G Fishing Tool Service*, 314 S.W.2d 782 (Tex. 1958), cert. denied, 358 U.S. 898 (1958). Cf. *Merchant Suppliers Paper Co. v. Photo-Marker Corp.*, 285 N.Y.S.2d 932, 934-36 (N.Y. Sup. Ct. 1967) (holding that similar contract restrictions were void as against federal public policy). Cf. also *J.C. Kinley Co. v. Haynie Wire Line Service*, 705 S.W.2d 193 (Tex. Civ. App.—Houston [14th Dist.] 1985, writ ref'd n.r.e.) (no confidential relationship exists between licensor and licensee unless set out in contract).

⁵⁸ *Electronic Data Systems Corp. v. Kinder*, 497 F.2d. 222, 223 n. 1 (5th Cir. 1974).

licensed under obligations of confidentiality retain their trade secret status.⁵⁹

Even relatively free distribution of “object code” might not preclude a claim of trade secret rights in a computer program, at least against misappropriators of source code or other secret information. Some decisions allow assertion of trade secret rights in such circumstances, assuming the requisite elements of the cause of action can be proved up for the source code. The rationale is that object code “cannot be understood even by expert programmers.”⁶⁰ The question of copyright infringement With today's tools for “reverse engineering” the executable form of a computer program, it is perhaps doubtful whether the court's distinction between source code and object code would any longer be valid.

Widespread distribution of other materials embodying a secret is not necessarily incompatible with the assertion of trade secret rights. Although there is no great wealth of authority, some courts have addressed the industry practice of distributing maintenance manuals and program documentation with proprietary or confidentiality legends. These courts have enforced trade secret rights notwithstanding the distribution.⁶¹

[e] Hard Cases: Perceptions of Fairness and the Reasonableness of Security Measures

Courts will sometimes be lenient in requiring proof of secrecy efforts when defendants seem to be wearing the black hat in one way or another. The zenith of this phenomenon may be the Fifth Circuit's *Christopher* case.⁶² The appellate court approved a trade-secret claim against defendants who flew over a methanol plant under construction and took aerial photographs. The court commented that “[p]erhaps ordinary fences and roofs must be built to shut out intrusive eyes, but we need not require the discoverer of a trade

⁵⁹ See, e.g., *Dickerman Associates v. Tiverton Bottled Gas Co.*, 594 F. Supp. 30, 33-36 (D. Mass. 1984); *J & K Computer Systems, Inc. v. Parrish*, 642 P.2d 732, 735 (Utah 1982).

⁶⁰ *Q-Co Industries, Inc., v. Hoffman*, 625 F. Supp. 608, 617 (S.D.N.Y. 1985) (citations omitted); see also *Telex Corp. v. IBM*, 367 F. Supp. 258, 325 (D. Okla. 1973), *aff'd in pertinent part*, 510 F.2d 894 (10th Cir.), *cert. dism'd*, 423 U.S. 802 (1975).

⁶¹ *Digital Development Corp. v. International Memory Systems*, 185 USPQ 136 (S.D. Cal. 1973); *Data General Corp. v. Digital Computer Controls Inc.*, 297 A.2d 433 (Del. Ch. 1971), *aff'd*, 297 A.2d 437 (Del. 1972); *Management Science America, Inc. v. Cyborg Systems, Inc.*, 1971-1 C.C.H. Trade Cases ¶ 61,472 (N.D. Ill. 1978) (distribution to 600 licensees under obligations of confidentiality did not preclude assertion of trade secrets).

⁶² *E.I. duPont deNemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), *cert. denied*, 400 U.S. 1024 (1971).

secret to guard against the unanticipated, the undetectable, or the unpreventable methods of espionage now available.”⁶³

Similarly, in *Technicon Data Systems Corp. v. Curtiss 1000, Inc.*,⁶⁴ the trade secrets at issue were communication techniques which permitted a number of terminals dispersed throughout a hospital to communicate with a central-site main frame computer. The defendants were consultants to the hospital and had access to the system, but did not have access to the inner workings of the communications components. The defendants spent some 200 man-hours working through trial and error to reverse-engineer the system. Although the security precautions appear to have been relatively lax, the court nevertheless found they were reasonable under the circumstances; it cited *Christopher* for the proposition that the law does not require that every conceivable security device be installed to protect a trade secret.⁶⁵

Courts can sometimes be quite forgiving of lax security measures in defecting-employee cases. In the *One Stop Deli* case,⁶⁶ a group of employees of a vending-machine food company apparently defected en masse to a competitor. The court entered a preliminary injunction against use of trade-secret information for preparing the food and use of customer information, even though from the description in the opinion the plaintiff's security precautions appear to have been something between lax and nonexistent.

A defendant's actual knowledge of proprietary status may also influence a court's scrutiny of a plaintiff's secrecy efforts. In *Bishop v. Wick*,⁶⁷ the defendant had been given a copy of the plaintiff's software to enable him (the defendant) to demonstrate it to a potential licensee, and was said to have known of the proprietary nature of the software. The defendant was held to have misappropriated the plaintiff's trade secrets by disabling the copy protection and making unauthorized copies for his own use and that of his company.⁶⁸

⁶³ *Id.* at 1016.

⁶⁴ 224 USPQ 286 (Del. Ch. Ct. 1984).

⁶⁵ 224 USPQ 286, *citing E.I. duPont deNemours & Co., Inc. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), *cert. denied*, 400 U.S. 1024 (1971).

⁶⁶ *One Stop Deli, Inc., v. Franco's Inc.*, 1993 U.S. Dist. LEXIS 17295 (W.D. Va. 1993) (granting preliminary injunction against defendant's use of trade-secret information brought with them by defecting employees of plaintiff).

⁶⁷ *Bishop v. Wick*, 11 USPQ2d (BNA) 1360, 1989 Copr. L. Dec. ¶ 26467 (N.D. Ill. 1988).

⁶⁸ *Id.*, 11 USPQ2d at 1363-64.

[f] A Different Kind of Security Measure: Recognizing the Dangers of Hiring Competitors' Former Employees

A striking feature of the computer industry is the mobility of its professionals and skilled employees. A company hiring an experienced worker can be unpleasantly surprised when a former employer alleges misappropriation of trade secrets by the new hire.⁶⁹ According to trade-journal reports of several years ago, Goal Systems' first inkling that it had such a problem was when Computer Associates' attorneys showed up—accompanied by a U.S. marshal, who executed an ex parte seizure of Goal's program code under the Copyright Rules. (The case apparently settled quickly.)

PRACTICE POINTERS: Consider —

- assigning new hires who were formerly employed by competitors to projects unrelated to their former job duties;
- writing into employment agreements a clause requiring new employees to preserve all secrets of former employers;
- in appropriate circumstances, sending a new hire's former employer a letter advising that the new hire has come on board and that the company's policy is to prohibit disclosure or use of former employers' secrets. (This one is a judgment call—if a problem arises, such a letter could be a very nice exhibit at trial, or in a preliminary injunction motion, for the former employer ...)

§ 4.6 Events that Can Negate All Secrecy Efforts

Some events may kill almost all possibility of asserting a trade-secret claim, no matter what other security measures are taken.

[a] Unrestricted Sale of Product Embodying Trade Secret

In *Acuson v. Aloka*, the plaintiff's unrestricted sale of its ultrasonic imaging equipment was held to open the door to reverse engineering by a competitor, even if the sale was to the competitor itself who bought secretly through an intermediary and the reverse engineering entailed cutting internal padlocks on the product, because "state law may not prohibit the copying of objects in the public domain."⁷⁰

⁶⁹ See, e.g., *Computer Associates Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 716 (2nd Cir. 1992) (reversing preemption-based dismissal of trade-secret claim; defendant's new employee apparently incorporated plaintiff's source code into defendant's product).

⁷⁰ *Acuson Corp. v. Aloka Co.*, 257 Cal. Rptr. 368, 373-74, 209 Cal. App. 3d 425, 10 USPQ2d (BNA) 1814 (1989) (reversing preliminary injunction).

The *Acuson* court rejected the plaintiff's contention that its sales of ultrasonic equipment only to medical doctors meant that equipment was still a trade secret, responding that “[i]n the case of the Acuson 128, it is precisely physicians and hospitals who have an economic interest in the product and whose demand for the product encourages manufacturers to supply it. Disclosure to them is, for all relevant purposes, disclosure to the world.”⁷¹

Acuson argued unsuccessfully that its license agreement, which permitted purchasers to use the software which controlled the machine, did not allow use of the software to operate the machine to learn how the system works. The court responded that “[w]e do not think that the license is reasonably susceptible to this interpretation. . . . If the parties had wanted to limit use of the software to ‘medical diagnostic purposes’ they could easily have drafted language to achieve that end.”⁷²

The *Acuson* defendant's engineers broke two of the padlocks on the machine that made it more difficult to examine certain parts. The court saw no problem there, because “a buyer buys the locks along with the machine and is free to cut them. . . . [E]ven if Acuson's explanation of [the purpose of] the locks were correct, the locks still would not convert lawful reverse engineering into a tort. Unless a buyer has made an enforceable promise not to examine the machine, a lock protects trade secrets about as effectively as a sign reading ‘Please don't look inside.’”⁷³

In *Secure Services Technology*,⁷⁴ the plaintiff and defendant were competing manufacturers of FAX machines. The defendant's machine was experiencing interoperability problems, i.e., its “handshake” protocol was not quite compatible with the protocol used by the plaintiff's machine. Interoperability was a requirement for bidding on a U.S. Government contract, however. The defendant therefore borrowed one of the plaintiff's FAX machines from the government and “black-boxed” it (hooked it to a protocol analyzer and break-out box) to analyze its signals and thereby its protocol.⁷⁵ The court granted summary judgment that the plaintiff's protocol was not entitled to trade secret protection. The plaintiff's handshake protocol could be readily determined by reverse engineering the plaintiff's FAX machines, which had been sold to the government without restriction.⁷⁶ Indeed, the plaintiff had not complied with the applicable Federal Acquisition Regulations, which

⁷¹ *Id.*, 257 Cal. Rptr. at 375.

⁷² *Id.*, 257 Cal. Rptr. at 376.

⁷³ *Id.*

⁷⁴ *Secure Services Technology, Inc., v. Time and Space Processing, Inc.*, 722 F. Supp. 1354 (E.D. Va. 1989).

⁷⁵ *Id.* at 1358-59, 1361 n.17.

⁷⁶ *Id.* at 1359-60, citing *Acuson*, 257 Cal. Rptr. at 375-77.

required specific notification to the government of any proprietary rights which the plaintiff wished to assert.⁷⁷

In *Videotronics, Inc., v. Bend Electronics*,⁷⁸ video game programs which contained read only memory (ROM) chips were distributed without any safeguards against copying. In that case, the court denied trade secret protection, holding that where a computer program is made available, “its contents cannot be deemed a trade secret unless access to it is actually treated as a secret.”⁷⁹

[b] Publication, Patenting, or Other Dissemination of Trade-Secret Information

When “trade secret” material is published in a patent it is deemed disclosed and no longer entitled to trade secret protection.⁸⁰ In the United States, patent applications are maintained in secrecy during the pendency of the application,⁸¹ and their contents thus can be kept secret unless and until a patent actually issues. In most other countries, however, pending applications are published or otherwise made publicly accessible 18 months from the filing date or from the priority date (i.e. the filing date of the corresponding U.S. application), whichever is earlier.

Even if a “trade secret” was unknown in the trade secret owner's industry, disclosure in another's foreign patent or published article may terminate the trade-secret claim in the U.S.⁸² While the Seventh Circuit held to the contrary in an opinion concerning Minnesota trade secret law,⁸³ its reasoning was later expressly disapproved by the Minnesota Supreme Court.⁸⁴

⁷⁷ *Id.* at 1360.

⁷⁸ *Videotronics, Inc., v. Bend Electronics*, 564 F. Supp. 1471 (D. Nev. 1983).

⁷⁹ *Id.*, 564 F. Supp. at 1476.

⁸⁰ *Atlas Bradford Co. v. Tuboscope Co.*, 378 S.W.2d 147 (Tex. Civ. App.—Waco 1964, no writ); *Keystone Plastics, Inc. v. C & P Plastics, Inc.*, 340 F. Supp. 55 (S.D. Fla. 1972), *aff'd*, 506 F.2d 960 (5th Cir. 1975).

⁸¹ See 35 U.S.C. § 122.

⁸² See *Carson Products Co. v. Califano*, 594 F.2d 453, 462-63 (5th Cir. 1979).

⁸³ *Goldberg v. Medtronic, Inc.*, 686 F.2d 1219, 1223-29 (7th Cir. 1982).

⁸⁴ *Electro-Craft Corp. v. Controlled Motion, Inc.*, 332 N.W.2d 890, 220 USPQ 811, 816 n.5 (Minn. 1983).

Even informal distribution of trade secret information can destroy secrecy; patenting or formal publication is not necessary.⁸⁵

Publication of a trade secret may not save a defendant who misappropriated the trade secret prior to the publication.⁸⁶

§ 4.7 “Misappropriation” of the Trade Secret

A trade-secret plaintiff must also show that the defendant “misappropriated” the secret. Misappropriation generally takes one of two forms: use or disclosure in violation of an obligation of confidence, or acquisition of the information through improper means.

[a] Use or Disclosure in Breach of Obligation of Confidence

Use or disclosure of trade-secret information in breach of an obligation of confidence constitutes misappropriation of the secret. An obligation of confidence might arise:

- by contract (express or implied), e.g., a nondisclosure agreement (“NDA”) with the plaintiff;⁸⁷ or

⁸⁵ *E.g., Webster Eng’g & Mfg. Co. v. Francis*, 1993 U.S. Dist. LEXIS 14346 (D. Kan. 1993) (granting defense motion for partial summary judgment; noting that engineering drawings were routinely loaned to customers and sales representatives, sometimes with stamped confidentiality statement but often not); *Nat'l Risk Mgmt., Inc. v. Bramwell*, 819 F. Supp. 417, 426, (E.D. Pa. 1993) (denying plaintiff's request for injunctive relief; distribution at trade shows and to prospective customers of booklets containing the alleged secret information destroyed secrecy).

⁸⁶ *Garth v. Staktek Corp.*, 876 S.W.2d 545 (Tex. App.—Austin 1994, writ dism'd w.o.j.) (affirming post-publication injunction; noting that, prior to publication of international patent application disclosing trade-secret technology, defendant had probably used trade-secret information to develop competing product).

⁸⁷ See *supra* note 51 & accompanying text (confidentiality clause in Model Software License Provisions).

- by operation of law independent of a written agreement,⁸⁸ e.g., in an employment relationship,⁸⁹ a joint venture,⁹⁰ or other fiduciary-type relationship with the plaintiff.

[b] Acquisition by Improper Means

Another form of trade-secret misappropriation is improper acquisition of the secret, e.g., by espionage, theft, or other means deemed by the court to have been inappropriate—something that is likely to be subject to considerable variation from case to case (i.e., from court to court).

In the *Acuson* case, for example, a California appeals court reversed a preliminary injunction against an alleged trade secret misappropriator that had secretly purchased a competitor's ultrasonic imaging machine through an intermediary (concealing the fact that it was the true purchaser) and reverse engineered the machine. The court rejected the plaintiff's notion that such conduct constituted misappropriation: “[T]rade secret law does not create an open-ended cause of action for every arguable breach of commercial ethics. Only when an ethical breach results in a compromise of actual trade secrets does that body of law have something to say.”⁹¹

On the other hand, in its well-known *Christopher* case, the Fifth Circuit held that aerial reconnaissance over a partially-built chemical processing plant did indeed constitute misappropriation.⁹² Similarly, in *Telerate Systems, Inc. v. Caro*, the plaintiff offered on-line financial information to subscribers through the use of rented proprietary terminals. The defendant apparently hooked up a line monitor to reverse engineer the terminals' communications protocol, in violation of a subscriber agreement, and marketed software that allowed the plaintiff's subscribers to use an ordinary

⁸⁸ A written agreement is usually easier to litigate than an alleged independent obligation of confidence, of course.

⁸⁹ *See supra* note 52 (citing cases).

⁹⁰ *See Webster Eng'g & Mfg. Co. v. Francis*, 1993 U.S. Dist. LEXIS 14346 (D. Kan. 1993) (granting motion by defendants for partial summary judgment; while plaintiff and defendants apparently had been joint venturers, plaintiff had failed to show that information developed during the venture was a trade secret; existence and occasional use of confidentiality stamp on engineering drawings that were routinely loaned to customers and sales representatives was not enough to establish trade-secret status), *citing Electro-Craft Corp. v. Controlled Motion, Inc.*, 332 N.W.2d. 890, 902-03 (Minn. 1983).

⁹¹ *Acuson Corp. v. Aloka Co.*, 257 Cal. Rptr. 368, 373-74, 209 Cal. App. 3d 425, 10 USPQ2d (BNA) 1814 (1989) (reversing preliminary injunction).

⁹² *E.I. duPont deNemours & Co., Inc. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970) (affirming judgment against pilots who flew “aerial reconnaissance” mission over plaintiff's chemical plant while it was under construction, apparently on behalf of a competitor of plaintiff), *cert. denied*, 400 U.S. 1024 (1971).

computer and a modem instead of the plaintiff's proprietary terminal. The plaintiff succeeded in preliminarily enjoining the defendant, in part on trade secret grounds, because of improper reverse engineering.⁹³

[c] The "Inevitable Disclosure" Doctrine

In recent years, trade-secret plaintiffs have attempted to use the "inevitable disclosure" doctrine to prevent a departing employee from going to work for a competitor. Courts are sometimes sympathetic to such attempts, "particularly where the movant competes directly with the prospective employer and the transient employee possesses highly confidential or technical knowledge concerning manufacturing processes, marketing strategies, or the like." *EarthWeb, Inc. v. Schlack*, 71 F. Supp.2d 299 (S.D.N.Y. 1999) (denying motion for preliminary injunction) (citing cases). *[The following discussion is adapted, in many places essentially verbatim, from the opinion in EarthWeb, 71 F. Supp. 2d at 309-13.]*

For example, in *PepsiCo, Inc. v. Redmond*, 54 F.3d 1262 (7th Cir. 1995), the Seventh Circuit analogized the former employer's predicament to that of "a coach, one of whose players has left, playbook in hand, to join the opposing team before the big game." *PepsiCo*, 54 F.3d at 1270. Similarly, in *Lumex, Inc. v. Highsmith*, 919 F. Supp. 624 (E.D.N.Y.1996), the district court found a risk of inevitable disclosure based on, *inter alia*, the employee's access to highly sensitive information concerning manufacturing costs, pricing structure and new products, plus the fact that the industry in question was a " 'copy cat' or cloning industry." *Lumex*, 919 F. Supp. at 629. *See also International Paper Company v. Suwyn*, 966 F. Supp. 246, 258-59 (S.D.N.Y. 1997); *Business Intelligence Services, Inc. v. Hudson*, 580 F. Supp. 1068, 1072 (S.D.N.Y. 1984); *Continental Group, Inc. v. Kinsley*, 422 F.Supp. 838, 844-45 (D. Conn. 1976); *DoubleClick, Inc. v. Henderson*, 1997 WL 731413, *5 (N.Y. Sup. 1997); *accord Delphine Software Intern. v. Electronic Arts, Inc.*, No. 99 Civ. 4454(AGS), 1999 WL 627413, *3 (S.D.N.Y. Aug.18, 1999) ("It is true that the case law suggests that a person in possession of trade secrets, when working on a similar project, may 'inevitably disclose' the proprietary information and techniques of which he is in possession.").

The more recent cases citing the inevitable-disclosure doctrine are notable because they have enjoined employees from working for competitors in the absence of an express non-compete agreement. *PepsiCo* is a leading example. In that case the employee, Redmond, signed a confidentiality agreement at the outset of his employment, but he did not sign a non-compete agreement. Redmond worked within the highly competitive sports-drink industry, and he eventually became a general manager for a business unit that had annual revenues of over \$500 million per year and accounted for twenty percent of *PepsiCo*'s profit for all of the United States.

⁹³ *Telerate Systems, Inc. v. Caro*, 689 F. Supp. 221, 232 (S.D.N.Y. 1988).

See PepsiCo, 54 F.3d at 1264. Redmond's position made him privy to information such as PepsiCo's national and regional marketing strategies for the upcoming year. *Id.* at 1265-66. He was recruited for a similar, high level position with Quaker Oats, a direct competitor of PepsiCo in the sports drink industry. Under these circumstances, the court effectively converted Redmond's confidentiality agreement into a non-compete agreement by enjoining him from working for a direct competitor of PepsiCo for a sixth month period. (The Seventh Circuit also relied on an Illinois statute, the Illinois Trade Secrets Act, which provides that a court may enjoin the "actual or threatened misappropriation" of a trade secret.)

In *Doubleclick*, the defendants were two senior executives for an Internet advertising company who were caught misappropriating trade secrets as they surreptitiously plotted to form their own company to compete directly with their former employer. Both defendants had signed confidentiality agreements and while one of them had also signed a non-compete agreement, although its applicability was disputed. Based on the evidence of actual misappropriation, which was "bolstered by ... a high probability of 'inevitable disclosure' of trade secrets", the court enjoined the defendants from launching their company, or accepting employment with any competing company, for a period of six months. *Doubleclick*, 1997 WL 731413, at *5-6.

Doubleclick appears to represent a high water mark for the inevitable disclosure doctrine in New York. Its holding, however, apparently rests heavily on evidence of the defendants' overt theft of trade secrets and breaches of fiduciary duty. *See Doubleclick*, 1997 WL 731413, at *7. Such misconduct has long been recognized as an appropriate ground for enjoining the disclosure of trade secrets, irrespective of any contract between the parties. *See, e.g., ABKCO Music, Inc. v. Harrisongs Music, Ltd.*, 722 F.2d 988, 994 (2d Cir. 1983); *Inflight Newspapers, Inc. v. Magazines In-Flight, LLC*, 990 F.Supp. 119, 137 (E.D.N.Y. 1997) ("[A]n employee's use of an employer's trade secrets or confidential customer information can be enjoined even in the absence of a restrictive covenant when such conduct violates a fiduciary duty owed by the former employee to his former employer.") (*quoting Churchill Communications Corp. v. Demyanovich*, 668 F. Supp. 207, 211 (S.D.N.Y. 1987); *Webcraft Technologies, Inc. v. McCaw*, 674 F. Supp. 1039, 1047-48 (S.D.N.Y. 1987); *Byrne v. Barrett*, 268 N.Y. 199, 206-07, 197 N.E. 217, 218-19 (1935); *Advance Biofactures Corp. v. Greenberg*, 103 A.D.2d 834, 478 N.Y.S.2d 344 (2d Dep't 1984); *Hecht Foods, Inc. v. Sherman*, 43 A.D.2d 850, 351 N.Y.S.2d 711 (2d Dep't 1974)).

The *EarthWeb* court observed that in cases that do not involve the actual theft of trade secrets, the inevitable-disclosure doctrine in essence binds a former employee to an implied-in-fact restrictive covenant based on a finding of inevitable disclosure. The court held that "[t]his runs counter to New York's strong public policy against such agreements and circumvents the strict judicial scrutiny they have traditionally required. Indeed, in post-employment disputes that do not involve trade secrets or tortious conduct on

the part of the employee, restrictive covenants may not be implied. See *American Federal Group, Ltd. v. Rothenberg*, 136 F.3d 897, 908-09 (2d Cir.1998); *American Broadcasting Companies v. Wolf*, 52 N.Y.2d 394, 406, 438 N.Y.S.2d 482, 488, 420 N.E.2d 363 (1981).” *EarthWeb*, 71 F. Supp. 2d at 309-10.

The *EarthWeb* court noted that in its purest form, the inevitable disclosure doctrine “treads an exceedingly narrow path through judicially disfavored territory.” The court held that “[a]bsent evidence of actual misappropriation by an employee, the doctrine should be applied in only the rarest of cases.” *Id.* at 310. The court held that the factors to consider in weighing the appropriateness of granting injunctive relief are whether:

- (1) the employers in question are direct competitors providing the same or very similar products or services;
- (2) the employee's new position is nearly identical to his old one, such that he could not reasonably be expected to fulfill his new job responsibilities without utilizing the trade secrets of his former employer; and
- (3) the trade secrets at issue are highly valuable to both employers.

Other case-specific factors such as the nature of the industry and trade secrets should be considered as well. *Id.* at 310.

The court remarked that the application of the inevitable-disclosure doctrine is fraught with hazards. Among these risks is the imperceptible shift in bargaining power that necessarily occurs upon the commencement of an employment relationship marked by the execution of a confidentiality agreement. When that relationship eventually ends, the parties' confidentiality agreement may be wielded as a restrictive covenant, depending on how the employer views the new job its former employee has accepted. This can be a powerful weapon in the hands of an employer; the risk of litigation alone could have a chilling effect on the employee. The court opined that such constraints should be the product of open negotiation.

The *EarthWeb* court pointed out that another drawback to the inevitable-disclosure doctrine is that courts are left without a frame of reference because there is no express non-compete agreement to test for reasonableness. Instead, courts must grapple with a decidedly more nebulous standard of “inevitability.” The absence of specific guideposts staked-out in a writing will only spawn such litigation, especially as the Internet becomes a primary medium for ideas and commerce.

The court “decline[d] to re-write the parties' employment agreement under the rubric of inevitable disclosure and thereby permit *EarthWeb* to broaden the sweep of its restrictive covenant.” It held that *EarthWeb*'s entitlement to a preliminary injunction enjoining Schlack's future employment must be found to rest, if at all, on the restrictive covenant it

drafted, and not on a confidentiality provision conflated with the theory of inevitable disclosure.” 79 F. Supp.2d at 311-12.

The *EarthWeb* court then skewered the noncompetition clause in suit because it was too long in duration. “[T]his Court finds that the one-year duration of EarthWeb’s restrictive covenant is too long given the dynamic nature of this industry, its lack of geographical borders, and Schlack’s former cutting-edge position with EarthWeb where his success depended on keeping abreast of daily changes in content on the Internet.” 79 F. Supp.2d at 313. The court noted that it had the discretion to “blue-pencil” the clause to make it shorter in duration and hence enforceable, but it declined to do so because it found that “the employment agreement as a whole overreaches.” *Id.* (citations omitted).

§ 4.8 Summary of Potential Trade-Secret Remedies

A trade-secret plaintiff who prevails on the liability question is normally entitled to injunctive relief such as a permanent injunction. One variation on that remedy is a limited “lead time” injunction to preserve the plaintiff’s head start in the marketplace.⁹⁴

If traditional standards are met, a preliminary injunction might be granted because a threatened loss of a trade secret may constitute irreparable harm: “A trade secret once lost is, of course, lost forever.”⁹⁵ Furthermore, it has been held that “the potential loss of an industry leader’s present market and loss of the advantage of being the pioneer in [a] field and [a] market leader, may constitute irreparable harm.”⁹⁶ In some jurisdictions the

⁹⁴ See *Integrated Cash Management Services, Inc., v. Digital Transactions, Inc.*, 732 F. Supp. 370, 378, 13 USPQ2d (BNA) 1397 (S.D.N.Y. 1989) (granting six-month “lead time” injunction against former employees who had gone into competition with plaintiff), *aff’d*, 920 F.2d 171, 175, 17 USPQ2d (BNA) 1054 (2d Cir. 1990) (agreeing in dicta that lead-time injunctions were appropriate type of remedy but declining to reach that question on grounds of mootness because by its own terms injunction had expired).

⁹⁵ *FMC Corp. v. Taiwan Tainan Giant Indus. Co.*, 730 F.2d 61, 63 (2d Cir. 1984) (per curiam), quoted in *Anacomp, Inc. v. Shell Knob Services, Inc.*, 1994 U.S. Dist. LEXIS 223 (S.D.N.Y. Jan. 10, 1994) (granting preliminary injunction against defendants’ use of plaintiff’s trade-secret information contained in manuals and diagnostic software for computer output microfilm (COM) recorders).

⁹⁶ *Computer Assoc. International, Inc. v. Bryan*, 784 F. Supp. 982, 986 (E.D.N.Y. 1992) (granting preliminary injunction against former employee found to have misappropriated trade secrets in CA-ESTIMACS software for estimating resources required for software development projects), quoted in *Anacomp*, 1994 U.S. Dist. LEXIS 223 (S.D.N.Y. Jan. 10, 1994) (granting preliminary injunction against defendants’ use of plaintiff’s trade-secret information contained in

injunction may continue even after the trade secret has been publicly disclosed if the improper conduct took place before disclosure.⁹⁷

The plaintiff likely will also be entitled to damages. While “[t]he proper measure of damages for misappropriation of trade secrets case can be elusive,” most courts now compute a reasonable royalty on the defendant’s sales (not profits), attempting to determine “what the parties would have agreed to as a fair price for licensing the defendant to put the trade secret to the use the defendant intended at the time the misappropriation took place.”⁹⁸

Criminal penalties⁹⁹ and perhaps RICO liability¹⁰⁰ can also await a party found to have misappropriated another’s trade secret.

§ 4.9 Federal Preemption of Trade-Secret Claims: Focusing on the “Extra Elements” Test

Some trade-secret claims may be preempted by federal copyright law. The analytical approach to the preemption question is fairly well settled.¹⁰¹ Section 301(a) of the Copyright Act provides that:

(a) On and after January 1, 1978, all legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright as specified by Section 106 in works

(..continued)

manuals and diagnostic software for computer output microfilm (COM) recorders) *supra*.

97 See note 86.

98 See, e.g., *Data General Corp. v. Grumman Sys. Support Corp.*, 825 F. Supp. 340, 345-46, (D. Mass. 1993) (denying motion for JNOV after \$27.4 million verdict against defendant for misappropriation of trade secrets, which trial judge increased by \$9 million because of willful misappropriation), *vacated and remanded for redetermination of possibly-duplicative damage award*, 36 F.3d 1147 (1st Cir. 1994).

99 See *Schalk v. Texas*, 823 S.W.2d 633, 634, 21 USPQ2d (BNA) 1838 (Tex. Crim. App. 1991) (affirming criminal conviction and two-year prison sentence of former Texas Instruments scientists for theft of trade secrets by misappropriating TI speech-recognition software).

100 See *One Stop Deli, Inc., v. Franco’s Inc.*, 1993 U.S. Dist. LEXIS 17295 (W.D. Va. 1993) (granting preliminary injunction against defendant’s use of trade-secret information brought with them by defecting employees of plaintiff; noting that elements of RICO claim were satisfied).

101 The text of this section is adapted from the Tenth Circuit’s succinct analysis in *Gates Rubber Co. v. Bando Chemical Indus. Ltd.*, 9 F.3d 823, 846-48, 28 USPQ2d (BNA) 1503 (10th Cir. 1993) (affirming in pertinent part judgment of trade-secret misappropriation against former employee of manufacturer of rubber belts for industrial use).

of authorship that are fixed in a tangible medium of expression and come within the subject matter of copyright as specified by sections 102 and 103, whether created before or after that date and whether published or unpublished, are governed exclusively by this title. Thereafter, no person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State.¹⁰²

However, 301(a) is qualified by 301(b), which provides in relevant part that:

- (b) Nothing in this title annuls or limits any rights or remedies under the common law or statutes of any State with respect to:
 - (1) subject matter that does not come within the subject matter of copyright as specified by sections 102 and 103, including works of authorship not fixed in any tangible medium of expression; or
 - (2) any cause of action arising from undertakings commenced before January 1, 1978;
 - (3) activities violating legal or equitable rights that are not equivalent to any of the exclusive rights within the general scope of copyright as specified by section 106¹⁰³

Thus, a state common law or statutory claim is preempted by Section 301 if: (1) the work is within the scope of the subject matter of copyright as specified in 17 U.S.C. §§ 102 and 103; and (2) the rights granted under state law are equivalent to any exclusive rights within the scope of federal copyright as set out in 17 U.S.C. § 106.¹⁰⁴

In software-related cases it is usually undisputed that the computer programs at issue fall within the “subject matter of copyright.” The question usually is whether state-law trade secret rights are equivalent to any of the exclusive rights granted by the Copyright Act.

Section 106 of the Copyright Act grants to the copyright owner the exclusive rights to: (I) reproduce the copyrighted work; (ii) prepare derivative works; (iii) distribute copies of the work; (iv) perform the work publicly; and (v) display the work publicly.¹⁰⁵ To determine whether a misappropriation

¹⁰² 17 U.S.C. § 301(a).

¹⁰³ 17 U.S.C. § 301(b).

¹⁰⁴ *Ehat v. Tanner*, 780 F.2d 876, 878 (10th Cir. 1985), *cert. denied*, 479 U.S. 820, 107 S. Ct. 86 (1986), *citing Harper & Row Publishers, Inc. v. Nation Enterprises*, 723 F.2d 195, 199-200 (2d Cir. 1983), *rev'd on other grounds*, 471 U.S. 539, 105 S. Ct. 2218 (1985).

¹⁰⁵ 17 U.S.C. 106.

claim asserts rights equivalent to those delineated in section 106, courts refer to the elements of the state law cause of action. Federal law will preempt “a state-created right if that right may be abridged by an act which, *in and of itself*, would infringe one of the exclusive rights” established by federal law.¹⁰⁶ However, if a state cause of action requires an extra element, beyond mere copying, preparation of derivative works, performance, distribution or display, then the state cause of action is qualitatively different from, and not subsumed within, a copyright infringement claim and federal law will not preempt the state action¹⁰⁷.

To prove misappropriation of a trade secret, a plaintiff typically must show: (i) that he or she possessed a valid trade secret, (ii) that the trade secret was disclosed or used without consent, and (iii) that the defendant knew, or should have known, that the trade secret was acquired by improper means. The breach of a duty of trust or confidence “is the gravamen of such trade secret claims and supplies the ‘extra element’ that qualitatively distinguishes such trade secret causes of action from claims for copyright infringement that are based solely on copying.”¹⁰⁸ Because the plaintiff must prove a breach of trust or confidence—proof that is not required under the Copyright Act—such state law claims are not preempted by federal law.

If the misappropriation claim is proved by showing some wrongful activity, e.g., theft or espionage, that too can constitute the extra element needed to save the claim from preemption.¹⁰⁹

The *Gates Rubber* defendants argued in the Tenth Circuit that the court’s own prior opinion in *Ehat v. Tanner*¹¹⁰ compelled a holding that the plaintiff’s claim was preempted. The court disagreed, noting that the cause of action in *Ehat* sought damages for the reproduction and distribution of copyrighted notes from individuals who had no part in the misappropriation of the materials. Moreover, it was not necessary under the common law claims asserted in *Ehat* that the plaintiff show a breach of trust or confidence.

¹⁰⁶ *G.S. Rasmussen & Assoc. v. Kalitta Flying Service, Inc.*, 958 F.2d 896, 904 (9th Cir. 1992), *cert. denied*, 113 S. Ct. 2927 (1993) (emphasis supplied).

¹⁰⁷ See, e.g., *Computer Associates Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 716 (2nd Cir. 1992) (holding that plaintiff’s trade-secret claim was not preempted and reversing dismissal of claim).

¹⁰⁸ *Gates Rubber Co.*, 9 F.3d at 847-48, citing *Trandes Corp. v. Guy F. Atkinson Co.*, 996 F.2d 655, 660 (4th Cir. 1993); *S.O.S., Inc. v. Payday, Inc.*, 886 F.2d 1081, 1090 n.13 (9th Cir. 1989); *Computer Associates Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 717 (2nd Cir. 1992); RESTATEMENT (FIRST) OF TORTS § 757 cmt. a (1939).

¹⁰⁹ *Data General v. Grumann*, 36 F.3d at 1163-65 (affirming trial-court holding that trade-secret claim was not preempted).

¹¹⁰ *Ehat v. Tanner*, 780 F.2d 876 (10th Cir. 1985), *cert. denied*, 479 U.S. 820 (1986).

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CHAPTER 5

Trademark Law and the Internet

D. C. Toedt III

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§ 5.1 Trademark Basics

At the moment, trademark law is the one intellectual property law issue that may be most likely to ensnare companies seeking to establish an Internet presence. Problems can arise, and a company can find itself embroiled in a controversy, even without the company's knowledge that it is doing anything that might be controversial. For example, in July 1998, Microsoft reportedly paid \$5 million to settle a case involving its right to use the trademark "Internet Explorer." According to news accounts, a software developer sued Microsoft for trademark infringement, claiming prior use of the mark for another Internet browser. Microsoft attempted to defend on grounds that the mark was generic, but the court rejected the defense. Microsoft ended the case by purchasing the pending application to register the mark. See <http://www.news.com/News/Item/0,4,23797,00.html>.

[a] What is a Trademark? A Service Mark?

Generally speaking, a **trademark** can be any word, phrase, slogan, graphic image (two- or three-dimensional), musical phrase (e.g., a tune), or other symbol used in the offer and sale of **goods**.

Examples of trademarks:

- the words "Coca-Cola" and "Coke"
- the script version of the words "Coca-Cola"
- the red-ball Coke graphic
- the wasp-waist Coca-Cola bottle
- various slogans such as "Things Go Better with Coke," "It's the Real Thing," and "Just for the Taste of It"
- the various tunes played in Coke commercials

A **service mark** is a symbol that is used in offering or selling services; the applicable law is essentially the same as for trademarks. (For convenience, the term "trademark" is used in this document to refer to both trademark and service marks.)

[b] What Kind of Marks are Protectable?

Not just any symbol can be protected as a trademark. A trademark must be capable of symbolizing, in the minds of the public, the goods or services that are offered, sponsored, or endorsed by the trademark owner, *as distinct from* the goods or services offered by others.

Categories of protectable marks include:

- coined or fanciful marks that have no other meaning (in any language). Some well-known examples are Xerox, Kodak, and Exxon;
- arbitrary marks that have a prior meaning but no association with the goods or services – e.g., Amazon for on-line retail services;
- suggestive marks that hint at some characteristic of the goods or services – e.g., Sprint for telecommunications services;
- descriptive marks that have acquired a “secondary meaning” (and thus are not “merely descriptive”) – e.g., Intensive Care Lotion

A “generic” term cannot function as a trademark, because by definition it is the common descriptive name of the goods or services in question, and therefore it cannot symbolize the goods or services offered, sponsored, or endorsed by any particular vendor. *Example:* In the United States, “aspirin” was formerly a trademark of the Bayer company, but decades ago a U.S. court held that it had become a generic term and therefore was no longer protectable as a trademark. (Apparently “aspirin” still has trademark status in Canada.)

[c] Who Has Priority of Rights in Trademarks?

Priority of trademark rights in the U.S. is based on use of the mark (although a federal registration application can be filed to establish a constructive priority on the basis of bona fide intent to use the mark). *See* 15 U.S.C. § 1051. Under federal law, a trademark infringement suit requires the plaintiff to prove that it has priority and that the defendant’s offering or sale of goods or services, using the offending domain name, is likely to cause confusion as to the origin, sponsorship, or endorsement of the goods or services. *See* 15 U.S.C. § 1114.

[d] Infringement of Others’ Trademark Rights

Under U.S. law, infringement of trademark rights consists of using the mark where a likelihood of confusion exists with a mark used by someone having priority. In most U.S. jurisdictions, the factors relevant to a determination of whether there is a likelihood of confusion are generally as follows:

- a) the strength or distinctiveness of the plaintiff’s mark;
- b) the similarity of the two marks;
- c) the similarity of the goods or services identified by the marks in question;

- d) the similarity of the facilities the two parties use in their businesses;
- e) the similarity of the advertising used by the two parties;
- f) if the goods or services of the two parties are sold in different markets, the likelihood that the plaintiff will bridge the gap between those markets (sometimes referred to as the plaintiff's "natural zone of expansion");
- g) the quality of the defendant's product;
- h) the sophistication of the purchasers and the amount of resources used in making a purchase decision — a \$50,000 computer system will be purchased with more attention, by purchasers with greater training, than a \$5 knick-knack;
- i) whether the defendant acted in good faith — because intent to copy another's trademark is often taken as circumstantial evidence that confusion is likely;
- j) any instances of actual confusion — because actual confusion, while possibly arising from non-trademark factors, can be compelling evidence that confusion is indeed likely.

See, e.g., Cardservice Int'l, Inc. v. McGee, 950 F. Supp. 737, 740 (E.D. Va. 1997) (granting permanent injunction against pro se defendant's use of cardservice.com as domain name for company providing credit and debit card processing services in competition with established company of that name, and ordering defendant to pay \$59,691.25 in attorneys' fees and expenses for bad-faith litigation); *see also Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961) (oft-cited list of factors bearing on likelihood of confusion). Not all of these factors are relevant to any given set of facts, nor must all factors be in the registrant's favor for a finding of confusion. *Cardservice*, 950 F. Supp. at 740.

Upon proof of infringement of a federally-registered trademark, the registrant is entitled to recover the defendant's profits arising from infringement (and, as in copyright law, need prove only the defendant's gross revenues), plus any damages sustained by the registrant. 15 U.S.C. § 1117(a). The court has the discretion to award up to treble the actual damages; if the court determines that an award based on profits alone is either inadequate or excessive, "the court may in its discretion enter judgment for such sum as the court shall find to be just . . ." *Id.*

§ 5.2 Domain-Name Registration

[a] Registration Mechanics

Registering a domain name is one of the first steps a business usually takes to establish an Internet presence. Domain names are registered through a process that is overseen by the Internet Corporation for Assigned Names and Numbers (“ICANN”), but with registrations actually processed by one of a variety of registrars (see <http://www.icann.org/registrar/accredited-list.html> for a list). One of the largest registrars for the United States is Network Solutions, Inc. (NSI).

[b] Trademark Searches in Selecting a Domain Name

A trademark search by a professional search firm, possibly coupled with an opinion from trademark counsel about the availability of a proposed domain name, is often advisable before beginning widespread use of the name. One of the best-known search firms is Thomson & Thomson (<http://www.thomson-thomson.com>).

A favorable opinion of counsel can provide at least some comfort that a company’s proposed investment in a domain name would not be wasted. In and of itself, however, an opinion will not shield the company from liability if it turns out that someone else’s trademark rights are infringed or diluted by the domain name. (On the other hand, a competent favorable opinion can demonstrate the company’s good faith in adopting the domain name and thus reduce the chance that infringement would be found to be willful, thereby reducing the risk of an award of enhanced damages and/or attorney’s fees.)

§ 5.3 The Problem of “Cybersquatting”

[a] Some Examples

Domain names were formerly registered on a first-come first-served basis. That led to problems when owners of brand names in the real world (sometimes referred to as “meatspace”) discovered that others had registered domain names identical to their trademarks. For example:

- A so-called “cyber-squatter” registered approximately 240 domain names and then offered to sell the domain names to companies that he thought might be interested. The marks in question included, e.g., *britishairways.com*, *deltaairlines.com*, *eddiebauer.com*, *crateandbarrel.com*, *neiman-marcus.com*, *northwestairlines.com*, *ramada-inn.com*, *unionpacific.com*, and *ussteel.com*. See *Intermatic Inc. v. Toeppen*, 947 F. Supp. 1227, 1230, 1233 (N.D. Ill. 1996) (adopting magistrate judge’s recommendation of summary judgment and permanent injunction in favor of plaintiff; holding that “cyber-squatter” defendant’s registration of

federally-registered trademark as domain name violated federal and state anti-dilution statutes); *see also Panavision Int'l, L.P. v. Toeppen*, 141 F.3d 1316, 1324-26 (9th Cir. 1997) (affirming summary judgment that defendant's registration of plaintiff's trademark as Internet domain name violated federal and state anti-dilution statutes).

- Injunctions were obtained in the cases of *adultsrus.com* and *candyland.com* for sexually-explicit Web sites. *See Toys "R" Us, Inc. v. Akkaoui*, 1996 WL 772709, 40 USPQ2d 1836 (N.D. Cal. 1996) (granting preliminary injunction, on anti-dilution grounds); *Hasbro, Inc. v. Internet Entertainment Group, Ltd.*, 1996 WL 84853, 40 USPQ2d (BNA) 1479 (W.D. Wash. 1996) (granting preliminary injunction requiring defendant to remove all content from sexually explicit Internet site *candyland.com*).
- An injunction was also obtained in the case of *plannedparent-hood.com* for a Catholic-oriented site featuring pro-life messages, *see Planned Parenthood Federation of America, Inc. v. Bucci*, No. 97 Civ. 0629 (KMW) (S.D.N.Y. Mar. 19, 1997) (granting preliminary injunction, on both trademark-infringement and anti-dilution grounds).
- In the early days of the Web, McDonald's restaurants were informed by a writer for WIRED magazine that, to prove it could be done, he had registered "mcdonalds.com" as a domain name, and established an email address "ronald@mcdonalds.com." See Joshua Quittner, *Billions Registered: Right Now, There are No Rules to Keep You From owning a Bitchin' Corporate Name As Your own Internet Address*, Wired, Oct. 1994 at 54.

[b] Action Under the Anticybersquatting Law

A trademark owner that finds itself beset by a cybersquatter can now sue the cybersquatter under the "Anticybersquatting Consumer Protection Act," enacted by Congress in 1999 to add a new subsection (d) to 15 USC 1125:

(d)(1)(A) A person shall be liable in a civil action by the owner of a mark, including a personal name which is protected as a mark under this section, if, without regard to the goods or services of the parties, that person--

(i) has a bad faith intent to profit from that mark, including a personal name which is protected as a mark under this section; and

(ii) registers, traffics in, or uses a domain name that--

(I) in the case of a mark that is distinctive at the time of registration of the domain name, is identical or confusingly similar to that mark; * * *

15 U.S.C. § 1125(d). The new legislation also provides for an award against cybersquatters of up to \$100,000 in statutory damages as well as attorneys' fees.

If the trademark owner cannot find, or obtain personal jurisdiction over, the cybersquatter, then the owner can bring an “in rem” action against the registrar of the offending domain name to cancel the domain registration. *See* 15 U.S.C. § 1125(d)(2).

[c] Action Under ICANN's Dispute-Resolution Policy

ICANN promulgated a dispute-resolution policy under which most types of trademark-based domain-name disputes must be resolved by agreement, court action, or arbitration before a registrar will cancel, suspend, or transfer a domain name. However, a trademark owner who wishes to take action against a cybersquatter can initiate expedited administrative proceedings by filing a complaint with an approved dispute-resolution service provider. *See* ICANN, Uniform Domain-Name Dispute-Resolution Policy, at www.icann.org/udrp/udrp.htm.

[d] Action Under the Federal Anti-Dilution Statute

Under a 1996 amendment to the federal trademark statute, the owner of a mark can also sue to enjoin use of a domain name that “dilutes” the distinctive quality of the trademark. *See Panavision Int'l, L.P. v. Toeppen*, 141 F.3d 1316, 1324-26 (9th Cir. 1997) (affirming summary judgment that defendant's registration of plaintiff's trademark as Internet domain name violated federal and state anti-dilution statutes); *Jews For Jesus v. Brodsky*, 993 F. Supp. 282, 46 USPQ2d 1652 (D.N.J. 1998) (granting motion for preliminary injunction); *Intermatic*, 947 F. Supp. at 1235-36 (denying plaintiff's motion for summary judgment that “cyber-squatter” had engaged in trademark infringement (although granting motion as to violation of anti-dilution statute); fact issues about likelihood of confusion precluded summary judgment). *Cf. Sega Enterprises Ltd. v. Sabella*, 1996 WL 780560 (N.D. Cal. 1996) (denying plaintiff's motion for summary judgment of trademark infringement because of fact issues as to whether plaintiff had adopted the mark, but granting summary judgment of violation of plaintiff's state-law trade name rights).

The 1996 amendment provides that, subject to the principles of equity, the owner of a famous mark is entitled to an injunction “against another person's commercial use in commerce of a mark or trade name, if [1] such use begins after the mark has become famous and [2] causes dilution of the distinctive quality of the mark.” 15 U.S.C. § 1125(c)(1). *[The text of this section is adapted from the opinion of the court in Akkaoui.]*

The first question is whether a mark is famous and distinctive. Under the statute, a court making this determination may consider factors such as, but not limited to:

- (A) the degree of inherent or acquired distinctiveness of the mark;

- (B) the duration and extent of use of the mark in connection with the goods or services with which the mark is used;
- (C) the duration and extent of advertising and publicity of the mark;
- (D) the geographical extent of the trading area in which the mark is used;
- (E) the channels of trade for the goods or services with which the mark is used;
- (F) the degree of recognition of the mark in the trading areas and channels of trade use by the marks' owner and the person against whom the injunction is sought;
- (G) the nature and extent of use of the same or similar marks by third parties; and
- (H) whether the mark was registered

Id.

The second question is whether the defendant's use of the mark results in "dilution." That is defined in the statute as "lessening of the capacity of a famous mark to identify and distinguish goods or services, regardless of the presence or absence of--(1) competition between the owner of the famous mark and other parties, or (2) likelihood of confusion, mistake, or deception." 15 U.S.C. § 1127. "In authorizing courts to enjoin dilution, Congress intended 'to protect famous marks from subsequent uses that blur the distinctiveness of the mark or tarnish or disparage it.'" H.R. Rep. No. 374, 104th Cong., 1st Sess. 3 (1995).

§ 5.4 Some Other Internet-Related Trademark Issues

[a] Use of Others' Marks in Metatags

In *Brookfield Communications, Inc. v. West Coast Entertainment Corp.*, 174 F.3d 1036 (9th Cir. 1999), West Coast had used "metatags" in its Web site that included the term "moviebuff." That meant that a Web surfer who searched for the term "moviebuff," hoping to find a link to Brookfield's database of that name, would find a link to West Coast's Web site. The Ninth Circuit reversed a district court's refusal to issue a preliminary injunction against such metatag use, holding that "initial interest confusion" would result in West Coast's getting an improper free ride on Brookfield's goodwill.

[b] Some Uses of Others' Marks May Be "Fair Use"

Some Web sites include references to others' trademarks; that can give rise to disputes with the owners of those marks. The federal Lanham Act provides what has been referred to as a "nominative fair use" defense to a charge of trademark infringement. The statute provides that it is a defense to a charge of trademark infringement "(4) That the use of the name, term, or device charged to be an infringement is a use, otherwise than as a mark [i.e., not purporting to be the defendant's trademark], of the [defendant's] individual name in his own business, or of a term or device which is descriptive of and used fairly and in good faith only to describe the goods or services of [the defendant], or their geographic origin. . . ." 15 U.S.C. § 1115(b)(4).

One appellate court explained that a commercial user of another's trademark is entitled to the nominative fair use defense if it meets three requirements:

First, the [plaintiff's] product or service in question must be one not readily identifiable without use of the trademark;

second, only so much of the mark or marks may be used as is reasonably necessary to identify the product or service; and

third, the user must do nothing that would, in conjunction with the mark, suggest sponsorship or endorsement by the trademark holder.

New Kids on the Block v. News America Pub., Inc., 971 F.2d 302, 308 (9th Cir. 1992) (footnotes omitted, paragraphing supplied), quoted in *Abdul-Jabbar v. General Motors Corp.*, 85 F.3d 407, 412 (9th Cir. 1996) (reversing dismissal of Kareem Abdul-Jabbar's name-and-likeness claim against GM for use of his former name Lew Alcindor in advertisement); see also, e.g., *Volkswagenwerk Aktiengesellschaft v. Church*, 411 F.2d 350, 352 (9th Cir. 1969) (not an infringing use for Volkswagen repair shop to use the name "Volkswagen" in sign advertising its business).

CHAPTER 6

Information Liability: Exposure of Information Providers to Tort Suits

D. C. Toedt III

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§ 6.1 Introduction

A question that is likely to arise with increasing frequency is the extent to which an on-line information provider can be liable for providing incorrect information. This question is of more than academic interest. Enormous quantities of data are available on-line through an exploding number of Web sites and other collections of information. In addition, computerized *expertise*, not just raw data, is gradually coming into more widespread use: expert-system type computer programs can help doctors to diagnose disease, lawyers to draft documents, and nonlawyers to draw up wills, to name just a few already-existing examples.

With the notable exception of the Jeppesen cases involving aircraft navigation charts (discussed below), information publishers generally have not been held liable when they do not clearly invite essentially complete reliance on the information they publish as a guide for action. Even instructional texts relating to subjects as potentially dangerous as health and nutrition have not given rise to liability (at least for publishers). Where only nonbodily injury is involved, even authors or assemblers of erroneous information have avoided liability. There seem to be two principal reasons for this:

1. Most courts appear to be reluctant to open the door to a potentially unlimited number of plaintiffs and claims, which might impose crushing liability on a publisher for a momentary lapse in care.
2. In addition, special consideration is given to disseminators of the ideas and information of other people, because they perform an essential function in society. The prospect of liability for erroneous information would force a disseminator to go to great expense to verify all the information it purveys, which could have a chilling effect on the broad dissemination favored by public policy. To similar effect, first-amendment concerns militate against liability.

This paper deals only with liability for defects in “*published*” *factual* information. As used here, the term “published” means that information is made available to a broad class of potential users.

The term does not encompass information furnished in response to a specific request for advice. Nor does the definition encompass information provided in the course of a special relationship (e.g., legal or medical advice about specific situations). Neither does the term .”published” encompass information furnished to induce the recipient to perform some act for the benefit of the furnisher (e.g., information in a securities prospectus).

Admittedly, distinguishing among these cases might sometimes be difficult. Nevertheless, the latter cases (which may involve privity concepts such as those seen in malpractice theories) are beyond the scope of this paper.

Similarly, this paper addresses only liability in connection with factual information. It does not deal with matters such as were presented in the *Soldier of Fortune* cases, for example.¹

§ 6.2 Review of Basic Liability Doctrines

[a] Strict Liability

One basis on which plaintiffs have sometimes sought to recover for injuries is that of strict liability for defective information — or for defective presentation of correct information. Section 402A of the Restatement of Torts provides that:

- (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if
 - (a) the seller is engaged in the business of selling such a product, and
 - (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
- (2) The rule stated in Subsection (1) applies although
 - (a) the seller has exercised all possible care in the preparation and sale of his product, and
 - (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.²

Courts have almost never held information providers liable on a strict-liability theory. Almost the only area in which an information provider has

¹ Compare *Eimann v. Soldier of Fortune Magazine, Inc.*, 880 F.2d 830 (5th Cir. 1989) (magazine that published advertisement which led to hiring of paid assassin was not liable under Texas law to victim's survivors) with *Rice v. Paladin Enterprises, Inc.*, 128 F.3d 233 (4th Cir. 1997) (reversing summary judgment; publisher of "how-to" book of murder-for-hire techniques was not shielded by First Amendment), reversing 940 F. Supp. 836, 848 (D. Md. 1996) (summarizing other *Soldier of Fortune* cases).

² RESTATEMENT (SECOND) OF TORTS § 402A, quoted in *Way v. Boy Scouts of America*, 856 S.W.2d 230, 238 n.2 (Tex. App.—Dallas 1993) (approving summary judgment dismissing wrongful-death claim against Boy Scouts for publishing firearms-safety supplement to *Boys' Life* magazine) (emphasis omitted).

been held strictly liable is that of aeronautical charts, in the *Jeppesen* cases discussed below.

[b] Negligence Standards

The other principal claim asserted in information-liability cases has been that of negligence. Section 311 of the Restatement provides that:

- (1) One who negligently gives false information to another is subject to liability for physical harm caused by action taken by the other in reasonable reliance upon such information, where such harm results
 - (a) to the other, or
 - (b) to such third persons as the actor should expect to be put in peril by the action taken.
- (2) Such negligence may consist of failure to exercise reasonable care
 - (a) in ascertaining the accuracy of the information, or
 - (b) in the manner in which it is communicated.³

A different flavor of misrepresentation is described in section 552 of the Restatement, which states:

- (1) One who, in the course of business, profession or employment, or in any other transaction in which he has a pecuniary interest, supplies false information for the guidance of others in their business transactions, is subject to liability for pecuniary loss caused to them by their justifiable reliance upon the information, if he fails to exercise reasonable care or competence in obtaining or communicating the information.
- (2) ... the liability stated in Subsection (1) is limited to loss suffered
 - (a) by the person or one of a limited group of persons for whose benefit and guidance he intends to supply the information or knows that the recipient intends to supply it, and

³ RESTATEMENT (SECOND) OF TORTS § 311, *quoted in Birmingham v. Fodor's Travel Publications, Inc.*, 73 Haw. 359, 367 n.2, 833 P.2d 70, 75 n.2 (1992), *discussed infra* Section § 6.5[d].

(b) through reliance upon it in a transaction that he intends the information to influence or knows that the recipient so intends or in a substantially similar transaction.⁴

Courts appear to have been almost equally reluctant to hold non-author information providers liable on negligence theories. Several courts have focused on the “duty” element of the negligence cause of action and determined that publishers who do not create the information in question owe no duty to users of the information.

§ 6.3 Strict Liability for Defective Information

All of the reported published-information cases where strict product liability was imposed in a final judgment have involved aeronautical charts produced and sold by Jeppesen & Co. In each of the Jeppesen cases, airplanes flew into the ground (or into mountains) during landing maneuvers, allegedly as a result of errors or omissions in Jeppesen approach charts.⁵

In each case the Jeppesen charts were held to be “products” for purposes of product-liability law.⁶ In each case, “defects” in the charts were expressly found to have been the proximate causes of airplane crashes.⁷

⁴ RESTATEMENT (SECOND) OF TORTS § 552, *quoted in Ginsburg v. Agora, Inc.*, 915 F. Supp. 733, 738 (D. Md. 1995) (granting defendants’ motion to dismiss claims against publisher of investment newsletter).

⁵ *Brocklesby v. United States*, 767 F.2d 1288, 1291-92 (9th Cir. 1985) (plane flew into mountain in Alaska allegedly as result of erroneous landing approach procedures promulgated by government but graphically depicted in charts by Jeppesen), *cert. denied sub nom. Jeppesen & Co. v. Brocklesby*, 106 S.Ct. 882 (1986); *Saloomey v. Jeppesen & Co.*, 707 F.2d 671, 672-73, 677-79 (2d Cir. 1983) (plane flew into ridge in West Virginia allegedly as result of relying on erroneous description of airport’s instrument-landing support capability); *Aetna Cas. & Sur. Co. v. Jeppesen & Co.*, 642 F.2d 339, 341-43 (2d Cir. 1981) (plane crashed while flying below minimum altitude during landing in Las Vegas, allegedly as result in part of misleading scale of graphic depiction on chart); *Fluor Corp. v. Jeppesen & Co.*, 170 Cal. App. 3d 468, 216 Cal. Rptr. 68, 70 (1985) (plane flew into uncharted hill in New York state).

⁶ *Brocklesby*, 767 F.2d at 1294-95; *Saloomey*, 707 F.2d at 676-77; *Aetna*, 642 F.2d at 342-43; *Fluor*, 216 Cal. Rptr. at 70-72.

⁷ *Brocklesby*, 767 F.2d at 1295-96; *Saloomey*, 707 F.2d at 676-77; *Aetna*, 642 F.2d at 342-43; *Fluor*, 216 Cal. Rptr. at 71-73.

[a] Aeronautical Navigation Chart Provider as Insurer

All but one of the Jeppesen cases were expressly grounded on the policy, under the product-liability law of the state in question, that product manufacturers are in essence insurers of consumers against injury arising from defects that in retrospect make the products unreasonably dangerous, whether or not the manufacturer was at fault in designing the product.⁸ The other case did not discuss the specific policy basis for product liability, but merely cited the governing state law.⁹

The Second Circuit's opinion applied a conventional product-liability doctrine: "By publishing and selling the charts, Jeppesen undertook a special responsibility, as seller, to insure *[sic]* that consumers will not be injured by the use of the charts; Jeppesen is entitled—and encouraged—to treat the burden of accidental injury as a cost of production to be covered by liability insurance."¹⁰

In three of the cases, the court in question apparently believed that Jeppesen could have taken steps that would have prevented the problem in the first place.¹¹

[b] Inappropriate Presentation of Navigational Information as Defect

One of the more interesting Jeppesen cases involved an unusual "defect" and a missed chance to argue a first-amendment issue (because the defendant failed to raise it in the trial court and therefore waived it). In that case, the Ninth Circuit found that a particular presentation of *correct* information in a Jeppesen chart was confusing; as a result, the chart was found to be defective and Jeppesen was held liable.

In the *Aetna* case, the court noted that each published Jeppesen chart had two graphic portrayals of the proper approach to the airport in question: A "plan" view of the approach path from above, and a "profile" view from the

⁸ *Brocklesby*, 767 F.2d at 1295-96 (California law); *Saloomey*, 707 F.2d at 676-77 (Colorado law); *Fluor*, 216 Cal. Rptr. at 71-73 (California law).

⁹ *Aetna*, 642 F.2d at 342-43 (Nevada law).

¹⁰ *Saloomey*, 707 F.2d at 676-77.

¹¹ *Brocklesby*, 767 F.2d at 1295-96 (Jeppesen could have detected error in FAA promulgated procedures and in the past had influenced FAA to change its procedures); *Saloomey*, 707 F.2d at 678 n.10 (chart in question was only edition of any Jeppesen chart that had the type of error in question); *Aetna*, 642 F.2d at 342-43 (nearly all of Jeppesen's other charts used roughly same scale for both plan and profile views).

side. It was undisputed that the Jeppesen approach chart for Las Vegas correctly showed the minimum altitude at a distance of three miles from the airport.¹²

The court held, however, that the Las Vegas chart contained a “defect” in its presentation of the minimum-altitude information, namely the fact that the plan view and the profile view were drawn to substantially different scales. The court cited the testimony of an aviation-psychologist expert witness to the effect that pilots and navigators came to take it for granted that Jeppesen charts were drawn to roughly the same scale for both plan and profile views. It concluded that reliance on this notion by the pilot of the crashed plane could have resulted in the plane flying at an unsafe altitude.¹³

Ironically, the Ninth Circuit then ruled that total reliance on the “defective” chart *presentation* constituted a breach of due care on the part of the flight crew, notwithstanding the defect in the chart. “To find that Jeppesen’s product defect was a proximate cause of the crash we must hypothesize pilot reliance on the graphics of the chart and complete disregard of the words and figures accompanying them. We reject outright a standard of care that would consider such conduct as reasonable attention to duty by a pilot of a passenger plane.”¹⁴

As a result, the trial court’s exoneration of the flight crew was reversed, and the case was remanded for redetermination of the proper apportionment of damages under Nevada law (which the court assumed to be the same as California’s comparative-fault rules).¹⁵

[c] Government Origin of Defective Navigation Information Is Immaterial

In another of the Jeppesen cases, the court rejected Jeppesen’s argument that it had no control over the government-promulgated information that it published.¹⁶ Jeppesen pointed out that the Federal Aviation Administration (FAA) had dictated the landing approach procedures that Jeppesen had translated into a graphic chart format. The Ninth Circuit was not impressed; it commented that Jeppesen’s own procedures required thorough research to determine the validity and completeness of any FAA procedure, and that

¹² *Aetna*, 642 F.2d at 342; *see also* 440 F. Supp. 394, 406-07 (D. Nev. 1977) (undisputed facts as recited in pretrial order).

¹³ 642 F.2d at 342.

¹⁴ *Id.* at 343

¹⁵ *Id.* at 343-44

¹⁶ *Brocklesby*, 767 F.2d at 1295-96.

Jeppesen's actions in the past had led to changes in the FAA procedures. Thus, it said, "Jeppesen had both the ability to detect an error and a mechanism for seeking corrections."¹⁷

In any event, the court said, Jeppesen's fault or lack thereof was immaterial, because California product-liability law imposed strict liability on Jeppesen as a manufacturer of a defective product; the fact that the defective portion was not made by Jeppesen was of no moment.¹⁸

**[d] Insurers May Have Duty to Defend
Defective Information as "Product"**

Apart from the Jeppesen cases, the only known federal-court holding that information can be a product appears to be of questionable usefulness for prospective plaintiffs. *Sears, Roebuck & Co. v. Employers Insurance of Wausau*¹⁹ involved an insurance-coverage dispute. Sears had been sued for product liability concerning a "how to" manual for a Sears power saw (sold separately from the power saw itself); the insurance company denied that it had a duty to defend Sears.

The court rejected the insurer's no-duty contention; it commented that "[g]iving the ordinary, plain meaning to the term "named Insured's product" as defined in the policy, [the] product plainly is the manual, and the policy makes no distinction between the physical manual and the intellectual content of the manual."²⁰

The *Sears* decision could plausibly be viewed as simply one of many cases holding that insurance companies cannot easily avoid their duty to defend by citing seeming technicalities.²¹ The opinion did not address the question whether the power-saw manual was a "product" for purposes of imposing strict liability.

¹⁷ *Id.* at 1296.

¹⁸ *Id.*

¹⁹ 585 F. Supp. 739 (N.D. Ill. 1983).

²⁰ *Id.* at 744 (emphasis supplied).

²¹ See, e.g., *Aetna Cas. & Surety Co. v. Certain Underwriters at Lloyds*, 56 Cal. App. 791, 800 (1971) ("[t]he law imposes an implied obligation to defend where it is not expressly and clearly omitted from the particular risk"); see generally, e.g., Robinson, *Insurance Coverage of Intellectual Property Lawsuits*, 17 AM. INTELLECTUAL PROP. L. ASS'N Q.J. 122, 129-35 (1989).

[e] Strict Liability for Chemistry Textbooks?

Two other state-court opinions, in cases involving injuries arising from performing experiments described in high-school chemistry textbooks, implied that publishers might be strictly liable for defective information that causes injury. One opinion was subsequently disagreed with by an appellate court in the same state; neither case has been obviously followed.

One such case was *Kercsmar v. Pen Argyl Area School District*.²² There, a minor plaintiff allegedly was injured while performing a high school chemistry experiment in accordance with the instructions in a chemistry textbook.

In a preliminary ruling on what appears to have been a motion to dismiss, the Pennsylvania trial court denied the publisher's objection or demurrer. The court held that the text book was a "good" within the context of section 2-105(l) of the Uniform Commercial Code; consequently, the plaintiff's claim of an injury caused by the textbook's description of the chemistry experiment was sufficient to meet the requisites of pleading for breach of an implied warranty.

Similarly, in the unreported *Carter v. Rand McNally & Co.* case,²³ a student sued a chemistry textbook publisher for injuries caused by an explosion of methyl alcohol vapors during an experiment; the textbook had recommended and suggested the use of the alcohol without any warning as to possible dangers. The case reportedly settled for \$1.1 million after a jury verdict in favor of the student.

§ 6.4 Little or No Liability for Publishing How-To Texts

Defects in published information has been alleged in a number of cases. In each case the publisher was held not liable; some courts hinted, however, that *authors* of the erroneous information might indeed be liable.

²² 1 D. & C.3d 1 (1976) (not reported in West system), *summarized and disagreed with in Smith v. Linn*, 386 Pa. Super. 392, 563 A.2d 123, 16 Media L. Rep. 2228 (1989), *aff'd per curiam w/o opinion*, 526 Pa. 447, 587 A.2d 309 (1991), discussed *infra* Section 23.07 [a] [5].

²³ No. 76-1864-F, slip op. (D. Mass. Sept. 4, 1980) (not reported in West system), *summarized in Herceg*, 565 F. Supp. at 804 n.1.

[a] *MacKown v. Illinois Publishing — Dandruff Remedy*

In *MacKown v. Illinois Publishing and Printing Co.*,²⁴ a newspaper was sued for injuries to one of its readers; the injuries allegedly resulted from the reader's use of a dandruff remedy recommended by the author of an article as one that had been given to him by a reputable physician. The court held that the newspaper was not liable to the reader, in part on grounds that no privity existed.

[b] *Cardozo v. True — Cookbook Recipe for Poisonous Plant*

In *Cardozo v. True*,²⁵ a cookbook ("Trade Winds Cookery") was alleged to be defective. The plaintiff claimed that while following a recipe in the cookbook for preparing and cooking of the Dasheen plant ("elephant ears") she became severely ill when she ate a small slice of the uncooked root of the plant. She sued both the author (who did not respond to the complaint) and the bookstore where she bought the cookbook.²⁶

In approving a summary dismissal as to the bookstore, the Florida court saw a need "to distinguish between the tangible properties of [books as] goods and the thoughts and ideas conveyed thereby," holding that:

It is unthinkable that standards imposed on the quality of goods sold by a merchant would require that merchant, who is a book seller, to evaluate the thought processes of the many authors and publishers of the hundreds and often thousands of books which the merchant offers for sale. One can readily imagine the extent of potential litigation.

Is the newsdealer, or for that matter the neighborhood news carrier, liable if the local paper's recipes call for inedible ingredients? We think not.²⁷

The Florida court analogized to other types of cases where publishers were held not to be liable without fault, including defamation cases²⁸ and

²⁴ 289 Ill. App. 59, 6 N.E.2d 526 (1937).

²⁵ 342 So. 2d 1053, 21 UCC Rep.Serv. 69 (Fla. App. 1977).

²⁶ *Id.*, 342 So.2d at 1054.

²⁷ *Id.* at 1055.(paragraphing supplied)

²⁸ *Id.*, citing *Time Inc. v. Firestone*, 424 U.S. 448, 96 S.Ct. 958, 47 L.Ed.2d 154 (1976); *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 94 S.Ct. 2997, 41 L.Ed.2d 789 (1974); *Sexton v. American News Co.*, 133 F.Supp. 591 (N.D.Fla.1955); *Layne v. Tribune Co.*, 108 Fla. 177, 146 So. 234 (1933).

allegations of liability for injuries resulting from products advertised in magazines.²⁹ It concluded that “[t]he common theme running through these decisions is that ideas hold a privileged position in our society. They are not equivalent to commercial products.³⁰

The court expressly declined to rule on the alleged liability of the author (as opposed to the bookstore), inasmuch as the author had not appeared in the case.³¹ Likewise, the court reserved for another day whether the bookstore might have a duty to warn if it knew or should have known of the dangerous ingredients in a cookbook; its exoneration of the bookstore rested in part on its perception that:

Those who are in the business of distributing the ideas of *other people* perform a unique and essential function. To hold those who perform this essential function liable, regardless of fault, when an injury results would severely restrict the flow of the ideas they distribute.³²

[c] Nautical Charts and Hazard Markings

Several opinions have found the U.S. Government liable for publishing erroneous nautical charts and for failure adequately to mark known navigational hazards. These cases seem to depend largely on the premise that the government invites and indeed virtually mandates almost total reliance on the information that it disseminates in this manner.

[1] Nautical Charts

Errors in a nautical chart almost led to liability for the U.S. Government in a 1971 Fifth Circuit case. In *De Bardeleben Marine Corp. v. United States*,³³ the government sold an out of-date harbor chart that did not show a known submerged natural-gas pipeline; the chart did, however, bear a government stamp to the effect that the chart had been updated by hand to reflect all known changes.³⁴

The chart eventually wound up in the hands of a tugboat captain who unknowingly anchored a barge over the pipeline. When he attempted to

²⁹ *Id.*, citing *Yuhas v. Mudge*, 129 N.J.Super. 207, 322 A.2d 824 (1974).

³⁰ *Id.* at 1056.

³¹ *Id.* at 1055.

³² *Id.* at 1056-57 (emphasis supplied).

³³ 451 F.2d 140 (5th Cir. 1971) (John R. Brown, C.J.)

³⁴ *Id.* at 141-42.

weigh the barge's anchor the next day, the anchor became fouled in the pipeline, which ruptured. The resulting fire and explosion damaged the barge and the tug and injured the tug's mate.³⁵

The Fifth Circuit ruled that the government had a duty to ensure that the charts it sold were accurate, despite the lack of proof of privity, because it had invited reliance on the accuracy of the charts.³⁶ The court said that the charts "are published by the Government with the certain knowledge that they . . . will be relied on as accurate portrayals of the waters covered. Indeed, this expectation is mandated as a rule of prudent conduct on the part of shipowners."³⁷

Apparently an invitation to reliance can be withdrawn, however. The government still won in the *De Bardeleben Marine* case because, a reasonable time before the accident, it had published a Notice to Mariners announcing the availability of a new (and correct) chart that rendered the defective chart obsolete.³⁸ The court said "that—as a part of the duty, not just a defense of contributory negligence—the Government's obligation ceases" at the time when a prudent shipowner-navigator would have reasonably received the Notice that a revised chart was available, since the Notice was "a reliable way to inform mariners of changes *including* errors in previous advices or charts," whether or not the errors were known to the government.³⁹

[2] Liability for Other Marine-Hazard Information

The U.S. Government has been held liable for publishing the locations of lighthouses and similar navigation markings, but then negligently failing to ensure that they visibly and accurately marked the marine hazards in question. Put another way, liability arose because the government invited reliance on what subsequently proved in changed circumstances to be erroneous information.

For example, the Supreme Court held in its 1955 *Indian Towing* case that, once the government decides that it will provide a lighthouse to mark dangerous rocks, and has "engendered reliance on the guidance afforded by

³⁵ *Id.* at 141.

³⁶ *Id.* at 148

³⁷ *Id.*

³⁸ *Id.* at 149.

³⁹ *Id.*; see also *Corporacion Insular de Seguros v. United States*, 646 F. Supp. 1230, 1236 (D.P.R. 1986) (government's liability for erroneous depiction of warning lights on harbor chart ended when chart correction published in Light List; citing *De Bardeleben*)

the light” by publishing its presence in the official Light List, then the government is “obligated to use due care” to maintain the light.⁴⁰ According to the First Circuit’s later explanation, “liability was *not* imposed in that case because a more powerful light or taller lighthouse would have been a better warning of the rocks marked by the lighthouse, but rather because the negligent nonfunctioning of the charted [viz., advertised] lighthouse misled plaintiff to his detriment.⁴¹

By way of contrast, in the First Circuit’s *Brown* case⁴² a holding of government liability for broadcasting erroneous marine weather information was reversed; the appellate decision can be regarded as based in part on the view that, under the circumstances, the government had *not* invited reliance on the broadcasts. In *Brown*, a government weather buoy at Georges Bank in the Atlantic malfunctioned; as a result, the National Weather Service failed to predict a gale at the fishing grounds at that location. The plaintiffs’ decedents, having listened to the erroneous weather report, sailed to the fishing grounds and were trapped by the gale; one boat was lost with all hands but one and a crewman was swept overboard from the other.

The district court held that the government, having undertaken to provide weather information, had a duty to do so with due care. The First Circuit reversed on grounds that the degree of care to be exercised by the government (at taxpayers’ expense) was a discretionary function not subject to scrutiny by the courts.

The First Circuit criticized the district court’s finding that “fishermen ‘had come to rely on the government forecasts.’”⁴³ The appellate court observed that “[a] weather forecast is a classic example of a prediction of indeterminate reliability,” and said that “the fishermen cannot unilaterally impose on the government a liability it expressly disclaimed.”⁴⁴ The court looked to the Supreme Court’s *Indian Towing* case and in particular to its own explanation (quoted above) for its reliance rationale.

⁴⁰ *Indian Towing Co. v. United States*, 350 U.S. 61, 69, 76 S. Ct. 122, 125 (1955).

⁴¹ *Chute v. United States*, 610 F.2d 7, 13-14 (1st Cir. 1978), *cert. denied*, 446 U.S. 936 (1980) (emphasis supplied), *quoted in Brown v. United States*, 790 F.2d 199, 201 (1st Cir. 1986) (bracketed material by the court); *but see Eklof Marine Corp. v. United States*, 762 F.2d 200 (2d Cir. 1985) (government duty to maintain buoy at dangerous point arises from government election to set buoy to mark danger in the first place).

⁴² *Brown v. United States*, 790 F.2d 199, 201 1st Cir. 1986).

⁴³ *Brown*, 790 F.2d at 203, *quoting and reversing* 599 F. Supp. 877, 885 (D. Mass. 1985).

⁴⁴ *Id.* at 203-04.

[d] *Roman v. City of New York — Birth Control Information*

*Roman v. City of New York*⁴⁵ was described by the court as a “wrongful conception” case brought by a mother who had believed that she had been sterilized. In investigating whether to undergo a tubal litigation sterilization procedure, the plaintiff picked up a copy of a Planned Parenthood booklet that gave specific advice:

Q. Should contraceptives be used after tubal litigation?

A. No. There is no possibility of pregnancy and contraceptives are not necessary.⁴⁶

Subsequent to her sterilization, the plaintiff became pregnant and bore a healthy child.⁴⁷

The court examined the possibility of a negligent-misrepresentation claim. It noted that such a claim was recognized under New York law, and acknowledged that the plaintiff’s damages might be legally cognizable.⁴⁸ The court said, however, that “not every negligent statement is actionable,” and ruled that Planned Parenthood did not have the kind of relationship with the plaintiff that would give rise to liability:

[The plaintiff] did not go to defendant and defendant did not contact her. Their sole relationship is her fortuitous receipt of defendant’s booklet at the hospital.

That defendant pointedly intended the booklet to provide information to the general public, including plaintiff, and the fact that it could have reasonable foreseen plaintiffs reliance thereon, does not change the result.

One who publishes a text cannot be said to assume liability for all “misstatements,” said or unsaid, to a potentially unlimited public for a potentially unlimited period of time.⁴⁹

⁴⁵ 110 Misc. 2d 799,442 N.Y.S.2d 945 (N.Y. Sup. Ct. 1981)

⁴⁶ *Id.* at 946, quoting Planned Parenthood booklet

⁴⁷ *Id.*

⁴⁸ *Id.* at 947.

⁴⁹ *Id.* at 947-48 (paragraphing supplied).

[e] *Alm v. Van Nostrand* — No Duty to Warn

The duty to warn and the boundaries of the potential plaintiff class were discussed in the *Alm* case⁵⁰ which involved a book entitled *The Making of Tools*. The plaintiff was injured when a tool shattered while he was allegedly following the instructions in the book for making that tool.⁵¹

The court refused to impose a duty on the publisher either to ensure that the book's instructions were correct or to warn novices about possible dangers. The court said that while privity no longer shielded tort-feasors from the consequences of negligent conduct, the concerns *behind* the privity requirement — namely that the legal duty imposed should not constitute an unduly severe burden upon a defendant — remained viable.⁵² The court also remarked on the potentially unlimited class of plaintiffs that such a duty would create:

Plaintiff's theory, if adopted, would place upon publishers the duty of scrutinizing and even testing all procedures contained in any of their publications. The scope of liability would extend to an undeterminable number of potential readers. We therefore adhere to the holding of this court in *[MacKown]*, and affirm the dismissal of plaintiffs complaint as to the defendant publisher.⁵³

[f] *Letwin v. McCreight* — Co-Authorship of Manual as Possible Grounds for Liability

The *Lewin* case⁵⁴ was “an action arising out of an explosion that allegedly occurred while plaintiffs were mixing a mordant [a corroding substance used in etching] according to the instructions in a book entitled *The Complete Metalsmith*.⁵⁵ After noting that the publisher had played no part in authoring the book, the court followed the Illinois *Alm* case, discussed *supra*, and adopted that case's conclusion that the burden on publishers would be

⁵⁰ *Alm v. Van Nostrand Reinhold Co., Inc.*, 134 Ill. 3d 716, 89 Ill. Dec. 520, 480 N.E.2d 1263 (1985).

⁵¹ *Id.*, 480 N.E.2d at 1264.

⁵² *Id.* at 1265-66.

⁵³ *Id.* at 1267 (citation omitted).

⁵⁴ *Lewin v. McCreight*, 655 F. Supp. 282 (E.D. Mich. 1987).

⁵⁵ *Id.* at 282.

too great if they were forced either to verify everything they published or to include warnings.⁵⁶

The court warned, however, that “[t]he balance [of competing policy interests] might well come out differently . . . if the publisher contributed some of the content of the book. The burden of determining whether the content was accurate would be less than in the present case.”⁵⁷

The court also speculated that “publishers may have greater responsibilities where the risk of harm is plain and severe such as a book entitled *How to Make Your Own Parachute*.⁵⁸ It noted, however, that [a]ny such legal responsibilities would, of course, have to comport with the rule that manufacturers have no duty to warn of obvious dangers.”⁵⁹

[g] Jones v. J.B. Lippincott Co.: Nursing Textbook

In *Jones v. J.B. Lippincott Co.*,⁶⁰ the plaintiff was a nursing student who treated herself for constipation by taking a hydrogen-peroxide enema after consulting a textbook on medical and surgical nursing.⁶¹ Suffering personal injury as a consequence of her self-treatment, she brought suit against both the author and the publisher of the textbook. The publisher moved for summary judgment as to itself (apparently the author either settled out or remained in the case).⁶²

As a preliminary matter, the *Jones* court rejected the plaintiff's contention that the publisher was a co-author (and therefore at least partly responsible for the contents of the textbook) on the basis of the undisputed facts.⁶³ That argument out of the way, the court addressed the plaintiff's argument that the publisher was liable for having sold a defective product under Section 402A of the Restatement (Second) of Torts. In the view of the *Jones* court, what it described as the “narrow” strict liability cases⁶⁴ were grounded on a theory that nautical charts and airline charts are analogous to

⁵⁶ *Id.* at 283-84.

⁵⁷ *Id.* at 284.

⁵⁸ *Id.*

⁵⁹ *Id.* (citation omitted).

⁶⁰ 694 F. Supp. 1216 (D. Md. 1988).

⁶¹ *Id.* at 1216.

⁶² *Id.*

⁶³ *Id.* at 1217.

⁶⁴ Specifically *Brocklesby* and *Saloomey*, discussed *supra* § 6.3.

compasses, radar finders, and other navigational instruments “which, when defective, will prove to be dangerous.”⁶⁵

The court said that in contrast, extending strict liability to “the dissemination of an idea or knowledge in books or other published material . . . could chill expression and publication which is inconsistent with fundamental free speech principles.”⁶⁶

[h] *Smith v. Linn: Diet Books*

In *Smith v. Linn*,⁶⁷ the plaintiff’s decedent lost 100 pounds in five months as a result of following a weight-loss plan in a diet book (under the supervision of a physician). She died of cardiac failure; her administrator (apparently her husband) sued the author and the publisher, as well as several other defendants.

All defendants except the publisher either settled out or were dismissed; the Pennsylvania trial court (en banc) then granted summary judgment in favor of the publisher. The appeals court affirmed on several grounds, including first-amendment concerns.

On appeal, the *Smith* appellate court rejected the plaintiffs’ urging of a duty to warn of an allegedly dangerous product: “Instructions by a manufacturer which accompany medication or use of certain marketed goods cannot be equated with publication of books which espouse a writer’s theory, opinions or ideology.” Similarly, it refused to hold that the publisher’s diet book was a product in the first place.⁶⁸

[i] *Winter v. G.P. Putnam Sons: Encyclopedia of Mushrooms*

One of the most frequently cited publisher-liability cases of recent years is *Winter*.⁶⁹ That case involved a book entitled “The Encyclopedia of Mush-

⁶⁵ 694 F. Supp. at 1217.

⁶⁶ *Id.*, citing *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 94 S. Ct. 2997 (1987).

⁶⁷ *Smith v. Linn*, 386 Pa. Super. 392, 563 A.2d 123, 16 Media L. Rep. 2228 (1989), *aff’d per curiam w/o opinion*, 526 Pa. 447, 587 A.2d 309 (1991).

⁶⁸ *Id.*, citing *Herceg v. Hustler Magazine, Inc.*, 565 F.Supp. 802 (S.D. Texas 1983) (discussed *supra*); *Cardozo v. True*, 342 So.2d 1053 (Fla.Dist.Ct.App.1977) (discussed *infra*), and disagreeing with *Kercesmar v. Pen Argyl Area School District*, 1 D. & C.3d 1 (1976) (unreported in West system; holding that, for purposes of motion to dismiss, allegation of defective information sufficiently stated claim for breach of implied warranty; discussed *infra*).

⁶⁹ *Winter v. G.P. Putnam’s Sons*, 938 F.2d 1033 (9th Cir. 1991).

rooms.” The encyclopedia was published by a British company but distributed in the United States in finished form by G.P. Putnam’s Sons, which had no part in writing or editing the book.

The *Winter* plaintiffs consulted the encyclopedia in gathering and cooking mushrooms, whereupon they became critically ill and eventually required liver transplants.⁷⁰ They sued Putnam, alleging that the encyclopedia contained erroneous and misleading information concerning the identification of the most deadly species of mushrooms. They alleged liability based on products liability, breach of warranty, negligence, negligent misrepresentation, and false representations.

The Ninth Circuit affirmed a summary judgment for Putnam. The court refused to treat the information contained in a book on mushrooms (as distinct from the physical book itself) as a “product” for strict-liability purposes, finding no indication that the Restatement drafters intended such an expansive definition of that term.⁷¹

The *Winter* court additionally analyzed some of the policy pros and cons and decided that strict liability for defective information is not a good idea:

Although there is always some appeal to the involuntary spreading of costs of injuries in any area, the costs in any comprehensive cost/benefit analysis would be quite different were strict liability concepts applied to words and ideas. We place a high priority on the unfettered exchange of ideas. We accept the risk that words and ideas have wings we cannot clip and which carry them we know not where.

The threat of liability without fault (financial responsibility for our words and ideas in the absence of fault or a special undertaking or responsibility) could seriously inhibit those who wish to share thoughts and theories. As a New York court commented, with the specter of strict liability, “[w]ould any author wish to be exposed ... for writing on a topic which might result in physical injury? e.g. How to cut trees; How to keep bees?”

One might add: “Would anyone undertake to guide by ideas expressed in words either a discrete group, a nation, or humanity in general?”

Strict liability principles even when applied to products are not without their costs. Innovation may be inhibited. We

⁷⁰ *Id.* at 1034.

⁷¹ WINTER at 1034.

tolerate these losses. They are much less disturbing than the prospect that we might be deprived of the latest ideas and theories.⁷²

The *Winter* court asserted that the *Jeppesen* cases (discussed above) could be distinguished on their facts:

Aeronautical charts are highly technical tools. They are graphic depictions of technical, mechanical data. The best analogy to an aeronautical chart is a compass. Both may be used to guide an individual who is engaged in an activity requiring certain knowledge of natural features. Computer software that fails to yield the result for which it was designed may be another. In contrast, The Encyclopedia of Mushrooms is like a book on how to use a compass or an aeronautical chart. The chart itself is like a physical "product" while the "How to Use" book is pure thought and expression.⁷³

The Ninth Circuit also alluded to the First Amendment as constraining the power of tort law to punish publishers:

In order for negligence to be actionable, there must be a legal duty to exercise due care. The plaintiffs urge this court that the publisher had a duty to investigate the accuracy of The Encyclopedia of Mushrooms' contents. We conclude that the defendants have no duty to investigate the accuracy of the contents of the books it publishes. A publisher may of course assume such a burden, but there is nothing inherent in the role of publisher or the surrounding legal doctrines to suggest that such a duty should be imposed on publishers. Indeed the cases uniformly refuse to impose such a duty. Were we tempted to create this duty, the gentle tug of the First Amendment and the values embodied therein would remind us of the social costs.⁷⁴

⁷² *Id.* at 1035 (paragraphing edited, citation omitted), *citing Walter v. Bauer*, 109 Misc.2d 189, 191, 439 N.Y.S.2d 821, 823 (Sup. Ct. 1981) (student injured doing science project described in textbook; court held that the book was not a product for purposes of products liability law), *aff'd in part & rev'd in part on other grounds*, 88 A.D.2d 787, 451 N.Y.S.2d 533 (1982).

⁷³ *Id.* at 1036 (footnote omitted).

⁷⁴ *Id.* at 1037 (footnotes with extensive case citations omitted).

[i] Way v. Boy Scouts of America — Firearms Information in Boys' Life Magazine

In the *Way* case, a Texas appellate court held that a publisher owes no duty of care to readers.⁷⁵ Included in the September 1988 edition of Boys' Life magazine was an advertising supplement on shooting sports that included advertisements for firearms and ammunition manufacturers. The supplement also contained various articles setting forth information about earning merit badges for shooting; about the biathlon, an Olympic shooting sport; about the Presidential Sports Award, which can be earned for accomplishments in the shooting sports; and about getting started in the shooting sports. The supplement also included a checklist on firearm safety.

After reading the supplement and obtaining information on shooting sports, Rocky and several of his friends located an old rifle and a .22-caliber cartridge. On November 19, 1988, Rocky was killed when the rifle accidentally discharged.

Jan Way sued the Boy Scouts of America and others for the death of her son. She based her action on theories of negligence and strict products liability, claiming negligent publication of supplemental material in Boys' Life magazine and that the information contained in the supplement made the magazine a defective product. She alleged her son was motivated to experiment with the rifle and cartridge as a direct result of the supplemental edition to the September 1988 edition of Boys' Life magazine published by the Boy Scouts of America.

The appellate court affirmed a summary judgment in favor of all defendants. As to the plaintiff's negligence theory, the court looked no further than the determination whether a duty existed. The court performed a risk-utility analysis that focused primarily on the unforecastability of Rocky's experimentation and on the social utility of the shooting supplement's emphasis on shooting safety.

Under the facts of this case, a risk-utility analysis leads us to conclude that the firearms supplement did not create a duty on the part of appellees to either refrain from publishing the supplement or add warnings about the danger of firearms and ammunition. We find the balance of guarding against the risk

⁷⁵ *Way v. Boy Scouts of America*, 856 S.W.2d 230 (Tex. App.—Dallas 1993) (approving summary judgment dismissing wrongful-death claim against Boy Scouts for publishing firearms-safety supplement to *Boys' Life* magazine). The factual description in text is adapted almost verbatim from the court's summary of the facts. *See* 856 S.W.2d at 232.

of harm, the actual risk of harm presented, and the burden of preventing harm weighs in favor of appellees.

Accordingly, under the facts of this case, we find appellees owed no duty to Rocky.⁷⁶

As to the strict-liability claim, the court, citing the Ninth Circuit's *Winter* case discussed above, likewise "conclude[d] that the ideas, thoughts, words, and information conveyed by the magazine and the shooting sports supplement are not products within the meaning of the Restatement (Second) of Torts."⁷⁷ It affirmed summary judgment against the plaintiff on that ground as well.

§ 6.5 Liability for Resource Lists and Recommendations

Web sites frequently provide lists of additional-reading resources that are available on the Web ("link farms"). Sometimes the site operators go so far as to provide recommendations or reviews of others' sites or their products or services. Can liability arise from such practices? Possibly.

[a] *Hanberry: Good Housekeeping Seal of Approval*

Nearly 30 years ago in *Hanberry v. Hearst Corp.*,⁷⁸ a California appellate court left open the possibility of publisher liability for endorsing a product. The court reversed a dismissal on the pleadings of a complaint for negligent misrepresentation against a publishing company. The publisher had affirmatively stated in its magazine that certain shoes had the "Good Housekeeping's Consumers' Guaranty Seal"; it represented that "We have satisfied ourselves the products and services advertised in Good Housekeeping are good ones and the advertising claims made for them in our magazine are truthful."⁷⁹ The plaintiff purchased a pair of the "certified" shoes. She allegedly was injured when she slipped on a vinyl floor, allegedly because the soles of the shoes were too slippery.⁸⁰

In reversing the dismissal, the appeals court focused chiefly on the publisher's actions to induce reliance by consumers on its statements about the quality of its advertisers' goods:

⁷⁶ *Id.* at 237.

⁷⁷ *Id.* at 239.

⁷⁸ 276 Cal. App. 2d 680, 81 Cal. Rptr. 519 (1969).

⁷⁹ *Id.* at 521.

⁸⁰ *Id.*

Since the very purpose of respondent's seal and certification is to *induce consumers to purchase* products so endorsed, it is foreseeable certain consumers will do so, *relying upon respondent's representations* concerning them, in some instances, even more than upon statements made by the retailer, manufacturer or distributor.

Having voluntarily involved itself into the marketing process, having in effect loaned its reputation to promote and induce the sale of a given product, the question arises whether respondent can escape liability for injury which results when the product is defective and not as represented by its endorsement. In voluntarily assuming this business relationship, we think respondent Hearst has placed itself in the position where public policy imposes upon it the duty to use ordinary care in the issuance of its seal and certification of quality so that members of the consuming public who rely on its endorsement are not unreasonably exposed to the risk of harm.⁸¹

The California court also seemingly looked to the reasonableness of the plaintiff's reliance, and implicitly concluded that reliance indeed could have been reasonable: "Respondent . . . held itself out as a disinterested third party which had examined the shoes, found them satisfactory, and gave its endorsement. By the very procedure and method it used, respondent represented to the public it possessed superior knowledge and special information concerning the product it endorsed."⁸²

The court noted that it was not ruling on the merits, and speculated that the publisher might be able to defeat the plaintiff's allegations at trial. It ruled, however, that the plaintiff's complaint adequately pleaded a cause of action, and that the case had to go forward.⁸³

[b] FNS Mortgage: Lists of Approved Plumbing Pipe

In the *FNS Mortgage* case,⁸⁴ the defendant in question was a nonprofit association controlled by officials engaged in the enforcement of local plumbing codes. The association maintained a uniform plumbing code (UPC)

⁸¹ *Id.* at 522 (emphasis supplied).

⁸² *Id.* at 523.

⁸³ *Id.* at 523-24

⁸⁴ *FNS Mortgage Service Corp. v. Pacific General Group, Inc.*, 24 Cal. App.4th 1564, 29 Cal. Rptr.2d 916 (1994) (reversing summary judgment for defendant).

and published a directory which listed plumbing products that the association had found to meet the code. Virtually all public entities in California had adopted the uniform code. The court noted that unlisted pipe that did not bear the UPC logo was unmarketable, because building inspectors would not sanction its use, plumbing wholesalers would not sell it, and plumbers would not buy it.⁸⁵ The association enforced the uniform plumbing code by delisting nonconforming pipe.

Defective pipe was listed in the directory and stamped with the association's federally registered certification mark.

The association was sued for negligence. The trial court entered summary judgment for the association on grounds that it owed the plaintiffs no duty because it was a nonprofit organization and because its activities were in the nature of a governmental function. The appellate court reversed, holding that because the association had undertaken to inspect pipe for conformity with uniform standards and to enforce those standards by delisting of nonconforming pipe, it could be liable to purchasers injured by nonconforming pipe as a result of its failure to exercise reasonable care in the performance of these undertakings.⁸⁶

[c] *Barden*: Attorney Lists

In the *Barden* case, a federal court in Massachusetts dismissed a claim against a book publisher that had included a list of attorneys who could be consulted to assist women survivors of child abuse.⁸⁷ The plaintiff, an adult victim of child abuse, purchased and read the book, contacted one of the attorneys listed in the book, and apparently had a bad experience with him or her. She sued the publisher's successor in interest, alleging that the attorney's qualifications, which had been detailed in the book, were false, and that the book contained unverified facts.⁸⁸

After an extensive review of the case law, the court granted summary judgment for the publisher on the plaintiff's negligence claim:

Simply put, allowing plaintiff to seek relief under a negligent misrepresentation claim would open a pandora's box that might be difficult to close. The burden placed upon publishers to check every fact in the books they publish is both impractical and outside the realm of their contemplated legal duties. Fur-

⁸⁵ *Id.*, 24 Cal. App.4th at 1566-67, 29 Cal. Rptr.2d at 918.

⁸⁶ *Id.*, 24 Cal. App.4th at 1575-76, 29 Cal. Rptr.2d at 924.

⁸⁷ *Barden v. HarperCollins Publishers, Inc.*, 863 F. Supp. 41 (D. Mass. 1994).

⁸⁸ *Id.* at 42.

ther, in the present case, it is clear that the defendant did not assume the duty to investigate. Finally, any temptation for the Court to create such a duty is tempered by the “gentle tug of the First Amendment” and the values embodied therein. Of course, fraudulent behavior might be a different situation; however, no allegations of fraud have been made in this case.⁸⁹

The *Barden* court also dismissed the plaintiff’s claim under the Massachusetts consumer-protection statute, holding that “plaintiff has failed to allege facts upon which it would be possible to conclude that defendant’s conduct was unfair or deceptive . . .”⁹⁰

[d] Yanase and Birmingham — Travel Guides

In *Yanase*,⁹¹ a man was shot and killed in the parking lot of a motel in which he was staying. The motel, located in a high crime area, was listed and rated in a "Tourbook" published and distributed by an automobile club. The man’s widow and orphans sued the club for negligently failing to determine and publish information on the safety of the area and the existence and effectiveness of security measures.

The appellate court affirmed dismissal on the pleadings. It narrowly defined the information presented in the Tourbook as limited to matters of comfort; “[n]othing is said about inspecting for dangerous neighborhoods or determining the presence or absence of personal security measures taken by the owners of the accommodations on behalf of their patrons.”⁹² On that basis the court joined the ranks of those distinguishing *Hanberry*.⁹³

In *Birmingham*, a couple bought a copy of a travel guide published by Fodor’s Travel Publications — but, notably, authored by independent travel writers — in preparation for their honeymoon trip to Hawaii. Based on information derived from the guide, they decided to go to Kekaha Beach on Kauai. They claimed to have relied on a description in the guide stating that

⁸⁹ *Id.* at 45 (citation omitted).

⁹⁰ *Id.* at 46.

⁹¹ *Yanase v. Automobile Club of So. Cal.*, 212 Cal. App.3d 468, 260 Cal. Rptr. 513 (1989).

⁹² *Id.*, 212 Cal. App.3d at 476, 260 Cal. Rptr. at 518.

⁹³ *Id.*, 212 Cal. App.3d at 476-77, 260 Cal. Rptr. at 518-19.

“Kekaha Beach Park on the south shore is a long, luxurious strip of sand recalling the beaches of California. Great for dune buggy action!”⁹⁴

Shortly after arriving at Kekaha Beach, the husband was injured while body surfing.⁹⁵ The couple sued Fodor’s, among others, alleging that the publisher negligently failed to warn them of dangerous surf conditions.⁹⁶ The trial court granted summary judgment for all defendants; the state supreme court affirmed as to Fodor’s (it reversed and remanded as to one defendant, the county government).⁹⁷

The Hawaii supreme court first rejected the plaintiffs’ negligence contention, focusing on their assertion that Fodor’s owed a duty to warn in publishing travel-guide information. After a review of the case law (including extensive quotations from policy discussions in cases such as *Alm*, *Letwin*, and *Winter*, discussed above), the court concluded that “a publisher of a work of general circulation, that neither authors nor expressly guarantees the contents of its publication, has no duty to warn the reading public of the accuracy of the contents of its publication.”⁹⁸

The court rejected the plaintiffs’ strict-liability theory as well. It noted the holdings in the *Jeppesen* cases, but found the Ninth Circuit’s *Winter* case more persuasive.⁹⁹

[e] *Demuth v. Merck* — Incorrect Chemical Information

The *Demuth* case¹⁰⁰ involved a claim of damage to business as a result of the publication of allegedly incorrect information. Merck & Co. published *The Merck Index*, advertising it as an encyclopedia of chemicals and drugs.¹⁰¹ Some 276,500 copies of the Seventh Edition were circulated; this edition included an entry linking the human toxicity of triethylene glycol with that of ethylene glycol. The plaintiff used triethylene glycol in an air sterilization

⁹⁴ *Birmingham v. Fodor’s Travel Publications, Inc.*, 73 Haw. 359, 362-63, 833 P.2d 70, 73 (1992).

⁹⁵ *Id.*, 73 Haw. at 363, 833 P.2d at 73.

⁹⁶ *Id.*, 73 Haw. at 364, 833 P.2d at 73.

⁹⁷ *Id.*

⁹⁸ *Id.*, 73 Haw. at 370-71, 833 P.2d at 76.

⁹⁹ *Id.*, 73 Haw. at 375, 833 P.2d at 79.

¹⁰⁰ *Demuth Development Corp. v. Merck & Co.*, 432 F. Supp. 990 (E.D.N.Y. 1977).

¹⁰¹ *Id.* at 991.

appliance; it claimed that its business suffered as a result of the allegedly incorrect entry.

The court refused to consider whether or not the *Index* entry was in fact incorrect. It focused instead on the absence of any “relationship of the parties, arising out of contract or otherwise,” which ‘in morals or good conscience’ placed Merck under any duty toward plaintiff or its business.”¹⁰² Instead, the court opined, “Merck’s right to publish free of fear or liability is guaranteed by the First Amendment, . . . and the overriding societal interest in the untrammeled dissemination of knowledge.”¹⁰³

The court rejected the plaintiff’s argument that strict liability should apply, saying that “[t]he reason for such a rule is obvious. To quote Prosser again, it is required in order to avoid [t]he spectre of unlimited liability, with claims devastating in number and amount crushing the defendant because of a momentary lapse from proper care”¹⁰⁴

§ 6.6 Advertising and Sponsorship Liability

What liability might a Web site operator incur by placing advertising on the site, but without endorsing the advertised product or service? What if there *is* an endorsement? Conversely, could a Web site advertiser be liable for injurious activities on the site?

[a] Publisher Liability for Advertised Products

In the *Walters* case,¹⁰⁵ the plaintiff was hospitalized for toxic shock following use of a tampon she saw advertised in *Seventeen* magazine. She sued the magazine; the trial court sustained defendant’s demurrer and the appellate court affirmed.

The *Walters* court distinguished *Hanberry*, noting that *Seventeen* magazine did not “in any way sponsor or endorse products advertised in its pages. There was no representation of quality, no promotional effort, and no attempt to induce the public to buy Playtex tampons beyond merely printing the advertisement.”¹⁰⁶

¹⁰² *Id.* at 993.

¹⁰³ *Id.*, citing *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 340, 94 S. Ct. 2997 (1974).

¹⁰⁴ *Id.*, quoting W. PROSSER, *LAW OF TORTS* 708 (4th ed. 1971).

¹⁰⁵ *Walters v. Seventeen Magazine* 195 Cal. App.3d 1119, 241 Cal. Rptr. 101 (1987). The summary of *Walters* in the text is adapted from that of the *McCullough* opinion discussed below.

¹⁰⁶ *Id.*, 195 Cal. App. 3d at 1122.

The court concluded that "In the absence of any cause of action supported by traditional theories, we are loathe to create a new tort of negligently failing to investigate the safety of an advertised product."¹⁰⁷ It asserted that such a tort would require publications to maintain a large staff to scrutinize and test each product offered, and that the enormous cost of that effort, combined with reduced advertising income, increased insurance rates, and tort judgments, would inevitably result in a dramatic drop in the number of publications in circulation.¹⁰⁸

[b] Advertiser Liability for Sponsored Activities

A company contemplating advertising on or otherwise sponsoring a Web site may be concerned about possible liability for actions or omissions of others involved in the site. In *McCullough*,¹⁰⁹ still another California appellate court distinguished *Hanberry* and affirmed a summary judgment dismissing a tort claim against corporate sponsors of a racing event. Promotional materials prepared and distributed by the defendants invited the public to attend and participate in the race and stated that the winner of the race would receive a prize of \$1 million, to be paid in \$20,000 yearly installments for 50 years. Included on the promotional materials which had been distributed prior to the race were the corporate logos of a number of the corporate defendants named in the suit.

The plaintiff won the race, but the defendants who were supposed to pay off refused to do so. The plaintiff sued everyone in sight, notably including the corporate sponsors.¹¹⁰ The appellate court approved dismissal of one of the corporate sponsors, an association of Ford dealers:

The false statements in the promotional materials were clearly identified as having been made by someone other than the Association. . . . The Association took no affirmative part in making the false statements.

The only connection between the conduct of the Association and plaintiff's injury was an aura of legitimacy given to the race by the participation of a nationally-known sponsor. While we recognize that may have been significant from plaintiff's point of view, we do not find it to be a sufficient

¹⁰⁷ *Id.*

¹⁰⁸ *See id.*

¹⁰⁹ *McCullough v. Ford Dealers Advertising Ass'n of So. Cal.*, 234 Cal. App.3d 1385, 286 Cal. Rptr. 223 (1991) (affirming summary judgment).

¹¹⁰ *Id.*, 234 Cal. App.3d at 1387, 286 Cal. Rptr. at 224.

basis for holding the Association as guarantor of the truth of all statements made by the organizers of the race.

Nor can we attach moral blame to the Association's conduct here. The Association had entered into a written agreement with Network, and from all indications had met its obligations under the contract. By a specific term in the agreement the Association had been relieved of any obligation to provide prizes. In the absence of any reason for the Association to believe that it had an obligation to investigate we are unwilling to attach moral blame to the Association's failure to investigate the truth of the statements made in the promotional materials.

And, finally, we consider the policy of preventing future harm. While we recognize that requiring the Association to investigate the truth of all materials to which it attaches its logo would reduce the risk of harm such as that suffered by plaintiff here, we also recognize that it would have a drastic impact on corporate sponsorship of events of every description. The risk of tort liability could bring an end to corporate sponsorship of all but the wealthiest of enterprises and could cripple the functioning of organizations at every level of our society.

We conclude, under an analysis of the factors set forth in *Hanberry* and based in large measure on considerations of public policy, that the Association had no duty to investigate the truth of the statements contained in the promotional materials.¹¹¹

§ 6.7 Dissemination — or Development — of “Industry Standards”

A few cases have addressed the liability of trade groups for injuries or death arising in connection with published information relating to industry standards. In each case, the trade group was held not liable, principally on the same grounds as reviewed above.

¹¹¹ 234 Cal.App.3d at 1391-92, 286 Cal.Rptr. at 227.

[a] Beasock and Firestone — Exploding Tires

*Beasock v. Dioguardi Enterprise, Inc.*¹¹² involved a man fatally injured while inflating a 16-inch tire. On the day of the accident, the man's employer had manually mounted the tire on a 16.5-inch rim; the deceased took the uninflated assembly to a gas station for inflation, where it exploded.¹¹³

The deceased's widow contended that the Tire & Rim Association (an industry trade group) was liable for having published a yearbook containing defective dimensional standards. Specifically, the yearbook referred to mounting a 16-inch tire on a 16.5-inch rim, where such a combination was known to be dangerous; the plaintiff claimed that the association had failed to provide adequate warnings of the danger.¹¹⁴

The court granted summary judgment for the association, on grounds that it was simply a collector and disseminator of tire-mounting information provided by manufacturers over whom it had no control, and that it had no testing or evaluation role of its own. Furthermore, according to the court, the association's only "product" was its publication, which did not itself cause the injury.¹¹⁵

The court additionally referred to the lack of a relationship between the parties of a kind that would give rise to a duty of care:

Lastly, although there is authority for the imposition of a duty upon one who disseminates erroneous information (Credit Alliance Corp. v. Anderson & Co., 65 N.Y.2d 536, 493 N.Y.S.2d 435, 483 N.E.2d 110; White v. Guarante, 43 N.Y.2d 356, 401 N.Y.S.2d 474, 372 N.E.2d 315; Ultramarine Corp. v. Touche, 255 N.Y. 170, 174 N.E. 441), such duty arises only where the relationship between the parties is "so close as to approach that of privity" (Credit Alliance Corp. v. Anderson & Co., *supra*, 65 N.Y.2d p. 546, 493 N.Y.S.2d 435, 483 N.E.2d 110), or where there has been an affirmative assumption of a duty of care by the wrongdoer to the injured party (Glanzer v. Shepard, 233 N.Y. 236, 135 N.E. 275). No such relationship exists in this case.¹¹⁶

¹¹² 130 Misc.2d 25, 494 N.Y.S.2d 974 (N.Y. Sup. Ct. 1985).

¹¹³ *Id.*, 494 N.Y.S.2d at 975-76.

¹¹⁴ *Id.* at 976.

¹¹⁵ *Id.* at 977-79.

¹¹⁶ *Id.* at 979.

On the subject of exploding tires, even the development and licensing of technology that becomes an industry standard — let alone the mere dissemination of information about the standard — may not give rise to liability for harm arising from others' use of that standard. In the *Firestone* case,¹¹⁷ the defendant, Firestone, had designed and patented in the 1950s a single-piece wheel known as the 15 degree bead seat taper that permitted installation of a tubeless tire on a wheel. Firestone patented its design but granted royalty-free licenses to the entire industry, seeking to profit from industry use of products that would help build customer demand for Firestone's own products.¹¹⁸

The *Firestone* plaintiffs' decedent, Jimmy Barajas, attempted to mount a 16-inch tire on a 16.5-inch wheel; the tire exploded, causing fatal injuries. Neither the wheel nor the tire had been manufactured by Firestone. Nor had Firestone designed the actual wheel, because the wheel's manufacturer had modified the original Firestone design.¹¹⁹

Essentially for that reason, the supreme court agreed with the trial court that Firestone was not liable on either a negligence theory or a strict product-liability theory. As to the negligence theory, "Firestone conclusively showed it did not design, manufacture or sell the wheel in question. Accordingly, Firestone owed no duty to the Barajases. Firestone negated an essential element of the Barajases' negligence cause of action."¹²⁰ As to the strict-liability theory, "Firestone proved it did not introduce the wheel or a component part into the channels of commerce. It is not enough that the original designer merely introduce a product of similar design into the stream of commerce. Firestone proved that it did not supply the product that caused Jimmy Barajas' death."¹²¹

[b] Howard and Meyers: Swimming Pool Standards

Of like effect were *Howard v. Poseidon Pools, Inc.*,¹²² and *Meyers v. Donnatacci*,¹²³ each involving claims against the National Spa and Pool

¹¹⁷ *Firestone Steel Products Co. v. Barajas*, 927 S.W.2d 608 (Tex. 1996) (approving summary judgment in favor of defendant tire company and overturning court of appeals reversal).

¹¹⁸ *Id.* at 611

¹¹⁹ *Id.*

¹²⁰ *Id.* at 615.

¹²¹ *Id.* at 616 (citations omitted).

¹²² 133 Misc.2d 50, 506 N.Y.S.2d 523, 525 (N.Y. Sup. Ct. 1986).

Institute (NSPI) in connection with injuries suffered while diving into swimming pools. The NSPI had promulgated “Suggested Minimum Standards for Residential Swimming Pools.” The plaintiffs’ claims were rejected by the courts for reasons similar to those in *Beasock*, discussed above.

§ 6.8 Game Rules and Information

In at least two cases, game manufacturers have been sued as “information providers,” i.e., because playing games promoted by the manufacturers allegedly resulted in harm. Neither plaintiff was successful.

[a] *Garcia* — Floor-Hockey Game Rules and Information

In *Garcia*, a child was injured while playing “floor hockey.” The plaintiff’s main contention was that by inventing the game “Safe-T-Play” indoor hockey and promulgating instructions for its use — including express representations that the game was safe for children and no protective equipment was needed — the defendants were liable for breach of express and implied warranties and under negligence principles.¹²⁴

A Massachusetts appellate court affirmed a summary judgment in favor of the defendants. Looking in particular to the Ninth Circuit’s *Winter* case, the court concluded that promoting the game and disseminating rules and information about it could not give rise to liability:

[T]he plaintiff cannot recover on the basis that the game (the concept and instructions) is the product either on strict liability or warranty principles or on theories of negligence. In the absence of special circumstances, he may not recover for instructions and representations concerning the use of other manufacturers’ equipment and may only recover if he can establish that some item traced to a specific defendant caused his injury.¹²⁵

(..continued)

¹²³ 220 N.J. Super. 73, 531 A.2d 398 (N.J. Super. Ct. Law Div. 1987).

¹²⁴ *Garcia v. Kusan, Inc.*, 39 Mass. App. Ct. 322, 326-27, 655 N.E.2d 1290, 1293 (1995) (affirming summary judgment in favor of defendants).

¹²⁵ *Id.*, 39 Mass. App. Ct. at 328-29, 655 N.E.2d at 1294.

[b] *Watters: Dungeons and Dragons*

A similar result was reached in *Watters*, in which the game involved was “Dungeons and Dragons.”¹²⁶ The plaintiff’s son, said to be a devoted player of the game, committed suicide. The plaintiff alleged that “as a result of his exposure to the game, ‘he lost control of his own independent will and was driven to self-destruction.’”¹²⁷ She claimed that the game manufacturer “violated its duty of ordinary care in two respects: It disseminated Dungeons & Dragons literature to ‘mentally fragile persons,’ and it failed to warn that the possible consequences of playing the game might include ‘loss of control of the mental processes.’”¹²⁸ The court had no trouble rejecting both of those allegations: “To submit this case to a jury on either theory, it seems to us, would be to stretch the concepts of foreseeability and ordinary care to lengths that would deprive them of all normal meaning.”¹²⁹

As to foreseeability, the court said that “if Johnny's suicide was not foreseeable to his own mother, there is no reason to suppose that it was foreseeable to defendant TSR.”¹³⁰ Concerning ordinary care, the court observed that:

The defendant cannot be faulted, obviously, for putting its game on the market without attempting to ascertain the mental condition of each and every prospective player. The only practicable way of insuring that the game could never reach a "mentally fragile" individual would be to refrain from selling it at all--and we are confident that the courts of Kentucky would never permit a jury to say that simply by marketing a parlor game, the defendant violated its duty to exercise ordinary care.¹³¹

The court affirmed summary judgment in favor of the game manufacturer on pure tort-law grounds, and therefore declined to reach the game manufacturer’s First Amendment defenses.¹³²

¹²⁶ *Watters v. TSR, Inc.*, 904 F.2d 378 (6th Cir. 1990) (affirming summary judgment in favor of defendant game manufacturer).

¹²⁷ *Id.*, 904 F.2d at 380.

¹²⁸ *Id.* at 381.

¹²⁹ *Id.* at 381

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.* at 380.

§ 6.9 Liability for Erroneous Financial Data

Several cases have involved allegations that investors relied on erroneous financial information published or otherwise disseminated by newspapers and other information services. The general rule is that no liability attaches even for negligent publication of (nondefamatory) financial information because of the potentially unlimited class of plaintiffs to whom a defendant might be liable.¹³³ However, special circumstances such as the licensing of financial data for use in computing option prices can lead to liability.

[a] Little or No Liability for *Publication Per Se*

The New York courts have used terms of justified reliance in analyzing such issues: "In addition to knowledge of the possibility of detrimental reliance, 'the relationship of the parties * * * must be such that in morals and good conscience one has the *right* to rely on the other for information"¹³⁴

In rejecting a liability claim against a financial information publisher, the Second Circuit articulated some public-policy factors that militated against liability:

The publication at issue [*Corporation Records*, a summary of corporation information published by Standard & Poor's] is a source of information disseminated to a wide public. The class of potential plaintiffs is multitudinous.

Even the most careful preparation will not avoid all errors.

The potential for meritless or even fraudulent claims is high and the cost of even successful defenses may be prohibitive if publishers are to be exposed to discovery and trial based solely on allegations that a plaintiff relied on an erroneous summary.

¹³³ *First Equity Corp. v. Standard & Poor's Corp.* 869 F.2d 175, 178-80 (2d Cir. 1989); *Daniel v. Dow Jones & Co., Inc.*, 137 Misc. 94, 520 N.Y.S.2d 334, 336-38 (N.Y. Civ. Ct. 1987); *Jaillet v. Cashman*, 202 A.D. 805, 194 N.Y.S. 947 (N.Y. App. Div. 1922), *affirmed*, 235 N.Y. 511, 139 N.E. 714 (1923); *Gutter v. Dow Jones, Inc.*, 490 N.E.2d 898, 22 Ohio St. 3d 286 (1986); *cf. Pittman v. Dow Jones & Co.*, 662 F. Supp. 921, 922-23 (E.D. La.) (*Wall Street Journal* not liable to investors in Texas financial institution that falsely advertised in *Journal* that funds invested were backed by U.S. Government; collecting cases), *aff'd*, 834 F.2d 1171 (5th Cir. 1987) (per curium).

¹³⁴ *Daniel*, 520 N.Y.S.2d at 336, quoting *International Products Co. v. Erie R.R. Co.*, 244 N.Y. 331, 338,155 N.E. 662 (1927) (emphasis supplied); *see also Gutter v. Dow Jones, Inc.*, 22 Ohio St.3d 286, 490 N.E.2d 898 (1986) (approving dismissal of claims against publisher of investment newsletter; reviewing case law).

Moreover, such summaries serve numerous purposes, with greatly varying risks so far as inaccuracies are involved.

Users of *Corporation Records* are well aware that the summaries involve thousands of complicated financial documents and are thus often only the starting point for research rather than the finish line. Appellants' position mistakenly treats such summaries as a substitute for the originals and ignores the fact that users can easily protect themselves from misstatements or inaccuracies by examination of the original documents or federally required prospectuses.

In such circumstances, we believe that a user is in the best position to weigh the danger of inaccuracy and potential loss arising from a particular use of a summary against the cost of verifying the summary by examination of the original documents or prospectus. ... That being the case, *the user should bear the risk of failing to verify the accuracy of a summary in the absence of proof of a knowing misstatement.*¹³⁵

[b] Rosenstein: Possible Liability for Regular Providing of Financial Data

An information provider that does more than simply publish its data may find itself liable for errors and omissions. One example is seen in *Rosenstein*.¹³⁶ In that case, Standard & Poor's (S & P) and the Chicago Board Options Exchange (CBOE) had entered into a license agreement in which S & P was the official source for calculating and disseminating the closing values of S & P 100 and S & P 500 indexes for the purpose of trading securities options. The plaintiff held option contracts with the CBOE whose value was determined by the values of the S & P indexes.

Near the close of business one Friday in December, 1989 — the last day for trading the options in question before the options expired — the New York Stock Exchange (NYSE) reported an inaccurate closing price for Ford Motor Company stock, one of the stock prices used by S & P to calculate its indexes. The NYSE issued a correction three minutes later. S & P's contractor, however, computed index values based on the erroneous Ford closing price, even though it had been notified of the correction. Corrected index values were not disseminated until the following Monday. By that time, the plaintiff

¹³⁵ *First Equity Corp. v. Standard & Poor's Corp.*, 869 F.2d 175, 180 (2d Cir. 1989) (emphasis and paragraphing supplied).

¹³⁶ *Rosenstein v. Standard & Poor's Corp.*, 264 Ill. App.3d 818, 636 N.E.2d 665, 201 Ill. Dec. 233 (1993).

had sold his options, at artificially low prices because of the erroneous index values.¹³⁷

The plaintiff sought to recover his losses, and those of putative class members holding option contracts, from S & P. The Illinois appellate court affirmed a summary judgment in favor of S & P — but only because of an enforceable exculpatory clause, not because of an absence of liability.¹³⁸

The court examined Justice Cardozo's opinion in a case in which the plaintiff contracted to pay a third party according to the actual weight of the beans as determined by the defendant bean weigher. The bean weigher had negligently misrepresented the actual weight of the beans and was held to owe a duty to plaintiff and reimburse him for losses based upon the incorrect weight.¹³⁹ The *Rosenstein* court observed that in the case at hand, “[p]laintiff claims, and we tend to agree, that compilation [of the S & P index data] is merely a sophisticated version of bean weighing.”

The court reviewed the case law and concluded that S & P was doing more than merely publishing information: “Although S & P may suggest that it is merely selling a product, information is the product and *it is clearly for the guidance of others in commercial transactions*, and, in fact, the determinative factor in those business transactions.”¹⁴⁰ The court acknowledged the First Amendment implications involved, but held that:

[I]n the case at bar, S & P has specifically contracted to provide information upon which, *to a certainty*, investments will be encouraged and determined solely on the basis of S & P Index values. Users of the information are not casual passersby, but rather individually employing S & P's information in their reliance on the price which their options will bring at market.¹⁴¹

The court concluded “that the trial court erred in determining that S & P did not owe a duty to plaintiff, that it had a special position as publisher of stock market indexes, that plaintiff did not rely on S & P representation, and that

¹³⁷ *Id.*, 264 Ill. App.3d at 819-20, 636 N.E.2d at 666-67, 201 Ill. Dec. at 234-35.

¹³⁸ See § 6.10.

¹³⁹ *Rosenstein*, 264 Ill. App.3d at 822, 636 N.E.2d at 668, 201 Ill. Dec. at 236, *citing Glanzer v. Shepard*, 233 N.Y. 236, 135 N.E. 275 (1922) (Cardozo, J.).

¹⁴⁰ *Id.*, 264 Ill. App.3d at 824, 636 N.E.2d at 667, 201 Ill. Dec. at 237 (emphasis supplied).

¹⁴¹ *Id.*, 264 Ill. App.3d at 825, 636 N.E.2d at 670, 201 Ill. Dec. at 238 (emphasis supplied).

plaintiff was not a member of a limited class that might have been foreseeable to S & P.”¹⁴²

§ 6.10 The Effect of Disclaimers

Courts seem to pay at least some attention to warnings or disclaimers in published information.

[a] *Herceg: Don't Try This At Home, Kids*

An unusual fact situation, involving a text expressly discouraging reliance, gave rise to a holding of no publisher liability in *Herceg v. Hustler Magazine, Inc.*¹⁴³ The magazine article in question, entitled “Orgasm of Death,” appeared in *Hustler* magazine; its subject was “the practice of ‘autoerotic asphyxiation’” involving masturbation while hanging by the neck.¹⁴⁴

The article began with a disclaimer, an editor’s note urging that “readers seeking unique forms of sexual release DO NOT ATTEMPT THIS METHOD. The facts are presented here solely for an educational purpose.”¹⁴⁵ The plaintiffs’ decedent nevertheless apparently read the article and attempted the procedure described in it; he fatally strangled himself in the process.¹⁴⁶

The *Herceg* court ruled against the plaintiffs’ liability claims. In holding that the magazine was not a “product,” the court analogized to broadcasters’ immunity from what would otherwise be crushing liability for broadcasting violent programs and depictions of crime that inspire copycat imitation.¹⁴⁷ It distinguished “incitement” cases in which a broadcaster had urged listeners to act in an inherently dangerous manner.¹⁴⁸ The court concluded that *Hustler* was not liable for the decedent’s death.

¹⁴² *Id.*, 264 Ill. App.3d at 828, 636 N.E.2d at 672, 201 Ill. Dec. at 240.

¹⁴³ 565 F. Supp. 802 (S.D. Tex. 1983).

¹⁴⁴ *Id.* at 803.

¹⁴⁵ *Id.* at 805 n.3.

¹⁴⁶ *Id.* at 803.

¹⁴⁷ *Id.* at 803-04, citing *Zamora v. CBS*, 480 F.Supp. 199, 201 (S.D. Fla. 1979), and *Olivia N. v. NBC*, 126 Cal. App. 3d 488, 178 Cal. Rptr. 888 (1981).

¹⁴⁸ *Id.*, citing *Weirum v. RKO General, Inc.*, 15 Cal. 2d 40, 123 Cal. Rptr. 468, 539 P.2d 36 (1975).

[b] *First Equity: Please Don't Rely on Us . . .*

In the *First Equity* case,¹⁴⁹ the Second Circuit took note of a clear disclaimer and an implied disclaimer:

Information has been obtained from sources believed to be reliable, but its accuracy and completeness, and the opinions based thereon, are not guaranteed.

* * *

As every effort is made to provide accurate information in this publication, we would appreciate it if subscribers would call our attention to any errors that may occur by communicating with [Standard & Poor's].¹⁵⁰

The Second Circuit affirmed dismissal on the pleadings on the public policy grounds discussed above.

[c] *Rosenstein: Use at Your Own Risk*

Similarly, in the *Rosenstein* case discussed above, an exculpatory clause in a license agreement that had been incorporated by reference into a customer agreement was held to be enforceable against the customer:

S & P shall obtain information for inclusion in or for use in the calculation of the S & P Indexes from sources which S & P considers reliable, but *S & P does not guarantee the accuracy and/or the completeness of any of the S & P Indexes or any data included therein.* S & P MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY ANY PERSON OR ANY ENTITY FROM THE USE OF THE S & P INDEXES OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH THE TRADING OF THE CONTRACTS, OR FOR ANY OTHER USE. S & P MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE FOR USE WITH RESPECT TO THE S & P INDEXES OR ANY DATA INCLUDED THEREIN. *CBOE Rules shall expressly include the disclaimer language contained in this [paragraph].*¹⁵¹

¹⁴⁹ *First Equity Corp. v. Standard & Poor's Corp.*, 869 F.2d 175 (2d Cir. 1989).

¹⁵⁰ *Id* at 176.

¹⁵¹ *Rosenstein*, 264 Ill. App.3d at 820, 636 N.E.2d at 666-67, 201 Ill. Dec. at 234-35 (emphasis supplied).

The court noted that while exculpatory clauses were not favored and strictly construed against the benefiting party, “this plaintiff makes a conscious decision to invest his money in the trading of options subject to the exculpatory clause which is part of the CBOE Licensing Agreement and Rules.”¹⁵² The court held that the exculpatory clause was not against public policy.

[d] Possible Disclaimer Approaches

Depending on the precise business context, some or all of the following measures might be appropriate in providing information to others:

- Disclaimers in sign-on screens indicating that the information is believed to be accurate and to have been obtained from reliable sources, but that no warranty is made on that point;
- Footnotes or Web-site links indicating where data can be verified (e.g., in SEC filings);
- Care in using advertisements that might be viewed as evidence of an intent to invite reliance;
- Legends that links to other Web sites, graphic depictions of data, etc., are for convenience only and that actual data should always be checked;
- Warnings that information is subject to change (“always check the pocket part”);
- Notices of actual changes (such as the Notice to Mariners of changes to nautical charts in *De Bardeleben Marine Corp.*, discussed *supra* § 6.4[c][1]);
- Legends that data are presented for general information purposes and not necessarily as specific guides for action;
- Warnings in instructional material that circumstances may alter the case;
- Warnings in instructional material that the user is assumed already to possess certain skills, and that lack of those skills may lead to hazardous situations;
- Disclosure of known uncertainties or hazards;
- Recommendations that users consult appropriate experts or professional persons for specific advice or action;
- Signed user agreements acknowledging the foregoing.

¹⁵² *Id.*, 264 Ill. App.3d at 827, 636 N.E.2d at 672, 201 Ill. Dec. at 240.

Some of the above legends and warnings could be presented in sign-on screens or on hard copy; others might be prominently displayed in a user instruction manual or similar document.

Most if not all of these warnings will be familiar to counsel or other professionals who have included hopefully-exculpatory language in opinions and securities materials. Many situations could arise in which courts could easily disregard any or all such warnings (e.g., the Jeppesen aeronautical chart cases). Within the limits of business acceptability, they could still be cheap insurance against nuisance claims.

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CHAPTER 11

An Overview of Export-Control Restrictions on Software

D. C. Toedt III

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§ 11.1 Introduction

The U.S. export controls regime is designed to implement some simple concepts that, when implemented in the aggregate, add up to a complex system. This paper provides an overview of those concepts and how they fit together in an integrated system.

This paper borrows liberally, and often verbatim,¹ from the very readable text of the Export Administration Regulations (“EAR” or “Export Regulations”), 15 C.F.R. §§ 730 et seq. The Export Regulations are administered by the Bureau of Export Administration (“BXA”) in the Department of Commerce. They were completely reorganized in March 1996, with major encryption-related revisions in December 1996 and September 1998, among others.

Readers should consult the actual Export Regulations themselves, **including possible late-breaking changes announced in the Federal Register**, in determining what if any kind of export license is required for a specific export or whether instead a License Exception is applicable. Web site addresses for searching for applicable Federal Register announcements are set out in § 11.7.

[a] Purpose of the Export Administration Regulations

The Export Regulations are intended to serve the national security, foreign policy, nonproliferation, and short supply interests of the United States and, in some cases, to carry out its international obligations. Some controls are designed to restrict access to dual use items by countries or persons that might apply such items to uses inimical to U.S. interests. These include controls designed to stem the proliferation of weapons of mass destruction and controls designed to limit the military and terrorism support capability of certain countries. The Export Regulations also include some export controls to protect the United States from the adverse impact of the unrestricted export of commodities in short supply. *See* Control purposes, 15 C.F.R. § 730.6.

[b] Actions That May Constitute “Exports”

Under the Export Regulations, “export” means an actual shipment or transmission of items subject to the Regulations out of the United States. *See* Important EAR terms and principles, 15 C.F.R. § 734.2(b)(1). Unless a

¹ Cf. 17 U.S.C. § 505 (no copyright in works by officers or employees of the U.S. Government acting within the scope of their employment).

“License Exception” applies, the export of high technology products, including sophisticated computer software and other technical data, is likely to require a license. An export license may be needed even if the export is being made from a U.S. company to its branch office or wholly owned subsidiary located abroad.

Some actions that might not be regarded as an “export” in other contexts do constitute an export subject to the Export Regulations — for example:

- carrying a notebook computer with encryption-capable software on a business trip outside the United States;
- the release of technology to a foreign national in the United States through such means as demonstration or oral briefing;
- the return of foreign equipment to its country of origin after repair in the United States,
- shipments from a U.S. foreign trade zone;
- the electronic transmission of non-public data that will be received abroad;
- visual inspection by foreign nationals of U.S.-origin equipment and facilities;
- oral exchanges of information in the United States or abroad;
- the application to situations abroad of personal knowledge or technical experience acquired in the United States;
- technical assistance by U.S. persons with respect to encryption commodities or software.

See Coverage of more than exports, 15 C.F.R. § 730.5; Important EAR terms and principles, 15 C.F.R. § 734.2(b)(2).

[c] Other Applicable Law and Agencies

Other U.S. agencies also have their own export controls which may affect certain exports. For example:

- Exports of cryptographic devices or products designed to military specifications or pursuant to a military contract or specifically designed, modified, or configured for military applications are governed by the International Traffic in Arms Regulations (“ITAR”), 22 C.F.R. §§ 121-130, administered by the Department of State.
- The export of nuclear reactor vessels and related technology is controlled by the Nuclear Regulatory Commission.

If the exporter is uncertain whether the Department of State or the BXA has jurisdiction over the export, a written determination from the Office of Defense Trade Controls can be requested.

[d] The Export Regulations' Step-by-Step Approach

Part 732 of the Export Regulations set out a step-by-step approach to compliance, including:

- steps regarding scope of the Export Regulations.
- steps regarding the ten General Prohibitions.
- steps regarding License Exceptions.
- steps regarding paperwork such as the required Shipper's Export Declaration, Destination Control Statements, record keeping, license applications, and other requirements.

§ 11.2 Determining Whether an Action Will Be Subject to the Export Regulations At All

[a] Items Subject to the Export Regulations

Part 734 of the EAR defines the items and activities that are subject to the EAR. The definition of "items subject to the EAR" in section 734.3 includes, but is not limited to, items listed on the Commerce Control List in part 774 of the EAR.

- (1) All items in the United States, including in a U.S. Foreign Trade Zone or moving in transit through the United States from one foreign country to another;
- (2) All U.S. origin items wherever located;
- (3) U.S. origin parts, components, materials or other commodities incorporated abroad into foreign-made products, U.S. origin software commingled with foreign software, and U.S. origin technology commingled with foreign technology, in quantities exceeding de minimis levels as described in section 734.4 and Supplement No. 2 of part 734;
- (4) Certain foreign-made direct products of U.S. origin technology or software, as described in section 736.2(b)(3) of the Export Regulations. The term "direct product" means the immediate product (including processes and services) produced directly by the use of technology or software; and
- (5) Certain commodities produced by any plant or major component of a plant located outside the United States that is a direct product of U.S.-

origin technology or software, as described in section 736.2(b)(3) of the Export Regulations.

[b] Items Excluded from the Export Regulations

Section 734.4 of the Export Regulations expressly excludes a number of items from coverage, including:

- prerecorded phonograph records reproducing in whole or in part, the content of printed books, pamphlets, and miscellaneous publications, including newspapers and periodicals;
- printed books, pamphlets, and miscellaneous publications including bound newspapers and periodicals;
- children's picture and painting books;
- newspaper and periodicals, unbound, excluding waste;
- music books;
- sheet music;
- calendars and calendar blocks, paper;
- maps, hydrographical charts, atlases, gazetteers, globe covers, and globes (terrestrial and celestial);
- exposed and developed microfilm reproducing, in whole or in part, the content of any of the above;
- exposed and developed motion picture film and soundtrack; and advertising printed matter exclusively related thereto;
- publicly available technology and software, except software controlled for EI (encryption) reasons under ECCN 5D002 on the Commerce Control List, that:
 1. are already published or will be published as described in section 734.7;
 2. arise during, or result from, fundamental research, as described in section 734.8;
 3. are educational, as described in section 734.9;
 4. are included in certain patent applications, as described in section 734.10.

Note that a printed book or other printed material setting forth encryption source code is not itself deemed subject to the Export Regulations, but the same source code in electronic form or media (e.g., computer diskette or CD ROM) remains subject to the Regulations. *See* § 11.5[d] below.

§ 11.3 Determining an Exporter's Obligations Under the Export Regulations

[a] Overview of the EAR License Requirements

The EAR have four principal ways of describing license requirements:

1. The EAR may require a license to a country if an item is listed in the Commerce Control List and the Country Chart in part 738 of the Export Regulations state that a license is required for exports to that country. (Part 740 of the Export Regulations describes License Exceptions that may be available.) Part 742 of the EAR describes the licensing policies that the BXA will apply in reviewing a license application (part 754 of the EAR on short supply controls and part 746 on embargoes are self-contained parts that include the available exceptions and licensing policy).
2. A license requirement may be based on the end-use or end-user in a transaction, primarily for proliferation reasons. Part 744 of the EAR describes such requirements and relevant licensing policies and includes both restrictions on items and restrictions on the activities of U.S. persons.
3. A license is required for virtually all exports to embargoed destinations, such as Cuba. Part 746 of the EAR describes all the licensing requirements, license review policies and License Exceptions that apply to such destinations. This part also describes controls that may be maintained under the EAR to implement UN sanctions.
4. In addition, under sections 736.2(b)(9) and (10) of the Export Regulations, an exporter may not engage in a transaction knowing a violation is about to occur or violate any orders, terms, and conditions under the Regulations. Part 764 of the Regulations describes prohibited transactions with a person denied export privileges or activity that violates the terms or conditions of a denial order.

[b] The Five Controlling Facts

Once it has been determined that the Export Regulations do in fact apply, five type of facts determine the exporter's obligations:

(1) **What is it?** What an item is, for export control purposes, depends on its classification, which is its place on the Commerce Control List (see part 774 of the Export Regulations);

(2) **Where is it going?** The country of ultimate destination for an export or reexport also determines licensing requirements (see parts 738 and 774 of the Export Regulations concerning the Country Chart and the Commerce Control List).

(3) **Who will receive it?** The ultimate end-user of an export item cannot be a “bad” end-user. See General Prohibition Four (Denial Orders) in section 736.2(b)(4) and parts 744 and 764 of the Export Regulations for a reference to the list of persons that exporters may not deal with.

(4) **What will they do with it?** The ultimate end-use of a proposed export item cannot be a “bad” end-use. See General Prohibition Five (End-Use End-User) in section 736.2(b)(5) and part 744 of the Export Regulations for general end-use and end-user restrictions.

(5) **What else do they do?** Conduct such as contracting, financing, and freight forwarding in support of a proliferation project (as described in section 744.6 of the Export Regulations) may prevent an exporter from dealing with someone.

[c] The General Prohibitions

Part 746 of the 1996 revision to the Export Regulations contains a consolidated list of all the prohibitions that are contained in the Regulations

General Prohibitions One through Three apply to items as indicated on the Commerce Control List:

1. Exports and Reexports: Export and reexport of controlled items to countries .
2. Parts and Components Reexports: Reexport and export from abroad of foreign-made items incorporating more than a de minimis amount of controlled U.S. content.
3. Foreign-produced Direct Product Reexports: Reexport and export from abroad of the foreign-produced direct product of U.S. technology and software.

On the other hand, General Prohibitions Four through Ten prohibit certain activities and apply to all export items subject to the Regulations, whether or not on the Commerce Control List, unless otherwise indicated:

4. Denial Orders: Engaging in actions prohibited by a denial order.
5. End-Use / End-User: Export or reexport to prohibited end-user or end-users.
6. Embargo: Export or reexport to embargoed destinations.
7. U.S. Person Proliferation Activity: To counter the proliferation of weapons of mass destruction, the Export Regulations restrict the involvement of “United States persons” anywhere in the world in exports of foreign-origin items, or in providing services or support, that may contribute to such proliferation.

8. In-Transit: In-transit shipments and items to be unladen from vessels and aircraft.
9. Orders, Terms and Conditions: Violation of any orders, terms, or conditions.
10. Knowledge Violation to Occur: Proceeding with transactions with knowledge that a violation has occurred or is about to occur.

**[d] Determining ECCN(s) and License Requirements
for an Export from the Commerce Control List**

Practice tip: An alphabetical index of the ECCNs is available on-line at http://w3.access.gpo.gov/bxa/ear/ear_data.html.

It might be said that the heart of the Export Regulations is the Commerce Control List (CCL). As explained in part 738 of the regulations, the CCL is divided into ten “categories,” numbered as follows:

- 0--Nuclear Materials, Facilities and Equipment and Miscellaneous
- 1--Materials, Chemicals, “Microorganisms,” and Toxins
- 2--Materials Processing
- 3--Electronics
- 4--Computers
- 5--Telecommunications and Information Security
- 6--Lasers and Sensors
- 7--Navigation and Avionics
- 8--Marine
- 9--Propulsion Systems, Space Vehicles and Related Equipment

Within each category, items are arranged by “group.” Each category contains the same five groups. Each group is identified by the letters A through E:

- A--Equipment, Assemblies and Components
- B--Test, Inspection and Production Equipment
- C--Materials
- D--Software
- E--Technology

Clearly two of the most significant software-related categories are 4 (Computers) and 5 (Telecommunications and Information Security). Note, however, that *any* category might have one or more items in its associated group D (Software).

Within each group, individual items are identified by an Export Control Classification Number (ECCN). Each number consists of a set of digits and a letter.

The first digit in an ECCN identifies the general category within which the entry falls (e.g., 3A001). The letter immediately following this first digit identifies under which of the five groups the item is listed (e.g., 3A001).

The second digit differentiates individual entries by identifying the type of controls associated with the items contained in the entry (e.g., 3A001). Listed below are the Reasons for Control associated with this second digit.

- 0: National Security reasons (including Dual Use and International Munitions List) and Items on the NSG Dual Use Annex and Trigger List
- 1: Missile Technology reasons
- 2: Nuclear Nonproliferation reasons
- 3: Chemical & Biological Weapons reasons
- 9: Anti-terrorism, Crime Control, Regional Stability, Short Supply, UN Sanctions, etc.

Since Reasons for Control are not mutually exclusive, numbers are assigned in order of precedence. As an example, if an item is controlled for both National Security and Missile Technology reasons, the entry's third digit will be a ``0''. If the item is controlled only for Missile Technology the third digit will be ``1''.

The numbers in either the second or third digit (e.g., 3A001) serve to differentiate between multilateral and unilateral entries. An entry with the number ``9'' as the second digit, identifies the entire entry as controlled for a unilateral concern (e.g., 2B991 for anti-terrorism reasons). If the number ``9'' appears as the third digit, the item is controlled for unilateral purposes based on a proliferation concern (e.g., 2A292 is controlled for unilateral purposes based on nuclear nonproliferation concerns).

Each ECCN has a brief description associated with it. Following this description is the actual entry containing ``License Requirements," ``License Exceptions," and ``List of Items Controlled" sections. A brief description of each section and its use follows:

The ``License Requirements" section contains a separate line identifying all possible Reasons for Control in order of precedence, and two columns entitled ``Control(s)" and ``Country Chart." The ``Controls" header identifies all applicable Reasons for Control, in order of restrictiveness, and to what extent each applies (e.g., to the entire entry or only to certain subparagraphs). Those requiring licenses for a larger number of countries and/or items are listed first. The following is a list of all possible Reasons for Control:

- AT Anti-Terrorism
- CB Chemical & Biological Weapons
- CC Crime Control
- MT Missile Technology
- NS National Security
- NP Nuclear Nonproliferation
- RS Regional Stability
- SS Short Supply
- XP Computers

Since Reasons for Control are not mutually exclusive, items controlled within a particular ECCN may be controlled for more than one reason.

The "Country Chart" header identifies, for each applicable Reason for Control, a column name and number (e.g., CB Column 1). These column identifiers are used to direct you from the CCL to the appropriate column identifying the countries requiring a license. Part 742 of the Export Regulations contains an in-depth discussion of the licensing requirements and policies applicable to each Country Chart column.

The "License Exceptions" section in each ECCN provides a brief eligibility statement for any ECCN-driven License Exceptions that may be applicable to the transaction. This section is consulted only after determining that a license is in fact required (based on an analysis of the entry and the Country Chart).

The brief eligibility statement in the License Exceptions section is provided to assist the exporter in deciding which ECCN-driven License Exception related to the particular item and destination should be explored prior to submitting an application. The word "Yes" (followed in some instances by the scope of Yes) appears next to each available ECCN-driven License Exception. "N/A" will be noted for License Exceptions that are not available within a particular entry. If one or more License Exceptions appear to apply to a transaction, it is necessary to consult part 740 of the EAR to review the conditions and restrictions applicable to each available License Exception.

[e] Example of ECCN-Based License Requirements

As an example, extracts from one ECCN entry and from the Country Chart are shown below:

5D002 Information Security ``Software''
License Requirements

Reason for Control: NS, AT, EI

Control(s) Country Chart

NS applies to entire entry--NS Column 1

AT applies to entire entry--AT Column 1

EI controls apply to encryption software transferred from the U.S. Munitions List to the Commerce Control List consistent with E.O. 13026 of November 15, 1996 (61 FR 58767) and pursuant to the Presidential Memorandum of that date. Refer to Sec. 742.15 of the EAR.

REASON FOR CONTROL

Countries	National Security		Anti-Terrorism	
	NS1	NS2	AT1	AT2
Algeria	X	X		
Sudan			X	X
Syria			X	

This ECCN entry indicates that Information Security "Software" is controlled in Category 5 (Telecommunications and Information Security), Group D (Software), for Reason for Control 0 (National Security).

A license is required for export of such software to any country with an "X" in NS (National Security) Column 1 (abbreviated NS1 above) or AT (Anti-Terrorism) Column 1 (abbreviated AT1 above). Moreover, a license is required to any country, except Canada, if the software in question has not been removed from the "EI" (encryption) license requirement after BXA review, as discussed in § 11.5 below.

§ 11.4 Some License Exceptions That May Be Available for Software Exports

Several License Exceptions are available for software. Perhaps the principal exception is **TSU**, which authorizes exports and reexports of “mass market” software subject to the General Software Note in Supplement No. 2 to part 774 of the Export Regulations. License Exception TSU is available to all destinations (*except* Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria) for release of software that is generally available to the public by being:

- a. Sold from stock at retail selling points, without restriction, by means of:
 1. Over the counter transactions;
 2. Mail order transactions; or
 3. Telephone call transactions; *and*
- b. Designed for installation by the user without further substantial support by the supplier.

The TSU License Exception does **not** apply, however, to encryption software controlled for EI reasons under ECCN 5D002. Such software may become eligible after a one-time BXA review according to the provision of section 742.15(b)(1) of the Export Regulations as discussed in § 11.5 below.

The **TSR** License Exception License Exception permits exports and reexports of software that is controlled to the ultimate destination for national security reasons only and that is identified by “TSR--Yes” in the appropriate entries on the CCL, *provided that* the software or technology is destined to Country Group B. (See Supplement No. 1 to part 740.) A written assurance is required from the consignee before exporting or reexporting under this License Exception. Note that the TSR License Exception is **not** available for exports of encryption software controlled under ECCN 5D002.

The **TMP** exceptions permit temporary exports of:

- “tools of the trade,” e.g., for software installed on a business traveler’s laptop computer under section 740.9(a)(2)(i). This variation of the TMP License Exception can be used even for software that would be otherwise subject to the new EI restrictions on encryption software;
- beta-test software under section 740.9(c). This form of the TMP License Exception cannot be used for software subject to the EI encryption restrictions

61 Fed. Reg. 68572, 68575 (1996).

The **KMI** License Exception applies under section 740.8 to financial-specific encryption software and commodities of any key length, after a one-time that are restricted by design (e.g., highly field-formatted with validation procedures, and not easily diverted to other end-uses) for financial applications to secure financial transactions, for end-uses such as financial transfers or electronic commerce. Such exports and reexports are eligible to all destinations except Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria. *See* 63 FR 50516 at 50617 (1998) (interim rule).

The **ENC** License Exception applies to certain encryption software, as discussed below.

§ 11.5 Export Treatment of Encryption Software

For several years one of the hottest topics in the export-controls field was that of the tight restrictions on American exports of encryption technology. In the past year, however, the Clinton Administration has dramatically loosened those restrictions.

[a] What is Encryption?

The following explanation of cryptography fundamentals is adapted almost verbatim from Judge Marilyn Hall Patel's opinion in *Bernstein v. United States Department of State*, 945 F. Supp. 1279, 1282-83 (N.D. Cal. 1996) (holding that ITAR licensing scheme for cryptographic software did not include sufficient procedural safeguards and therefore was an unconstitutional prior restraint on "speech," i.e., the publication of the source code of the software in question) (citations and footnotes omitted), *aff'd*, 176 F.3d 1132, *rehearing en banc granted*, 192 F.3d 1308 (9th Cir. 1999).

In a technical sense, *encryption* involves running a readable message known as "plaintext" through a computer program that translates the message according to an equation or algorithm into unreadable "ciphertext." *Decryption* is the translation back to plaintext when the message is received by someone with an appropriate "key." The message is both encrypted and decrypted by compatible keys. (In symmetric cryptography the encryption key is the same as the decryption key. Asymmetric, or public-key, cryptography uses different keys for encryption and decryption and generally only the encryption key is disclosed.)

The uses of cryptography are far-ranging in an electronic age, from protecting personal messages over the Internet and transactions on bank ATMs to ensuring the secrecy of military intelligence. In a prepublication copy of a report done by the National Research Council ("NRC") at the request of the Defense Department on national cryptography policy, the NRC identified four major uses of cryptography: ensuring data integrity, authenticating users, facilitating nonrepudiation (the linking of a specific

message with a specific sender) and maintaining confidentiality.

Once a field dominated almost exclusively by governments concerned with protecting their own secrets as well as accessing information held by others, the last twenty years has seen the popularization of cryptography as industries and individuals alike have increased their use of electronic media and have sought to protect their electronic products and communications.

Not all encryption-related technology is subject to strict export controls. The encryption-related ECCNs specifically exclude from control certain types of technology that have encryption-like features but do not permit users to encrypt their own messages. Examples include:

- personalized smart cards;
- equipment containing “fixed” data compression or coding techniques, where “fixed” means that the coding or compression algorithm cannot accept externally supplied parameters (e.g., cryptographic or key variables) and cannot be modified by the user;
- decryption functions specially designed to allow the execution of copy-protected “software”, provided the decryption functions are not user-accessible;
- access control equipment, such as automatic teller machines, self-service statement printers or point of sale terminals, that protects password or personal identification numbers (PIN) or similar data to prevent unauthorized access to facilities but does not allow for encryption of files or text, except as directly related to the password or PIN protection;
- cryptographic equipment specially designed and limited for use in machines for banking or money transactions, such as automatic teller machines, self-service statement printers or point of sale terminals.

[b] The Clinton Administration’s Progressive Loosening of Encryption Export Restrictions

The subject of export controls on encryption technology has been highly controversial. Beginning in the fall of 1996, over vociferous opposition from some industry segment, the Clinton Administration moved toward implementing a system in which encryption-technology vendors would build in “backdoor” capabilities to permit government interception and monitoring of encrypted materials. In 2000, however, the administration did a stunning about-face.

[1] The Controversial 1996 Rules

On October 1, 1996, the Clinton Administration announced a plan envisioning a worldwide key management infrastructure, with the use of key escrow and key recovery encryption software. On November 15, the President directed that all encryption items controlled on the U.S. Munitions List (except those specifically designed, developed, configured, adapted, or modified for military applications) be transferred to the Commerce Control List. *See Executive Order 13026*, 61 Fed. Reg. 58767 (1996). On December 30 of that year, the BXA published an interim final rule as an amendment to the Export Regulations. *See* 61 Fed. Reg. 68572-68587 (1996).

By and large, the U.S. software industry was quite unhappy with that turn of events. It was said that U.S. software and hardware companies would be at a decided competitive disadvantage with foreign companies, who are free to sell much more powerful encryption technology in foreign markets than are American firms. It was also noted that foreign customers might be reluctant to buy American encryption technology that could be “cracked” by the U.S. Government, and that the lack of secure, encrypted communications capability could be a threat to dissenters in countries with repressive governments.

[2] The January 2000 About-Face: More Possibilities for Encryption Exports

In response to heavy pressure from computer- and software industry groups, in late 1999 and 2000 the Clinton Administration significantly liberalized the rules for exporting encryption technology. In January 2000, the Commerce Department published a regulation implementing the Clinton Administration’s update to encryption export policy announced in September, 1999. The major components of this new regulation were as follows.

(The text below is adapted largely verbatim from a BXA press release. *See <http://www.bxa.doc.gov/Encryption/July2KProposedRegSum.html>.*)

Global exports to individuals, commercial firms or other non-government end-users: Any encryption commodity or software, including components, of any key length can now be exported under a license exception after a technical review to any non-government end-user in any country except for the seven state supporters of terrorism. Exports previously allowed only for a company’s internal use can now be used for any activity, including communication with other firms, supply chains and customers. Previous liberalizations for banks, financial institutions and other approved sectors are continued and subsumed under the license exception. Exports to government end-users may be approved under a license.

Global exports of retail products: A new category of products called “Retail encryption commodities and software” can now be exported to any end user (except in the seven state supporters of terrorism). Retail encryption

commodities and software are those which are widely available and can be exported and reexported to anyone (including any Internet and telecommunications service provider), and can be used to provide any product or service (e.g., e-commerce, client-server applications, or software subscriptions). BXA will determine which products qualify as retail through a review of their functionality, sales volume, distribution methods. Products that are functionally equivalent to products classified as retail will also be considered retail. Finance-specific, 56-bit non-mass market products with a key exchange greater than 512 bits and up to 1024 bits, network-based applications and other products which are functionally equivalent to retail products are considered retail products.

Internet and Telecommunications Service Providers: Telecommunications and Internet service providers can obtain and use any encryption product under this license exception to provide encryption services, including public key infrastructure services for the general public. Provision of services specific to governments (e.g., running a virtual private network for a government agency) will, however, require a license

Global Exports of Unrestricted Encryption Source Code: Encryption source code which is available to the public and which is not subject to an express agreement for the payment of a licensing fee or royalty for commercial production or sale of any product developed with the source code may be exported under a license exception without a technical review. The exporter must submit to the Bureau of Export Administration a copy of the source code, or a written notification of its Internet location, by the time of export. Foreign products made with the unrestricted source code do not require review and classification by the U.S. Government for reexport. This license exception should apply to exports of most "open source" software.

Global Exports of Commercial Encryption Source Code and Toolkits: Encryption source code which is available to the public and which is subject to an express agreement for the payment of a licensing fee or royalty for commercial production or sale of any product developed using the source code (such as "community source" code) may be exported under a license exception to any end-user without a technical review. At the time of export, the exporter must submit to the Bureau of Export Administration a copy of the source code, or a written notification of its Internet address. All other source code can be exported after a technical review to any non-government end-user. U.S. exporters may have to provide general information on foreign products developed for commercial sale using commercial source code, but foreign products developed using U.S.-origin source code or toolkits do not require a technical review.

U.S. Subsidiaries: Any encryption item (including commodities, software and technology) of any key length may be exported or reexported to foreign subsidiaries of U.S. firms without a technical review. Foreign nationals working in the United States no longer need an export license to work for

U.S. firms on encryption. This extends the policy adopted in last year's update, which allowed foreign nationals to work for foreign subsidiaries of U.S. firms under a license exception. All items produced with encryption commodities, software, and technology authorized under this license exception will require a technical review.

Export Reporting: Post-export reporting is required for certain exports to a non-U.S. entity of products above 64 bits. However, no reporting is required if the item is a finance-specific product or is a retail product exported to individual consumers. Additionally, no reporting is required if the product is exported via free or anonymous download, or is exported from a U.S. bank, financial institution or their subsidiaries, affiliates, customers or contractors for banking or financial use. Reporting helps ensure compliance with our regulations and allows us to reduce licensing requirements.

[3] The July 2000 Action: Wide-Open Exports to "EU + 8"

Then on July 17, 2000, the Clinton Administration announced still more updates to its encryption policy. The major components of these proposed changes were as follows.

(The text below is adapted largely verbatim from a BXA press release. See <http://www.bxa.doc.gov/Encryption/July2KProposedRegSum.html>.)

Exports to the European Union (EU) plus an additional eight countries: U.S. exporters will be able to export and reexport all encryption items, except cryptanalytic products and their related technology, immediately to EU member states, Australia, Czech Republic, Hungary, Japan, New Zealand, Norway, Poland and Switzerland without a license (i.e., under a license exception). This policy change is consistent with the Administration's promise in the update in January to ensure U.S. exporters would not disadvantaged by the EU's "license-free" zone.

Release of Products Incorporating Short-Range Technologies: Products that incorporate components providing cryptographic functionality limited to short-range radio-link wireless technology will be exported freely, without a technical review or reporting requirements. These are consumer products, for example, audio devices, cameras and videos, computer accessories, hand held devices, mobile phones and consumer appliances (e.g., refrigerators) that communicate with each other and over the Internet.

Exports of Open Cryptographic Interfaces: U.S. products that use an open cryptographic interface (OCI) will be permitted to be exported to the EU+8 under license exception and without review of the foreign product. Further, U.S. exporters may enable, e.g., digitally sign, foreign products developed for any country under license exception and without review of that product.

Releasing Certain Products from U.S. Content Requirements: The update will allow BXA to make certain encryption commodities and software (e.g.,

browsers, operating systems and similar products) eligible for de minimis treatment when incorporated into foreign-made products.

Global Exports of Encryption Source Code: Proprietary encryption source code, which is not considered publicly available, may now be exported under a license exception. Exporters must submit to the Bureau of Export Administration a copy of the source code, or for public source code-its Internet location-by the time of export. This further liberalizes the Administration's treatment of encryption source code. Additionally, the draft clarifies that object code compiled from source code that is considered publicly available is treated the same as the source code.

[c] Summary of Current Export Possibilities for Encryption Technology

The chart and text below, adapted from a BXA Web site, provides additional guidance concerning transfers of encryption technology controlled under ECCN 5E002. It is not all inclusive and is only meant as general guidance for exporters. See <http://www.bxa.doc.gov/Encryption/tech.htm>.

The chart includes guidance on the release of 5E002 encryption technology to foreign nationals under the "deemed export" rule found at § 734.2(b)(2) of the Export Administration Regulations (EAR). The inclusion of "contractors" and "consultants" within the meaning of "employees", as that term is used in the relevant EAR provisions, is intended to address export control issues only and does not have any bearing on labor or employment matters. Please refer to the EAR, in particular § 740.17, for specific details, and Part 772 for the definition of a U.S. subsidiary.

Also, exports or transfers of encryption technology to foreign nationals from Cuba, Iran, Iraq, Libya, North Korea, Sudan or Syria are not permitted without written authorization from the U.S. government.

EXPORTER	END-USERS	LICENSING MECHANISM	TECHNICAL REVIEW
U.S. Company	U.S. Company's foreign subsidiary	ENC *	No
U.S. Company	Foreign employees, including Contractors and Consultants ¹ , in the U.S.	ENC	No

EXPORTER	END-USERS	LICENSING MECHANISM	TECHNICAL REVIEW
U.S. Company (owned by foreign parent)	Foreign employees, including Contractors and Consultants ¹ of a U.S. company, in the U.S.	ENC	No
U.S. Company (U.S. or owned by foreign parent)	Foreign Entity	ELA / IL *	Yes
U.S. Company (owned by foreign parent)	Foreign Parent	ELA / IL	Yes
U.S. Company (owned by foreign parent)	Foreign employees of foreign parent working in the U.S.	ELA / IL	Yes

* Notes:

ELA-Encryption Licensing Arrangement
 ENC-License Exception ENC
 IL-Individual License

1. Consistent with the EAR provisions, it is BXA's intent to include self-employed natural person (not a juridical person, e.g., not a company) within this end-user category.

The chart below, from <http://www.bxa.doc.gov/Encryption/lechart1.htm>, a BXA Web site, identifies license exceptions that are applicable to encryption items. It is not all inclusive and is meant only as initial guidance for exporters. For additional information, please refer to the appropriate sections of Part 740 of the Export Administration Regulations to ascertain other provisions, criteria and restrictions of each license exception.

LICENSE EXCEPTION	CLASS OF PRODUCT	COUNTRY END-USERS	REPORTIN G?	RESTRICTIONS
LVS - §740.3	Component s and spare parts for previously authorized exports	Previously approved end- users	Previously approved destinations	No \$500 or less
KMI - §740.8	Key recovery encryption products	All	Global, except T7	Yes Review and classification by BXA
TMP - §740.9	Encryption products	Exporters or exporter's employees (also designated sales reps for demonstration)	For tools of trade, global, except E:2 countries and Sudan. For exhibition and demonstration only in country group B	No - No beta test software - Return in 1 year - Must retain effective control - Includes laptop with pre-loaded encryption - For exhibition and demonstration-no more than 120 days in one location
RPL - §740.10	Component s, parts, tools or test equipment	All	Global, except T7	No Refer to regulations
GOV - §740.11	Encryption items	U.S. Government personnel and official offices	Global	No For personal use
TSU - §740.13	Unrestricted encryption source code (open source code)	All	Global, may not knowingly export to T7	No - Notification at time of export - Considered publicly available and not subject to licensing fees or royalties
BAG - §740.14	Encryption products	U.S. persons, e.g., citizens or permanent residents	Global, except T7	No - Personal ownership - Not intended for sale - Includes laptops w/ pre-loaded encryption

LICENSE EXCEPTION	PRODUCT	CLASS OF END-USERS	COUNTRY SCOPE	REPORTIN G?	RESTRICTIONS
APR - §740.16	Encryption products	All	Export must be from an A:1 country and can only be destined to another A:1 country or a country in group B that is not also included in groups D:2, D:3, or D:4	No	Refer to the regulations - restrictions vary
ENC §740.17(a)(1)	Encryption items (includes technology)	U.S. Subsidiaries (foreign employees, including contractors & consultants)	Global, except T7	No	<ul style="list-style-type: none"> - No review - Developed items require review & classification by BXA prior to reexport, resale or transfer
ENC - §740.17(a)(2)	Encryption commodities	All, EXCEPT foreign software and component s	Global, except T7	Yes	<ul style="list-style-type: none"> - Review and classification by BXA - Requires a license to export to foreign government end-users - Telcos & ISPs must obtain a license to provide services specific to government end-users
ENC "retail" products - §740.17(a)(3) (i), (ii),(iii),(iv)	Encryption commodities	All, INCLUDING foreign software and component s	Global, except T7	Yes, except exports to individual consumers	<ul style="list-style-type: none"> - Review and classification by BXA - Product(s) must meet criteria specified in §740.17(a)(3)(i)
ENC "retail" products - §740.17(a)(3) (vi)	Finance-specific encryption products	All	Global, except T7	No	<ul style="list-style-type: none"> - Review and classification by BXA - Products must be highly field formatted with validation procedures

LICENSE EXCEPTION	CLASS OF PRODUCT	COUNTRY END-USERS	REPORTIN G?	RESTRICTIONS
ENC "retail" products - §740.17(a)(3) (vii)	Non-mass market 56-bit products with key exchanges between 512-1024 bits	All	Global, except T7	No Review and classification by BXA
ENC - §740.17(a)(5) (i)	Commercial encryption source code (community source code)	All	Global, may not knowingly export to T7	Yes; only if foreign product developed for commercial sale - Notification at time of export - Considered publicly available and subject to licensing fees or royalties
ENC - §740.17(a)(5) (ii), (iii)	Commercial encryption source code and general purpose toolkits	All, EXCEPT foreign government end-users	Global, except T7	Yes - Review and classification by BXA - Does not contain an Open Cryptographic Interface (OCI)

[d] The First Amendment and the Distinction Between Printed and Electronic Encryption Information

Some sticky First Amendment issues arise when source code to encryption software is proposed to be published in both printed and electronic form. This issue has arisen in at least three cases; it survives even though much encryption software has been transferred to the Commerce Control List and thus is no longer subject to State Department jurisdiction under the ITAR. *See* § 11.1[c]. The Clinton Administration has taken the position that while a printed book or other printed material setting forth encryption source code is not itself subject to the Export Regulations, nevertheless encryption source code in electronic form or media (e.g., computer diskette or CD ROM) remains subject to the Regulations. *See* 15 C.F.R. § 734.3(b)(2), (3).

[1] Bernstein v. State Department

In the *Bernstein* case, a Bay-Area federal district court held that the export control regulations in question were unconstitutional; the Ninth Circuit panel affirmed, but the full court subsequently granted en-banc

review. *Bernstein v. United States Department of State*, 945 F. Supp. 1279 (N.D. Cal. 1996), *aff'd*, 176 F.3d 1132, *rehearing en banc granted*, 192 F.3d 1308 (9th Cir. 1999).

Bernstein wanted to preclude the government from prosecuting him if he taught a course to a class including foreign nationals, using as materials the source code of an encryption program he had written and some textual explanations of the code. A district court held that the licensing scheme of the International Traffic in Arms Regulations (ITAR) affecting cryptographic software was "a paradigm of standardless discretion," 945 F. Supp. at 1289, 1296, and therefore an unconstitutional prior restraint because it did not include sufficient procedural safeguards.

Bernstein also wanted a preliminary injunction preventing the government from prosecuting him if he posted the source code on the Web for his students to access. The district court was less comfortable with this request; it denied the requested injunction without prejudice and all but expressly suggested that the parties enter into a stipulation that the plaintiff would make the Web materials inaccessible internationally. *See id.*

A panel of the Ninth Circuit subsequently affirmed, "find[ing] that the EAR regulations (1) operate as a prepublication licensing scheme that burdens scientific expression, (2) vest boundless discretion in government officials, and (3) lack adequate procedural safeguards. Consequently, we hold that the challenged regulations constitute a prior restraint on speech that offends the First Amendment." 176 F.3d at 1135. But the full court subsequently granted a petition for rehearing en banc, which at this writing is pending. *See* 192 F.3d 1308.

A recent exchange of letters between Bernstein's attorney and the BXA, concerning the impact on the case of the January 2000 revision to the export regulations, can be found at <http://cryptome.org/bernstein-bxa.htm>.

[2] *Karn v. State Department*

In *Karn* another district court flatly rejected a similar challenge to the ITAR. *Karn v. United States Department of State*, 925 F. Supp. 1 (D.D.C. 1996), *remanded for reconsideration in view of intervening changes in export regulations*, 107 F.3d 923 (D.C. Cir. 1997) (table). The plaintiff had asked the State Department for a "commodity jurisdiction" determination confirming that his book on encryption technology was not subject to the department's jurisdiction under the ITAR. The State Department agreed in the case of the book, but stated that its determination did not apply to the computer disk, containing an electronic copy of source code printed in the book, that was referenced in the book and available from the author. *See* 925 F. Supp. at 3.

The plaintiff then submitted a separate commodity-jurisdiction request for the source-code disk. The State Department responded that the disk was a "defense article" and therefore was subject to the department's ITAR

jurisdiction, even though the book containing a printed copy of the same source code was not. *Id.*

The *Karn* plaintiff filed suit challenging the State Department's action under the Administrative Procedure Act (APA) as well as on constitutional grounds. The court granted the defendants' motion to dismiss, characterizing the dispute as relating to a "political question" that must be resolved by the legislative and executive branches. *Id.*

The *Karn* decision reportedly was the subject of "general dismay" among the academic community. *See Bernstein*, 945 F. Supp. at 1291 n.10. The *Bernstein* court later quoted a quip repeated in a report on national cryptography policy prepared by the National Research Council ("NRC") at the request of the Defense Department: "They think terrorists can't type?" *Id.* (citation omitted).

The D.C. Circuit subsequently remanded *Karn* for reconsideration by the district court in view of intervening regulatory changes. *See* 107 F.3d 923.

[3] *Junger v. Daley*

A third similar case is *Junger*, in which a district judge initially rejected a professor's constitutionality challenge to the export regulations on grounds that encryption source code is inherently functional and thus not protected by the First Amendment. The Sixth Circuit reversed, however, holding that source code is "an expressive means for the exchange of information and ideas about computer programming" that is protected by the First Amendment. The appellate court remanded for reconsideration of the professor's constitutional challenge. *Junger v. Daley*, 8 F. Supp.2d 708 (N.D. Ohio 1998) (denying *Junger*'s motion for summary judgment and granting government's cross-motion), *reversed and remanded*, 209 F.3d 481, 485 (6th Cir. 2000).

§ 11.6 Penalties for Export Violations

As complicated and time consuming as export control compliance is, exporters must achieve compliance; substantial fines and prison terms can be imposed for violations of the Export Regulations. Even without demonstrating culpability on the part of the exporter, administrative officials may impose substantial fines for each violation, condition subsequent export licensing upon payment of penalties, and suspend or revoke the privilege to export.

§ 11.7 For Additional Information

The text of export-related Code of Federal Regulations (CFR) provisions and Federal Register announcements is available at a Government Printing Office (GPO) Web site, http://w3.access.gpo.gov/bxa/ear/ear_data.html.

To search an on-line version of the CFR or of the Federal Register, see http://www.access.gpo.gov/su_docs/aces/aces140.html.

Additional BXA-provided information about encryption-related export regulations is at <http://www.bxa.doc.gov/Encryption/guidance.htm>.

An alphabetical index of the ECCNs is available on-line at http://w3.access.gpo.gov/bxa/ear/ear_data.html.

Parts 748 and 750 of the EAR provide information on license submission and processing. Part 752 of the EAR provides for a Special Comprehensive License that authorizes multiple transactions. If a license application is denied, part 756 of the EAR provides rules for filing appeals. Part 758 of the EAR describes the requirements for clearance of exports. Part 762 of the EAR sets out recordkeeping requirements. Parts 764 and 766 of the EAR deal with violations and enforcement proceedings. Part 768 of the EAR provides rules for determining foreign availability of items subject to controls.

CHAPTER 13

Software Licenses (*excerpts only*)

D. C. Toedt

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§ 13.01 Introduction

[Intentionally omitted]

[a] Licenses are Long-Term Transactions

In its idealized form, a software license relationship looks much like a simple business transaction: The licensee pays a stated consideration. In return, the licensee receives one copy of the software from the licensor or other authorized source. The licensee quickly installs the software on its

- ¹ Discussions and annotated sample provisions for software development, software distribution, and source code escrow arrangements, also taken from the Model Provisions, can be found in Chapters 14 through 16 respectively. While the Model Provisions reflect suggestions and comments from numerous practicing attorneys, they have not been endorsed or approved by the ABA nor any component thereof.
- ² The enforceability of so-called “shrink-wrap” license agreements is open to question. *See* text accompanying notes 242 et seq.

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computer system. The software is intuitive to use; the licensee's single authorized user immediately grasps how to use it. The licensor receives the occasional glowing testimonial letter from the licensee, but otherwise never hears from the licensee again. And they all lived happily ever after

Software licenses often do not resemble neat, cut-and-dried transactions of this kind. A great many real-world issues can complicate the fairy tale. To name but a few:

- *Installation Issues.* At the very outset, licensees can have trouble installing the software. Their computer systems can be one of a seemingly infinite number of combinations of hardware (motherboards, CPUs, network connections, other add-in cards), and software (operating systems, network operating systems, drivers, other application software).
- *Training Issues.* Software is not always intuitive to use. Licensees' employees may need a little or a lot of training. Moreover, as time goes on, new employees may need to be trained.
- *Bug Fixes.* It is commonly accepted in the software industry that there is no such thing as bug-free software. Even software that is bug-free under initial use conditions may have problems as equipment is upgraded, other application programs are added, etc. Who will bear the risks associated with such bugs is often a significant issue.

[b] The License as Business Relationship

A more realistic way of viewing a software license is as an on-going relationship. As time goes on, the licensor and licensee will encounter a variety of situations relating to the software. Each party will have what Tom Arnold refers to as "legitimate needs and greeds." The license agreement

between the parties should take into account those situations and the parties' needs and greeds.

§ 13.02 Basic Law: The Uniform Commercial Code

A great many software license transactions will be covered by Article 2 of the Uniform Commercial Code (UCC).³ Not that licensors intend it that way; most license documents, usually drafted by licensors, go to great pains to disclaim any transfer of ownership in the software or any copy thereof to the licensee. (See, for example, Section 103.4 in the Model Provisions below.)

Most courts have a strong inclination to deem software licenses as being governed by Article 2 of the UCC. Applying a “predominant element” test, they examine the transaction in its entirety to identify its most significant element. If the predominant element is the sale of goods, with the rendering of services being only incidental (even when the software is being custom-developed), then the agreement is deemed to involve a transaction in goods and therefore to be subject to Article 2.⁴ Judges apparently prefer the familiarity of the

³ Selected provisions of the UCC are set out in the Appendix at the end of the book.

⁴ See, e.g., *Advent Systems Ltd. v. Unisys Corp.*, 925 F.2d 670, 673-76 (3d Cir. 1991) (under Pennsylvania law, definition of “goods” is wide-ranging; software as distributed is tangible, analogous to musical performances distributed on compact discs); *RRX Industries, Inc. v. Lab-Con, Inc.*, 772 F.2d 543, 545-46 (9th Cir. 1985); *Analysts Int'l Corp. v. Recycled Paper Products, Inc.*, No. 85 C 8637, 1988 WL 12917 (N.D. Ill. June 19, 1987) (denying motion for summary judgment dismissing claim for breach of implied warranty; holding that UCC applied); *Chatlos Systems Inc. v. National Cash Register Corp.*, 479

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UCC to the less-developed body of law that might otherwise apply.⁵ (A few courts, however, have held that custom-software development contracts were for services, not goods, and therefore were not governed by the UCC.⁶)

(..continued)

F.Supp. 738 (D.N.J. 1979) *aff'd*, 670 F.2d 1304 (3rd Cir. 1982); *Triangle Underwriters, Inc. v. Honeywell Inc.*, 457 F.Supp. 765, 767 (E.D.N.Y. 1978), *modified*, 604 F.2d 737 (2d Cir. 1979); *Delorise Brown, M.D., Inc. v. Allio*, 86 Ohio App. 3d 359, 361-62, 620 N.E.2d 1020, 1021-22 (1993) (affirming judgment in favor of vendor); *Systems Des. & Mgmt Inf., Inc. v. Kansas City P.O. Empl. Credit Union*, 14 Kan. App. 2d 266, 788 P.2d 878, 881-83 (1990) (software in suit was "goods"; buyer purchased only a reproduction of the programmer's skill, and was interested only in the outcome of running the program and whether it would perform the functions for which purchased); *Communications Groups, Inc., v. Warner Communications, Inc.*, 138 Misc. 2d 80, 527 N.Y.S.2d 341, 343-44 (N.Y. Civ. Ct. 1988) (denying motion to dismiss UCC claim; custom-software contract was for goods, not services); *Neilson Business Equipment Center, Inc. v. Monteleone*, 524 A.2d 1172, 1174-75 (Del. 1987) (citing cases; UCC was applicable to sale of computer system with software to be customized for user's needs).

- 5 See *Advent Systems*, 925 F.2d at 673-76 (holding that benefits of certainty and other policy reasons support applying well-established UCC principles to software).
- 6 E.g., *Micro-Managers, Inc. v. Gregory*, 147 Wis. 2d 500, 434 N.W.2d 97, 100 (1988) (affirming judgment against software development customer; contract for initial development of software was for services, not goods, and UCC did not apply), *following Data Processing v. L. H. Smith Oil Corp.*, 492 N.E.2d 314 (Ind. App.), *aff'd on rehearing*, 493 N.E.2d 1272 (Ind. App. 1986).

[a] Express Warranties Under the UCC

An express warranty is defined in the UCC: “Any affirmation of fact or promise made by the seller to the buyer which relates to the goods *and becomes part of the basis of the bargain* creates an express warranty that the goods shall conform to the affirmation or promise.”⁷ In particular, “[a]ny description of the goods which is made part of the basis of the bargain creates an express warranty that the goods shall conform to the description.”⁸

Absent a proper integration clause, the affirmation of fact can be external to the sales agreement, e.g., in sales literature or sales-force oral description.⁹ “It is not necessary to the creation of an express warranty that the seller use formal words such as ‘warrant’ or ‘guarantee’ or that he have a specific intention to make a warranty, but an affirmation merely of the value of the goods or a statement purporting to be merely the seller’s opinion or commendation of the goods does not create a warranty.”¹⁰

⁷ UCC § 2-312(1)(a) (emphasis supplied).

⁸ *Id.* §2-312(1)(b)

⁹ See, e.g., *Lathan and Assoc., Inc., v. William Raveis Real Estate, Inc.*, 218 Conn. 297, 307, 589 A.2d 337, 342 (1991) (affirming judgment in favor of buyer; vendor’s misrepresentation that it would develop a software system suitable for the plaintiff’s needs constituted an express warranty that would be enforced notwithstanding disclaimer of warranties).

¹⁰ UCC § 2-312(2).

[b] UCC Implied Warranties

The UCC provides that sellers are deemed to make a variety of implied warranties unless a proper disclaimer is used:

[1] Warranty of Title

Under UCC § 2-312, a seller of goods implicitly warrants that the title transferred is good and free from liens or encumbrances of which the buyer has no knowledge. The implied warranty of title can only be disclaimed “by specific language or by circumstances which give the buyer reason to know that the person selling does not claim title in himself or that he is purporting to sell only such right or title as he or a third person may have.”¹¹ Courts generally construe this provision strictly, and tend not to give effect to imprecise general disclaimers.¹²

[2] Warranty of Noninfringement

The implied warranty of noninfringement arises in every sale of goods by “a seller who is a merchant regularly dealing in goods of the kind.”¹³ A merchant is “a person who deals in goods of the kind *or otherwise by his occupation holds himself out as having knowledge or skills peculiar to the practices or goods* involved in the transaction.”¹⁴ (A buyer who furnishes the seller with specifications, however, must hold the seller

¹¹ UCC § 2-312(2).

¹² See, e.g., *Sunseri v. RKO Stanley Warner Theatres, Inc.*, 374 A.2d 1342 (Pa. Super. Ct. 1977) (disclaimer that seller is transferring only such ownership interest as he has is ineffective as a disclaimer of the implied warranty of title).

¹³ UCC § 2-312(3).

¹⁴ UCC § 2-104(1) (emphasis supplied).

harmless for claims arising out of the seller's compliance with the specifications.¹⁵⁾

[3] Warranty of Merchantability

A seller who is "a merchant with respect to goods of [the] kind [being sold]" (see the previous paragraph for a definition of "merchant") is deemed to make an implied warranty of merchantability.¹⁶ "Merchantability" is defined as meaning, *inter alia*, that the goods in question pass without objection in the trade "under the contract description" (e.g., absent agreement a spreadsheet program probably cannot be sold as a word processor), are fit for the "ordinary purpose" for which such goods are used, and are adequately contained, packaged, and labeled as the sale agreement may require.¹⁷ The implied warranty of merchantability can be excluded or modified by language which mentions merchantability and, if in writing, is "conspicuous."¹⁸

[4] Warranty of Fitness for a Particular Purpose

The implied warranty of fitness for a particular purpose arises "[w]here the seller at the time of contracting has reason to know any particular purpose for which the goods are required and that the buyer is relying on the seller's skill or judgment to select or furnish suitable goods"¹⁹ A

¹⁵ UCC § 2-312(3).

¹⁶ UCC § 2-314(1).

¹⁷ UCC § 2-314(2).

¹⁸ UCC § 2-316(2); *see also* note 163 (discussion of conspicuousness requirement).

¹⁹ UCC § 2-315.

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disclaimer of fitness for a particular purpose must be in a conspicuous writing.²⁰

[5] Warranties from Course of Dealing or Usage

The UCC provides that “[u]nless excluded or modified ..., other implied warranties may arise from course of dealing or usage of trade.”²¹

[c] Incidental and Consequential Damages

One of the major concerns of any software licensor is the prospect of consequential damages arising from defects in the software. Section 2-715(2)(a) of the UCC defines the consequential damages available to a buyer as including “any loss resulting from general or particular requirements and needs of which the seller at the time of contracting had reason to know and which could not reasonably be prevented by cover or otherwise.”²²

Section 2-719(3) provides, however, that “[c]onsequential damages may be limited or excluded unless the limitation or exclusion is unconscionable.”²³

[d] Limitation of Remedies

Section 2-719 of the UCC provides that parties to a sales contract “may limit or alter the measure of damages recoverable under this Article, as by limiting the buyer’s

²⁰ UCC § 2-316(2); *see also* note 163 (discussion of conspicuousness requirement).

²¹ UCC § 2-314(3).

²² UCC § 2-715(2)(a).

²³ UCC § 2-719(3).

remedies to return of the goods and repayment of the price or to repair and replacement of non-conforming goods or parts”²⁴ If the agreement expressly so states, resort to a specified remedy is exclusive.²⁵

Caveat: The same section provides that “[w]here circumstances cause an exclusive or limited remedy to fail of its essential purpose, remedy may be had as provided in this Act,”²⁶ possibly including incidental and consequential damages.²⁷ An exclusive remedy can be deemed to fail of its essential purpose if “goods which buyer purchases are not substantially defect free, and in addition seller is unwilling or unable to conform goods to contract.”²⁸

Most courts have upheld exclusions of consequential damages (absent unconscionability) even after an exclusive remedy fails of its essential purpose.²⁹ Not all courts take that position, however. In one opinion, the Ninth Circuit

²⁴ UCC § 2-719(1)(a).

²⁵ *Id.* § 2-719(1)(b).

²⁶ *Id.* § 2-719(2).

²⁷ UCC §2-719(2).

²⁸ *Office Supply Co. v. Basic/Four Corp.*, 538 F. Supp. 776 (E.D. Wis. 1982); *Chatlos Systems, Inc. v. National Cash Register*, 479 F. Supp. 738 (D.N.J. 1979) (holding that remedy limited to correction of defects that appeared within 60 days after furnishing of computer program had failed of its essential purpose).

²⁹ See, e.g., *v. Basic/Four Corp.*, 538 F. Supp. 776, 788 (E.D. Wis. 1982) (even after failure of exclusive remedy, buyer is limited to expectation damages if exclusion of incidental and consequential damages was not unconscionable); *Chatlos Systems, Inc. v. National Cash Register*, 479 F. Supp. 738 (D.N.J. 1979).

held that “the default of the seller [was] so total and fundamental that its consequential damages limitation was expunged from the contract.”³⁰ That court even went so far as to say that “[u]nconscionability is irrelevant in determining whether to invalidate a consequential-damages limitation.”³¹

[e] The UCC as Creator of Fact Issues

Article 2 its present form is thought by some to be too much of a “blunt instrument,” in the words of a respected Silicon Valley attorney. It should be clear from the summary above that many provisions of Article 2 leave much, perhaps too much, to be determined after the fact if the parties do not cover the right bases in their agreement.

It is almost a certainty that in a software licensing dispute, trial counsel will attempt to show the existence of a genuine issue of material fact on any of a variety of points. A quick, inexpensive summary judgment could easily be impossible. The parties would then enjoy the delights of the discovery process and of trial.

The UCC thus could be considerably less than ideal for use in governing a negotiated software license relationship. As a result, counsel drafting license agreements normally attempt to “write around” it. One approach to doing so is

³⁰ *RRX Industries, Inc. v. Lab-Con, Inc.*, 772 F.2d 543, 547 (9th Cir. 1985) (citation omitted).

³¹ *Id.* at 547 n.4. See also *Ragan Corp. v. Kearney & Trecker Corp.*, 912 F.2d 619, 625 (3d Cir. 1990) (failure of exclusive remedy negated damages disclaimer); *Caudill Seed and Warehouse Co., Inc. v. Prophet 21, Inc.*, 123 F. Supp. 2d 826, 832 (E.D. Pa. 2000) (same); *Amsan LLC v. Prophet 21, Inc.*, 2001 WL 1231819 (E.D. Pa. Oct. 15, 2001) (same defendant, same judge, same holding as *Caudill Seed* opinion)

discussed in Section 13.05 below and is reflected in the Model Provisions.

§ 13.03 The Uniform Computer Information Transactions Act (UCITA)

In the 1990s, the National Conference of Commissioners on Uniform State Laws (NCCUSL) undertook a major project, spearheaded by Professor Raymond T. Nimmer of the University of Houston School of Law, to develop a proposed new Article 2B for the UCC, covering software licensing and other information-technology transactions. Political opposition caused the proposed new Article to be recast as the standalone Uniform Computer Information Transactions Act (UCITA). Even UCITA, however, continues to run into stiff opposition from the plaintiffs' bar, consumer groups, some large corporations, and various other constituencies who want to be able to hold software companies' feet to the fire. At this writing, UCITA has been enacted only in Maryland and Virginia.

§ 13.04 Other Laws Affecting Software Licensing

Several other bodies of law can affect a software license transaction. This section briefly reviews some of them.

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[d] Bankruptcy Issues

Bankruptcy of a party imposes a new set of constraints on a license relationship. Selected portions of the Bankruptcy Code that are applicable to software licenses are reproduced in the Appendix to this book.

[1] Automatic Stay

Section 362 of the Bankruptcy Code automatically stays all action that was or could have been commenced against the bankruptcy debtor prior to commencement of the case in bankruptcy. That includes judicial and nonjudicial action.⁴⁴

A party in interest can file a request for relief from the stay for cause, among other reasons.⁴⁵ If a request for relief is filed, the stay terminates automatically in 30 days unless the bankruptcy court orders the stay to continue in effect after notice and a hearing.⁴⁶ The bankruptcy court can grant such relief as is necessary to prevent irreparable damage to the interest of an entity in property if such interest will suffer such damage before there is an opportunity for notice and a hearing.⁴⁷

An individual injured by any willful violation of the automatic stay “*shall* recover actual damages, including costs

(..continued)

providers was not an unlawful tying arrangement because “Data General may lawfully license MV/ADEX to whomever it chooses”).

⁴⁴ See 11 U.S.C. § 362(a).

⁴⁵ *Id.* § 362(c).

⁴⁶ *Id.* § 362(d).

⁴⁷ *Id.* § 362(f).

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and attorneys' fees, and, in appropriate circumstances, may recover punitive damages.”⁴⁸

[2] Rejection of the License Agreement

Section 365 of the Bankruptcy Code in essence lets a bankruptcy trustee (or debtor-in-possession) decide whether the debtor will continue to be bound by its executory contracts and unexpired leases. Subject to the court’s approval:

- The trustee can decide to assume an executory contract or unexpired lease,⁴⁹ subject to curing any existing defaults and providing adequate assurance of future performance under the contract or lease.⁵⁰
- Alternatively, the trustee can reject the contract or lease. A rejected contract or lease is treated as having been breached immediately before the date of the commencement of the bankruptcy case⁵¹ — which has the practical effect of immunizing the debtor from liability for the breach of contract, and frequently relegates the other party to the status of an unsecured claimant for damages.⁵²

[3] Assignment of Agreements

Normally, if a bankruptcy trustee (or debtor-in-possession) assumes an executory contract or unexpired lease and provides adequate assurance of future performance, then s/he can assign it to another party that is able to perform under the agreement — e.g., sell the contract

⁴⁸ *Id.* § 362(h).

⁴⁹ 11 U.S.C. § 365(a).

⁵⁰ *Id.* § 365(b).

⁵¹ *Id.* § 365(g).

⁵² 11 U.S.C. § 502(g).

or lease to raise cash. The trustee has this power regardless whether the contract or lease contains a no-assignment clause or applicable law prohibits assignment.⁵³

The trustee may not assign the contract or lease, however, if (a) “applicable law excuses a party, other than the debtor, to such contract or lease from accepting performance from or rendering performance to an entity other than the debtor or the debtor in possession,” and (b) the other party does not consent to the assignment.⁵⁴ That exception has been held to prevent bankruptcy debtors from assigning licenses. As explained by one California federal district court in 1994, “subsection 365(f) operates to delete a nonassignability clause from a contract and render it ‘silent’ regarding assignment, but subsection 365(c) restores the nonassignability if applicable law holds such ‘silent’ contracts to be nonassignable.”⁵⁵ Where patent and copyright licenses are concerned, the court noted, “applicable law” governing assignability of a license agreement is *federal* law, to the exclusion of contrary state-law provisions, and federal law prohibits assignment of patent or copyright licenses without licensor consent.⁵⁶

⁵³ 11 U.S.C. § 365(f).

⁵⁴ *Id.* § 365(c).

⁵⁵ *In re CFLC, Inc.*, 174 B.R. 119, 120-21, 26 Bankr. Ct. Dec. 175 (N.D. Cal. 1994) (affirming patent owner’s objection to debtor’s proposed assignment of nonexclusive license), *citing Matter of Midway Airlines Inc.*, 6 F.3d 492, 495 (7th Cir. 1993) and *In re Pioneer Ford Sales, Inc.*, 729 F.2d 27, 29 (1st Cir. 1984).

⁵⁶ *Unarco Indus., Inc. v. Kelley Co.*, 465 F.2d 1303, 1305 (7th Cir. 1972) (holding that assignability of patent license is controlled by federal law), *cert. denied*, 410 U.S. 929, 93 S. Ct. 1365 (1973); *see also Harris v. Emus Records Corp.*, 734 F.2d 1329, 1733 (9th Cir. 1984) (applying *Unarco* rationale in holding

[4] Continued Possession of “Intellectual Property”

Until the 1988 Bankruptcy Code amendments, a licensee of intellectual property was largely out of luck if the licensor went into bankruptcy proceedings. Under section 365 of the Code, if the bankruptcy debtor is a licensor under an executory license agreement, then the licensor can reject the license agreement and terminate the licensee's rights under the agreement.⁵⁷ Two courts had held that this provision permitted a licensor to reject its license agreement and prevent the licensee from using the licensed technology.⁵⁸

(..continued)

that federal law prohibits assignment of copyright license without consent of copyright owner); *PPG Industries, Inc. v. Guardian Industries Corp.*, 597 F.2d 1090 (6th Cir.) (following *Unarco*; patent license nonassignable without consent), *cert. denied* 444 U.S. 930, 100 S.Ct. 272, 62 L.Ed.2d 187 (1979); *In re Alltech Plastics, Inc.*, 71 B.R. 686 (W.D.Tenn. 1987) (applying *Unarco*; holding that bankruptcy trustee did not have power to assign patent license absent consent from licensor); *all cited in CFLC, Inc.*, 174 B.R. at 121-22.

⁵⁷ See text accompanying notes 49 et seq.

⁵⁸ Rejection of license agreements as “executory contracts” was approved in at least two cases that provided the impetus for the 1988 Bankruptcy Code amendments, discussed in the text. See *Lubrizol Enterprises, Inc. v. Richmond Metal Finishers, Inc.*, 756 F.2d 1043 (4th Cir. 1985) (reversing district court and reinstating bankruptcy-court order permitting debtor-licensor to reject license agreement granting licensee a nonexclusive right to use patent-pending metal-coating process), *cert. denied sub nom. Lubrizol Enterprises, Inc. v. Canfield*, 475 U.S. 1057 (1986); *In re Logical Software, Inc.*, 66 B.R. 683 (Bankr. D. Mass. 1986) (approving software licensor's rejection of exclusive distribution license, even though distributor likely would be put out of business), *vacated and remanded on other*

In response, Congress enacted the 1988 amendments to the Code. Under new section 365(n), if the trustee rejects an executory contract under which the debtor is a licensor of a right to “intellectual property,” then the licensee can elect either

- to treat the contract as terminated, or
- to retain its rights under the contract and any “agreement supplementary to such contract” (e.g., a source code escrow agreement) to the intellectual property, including embodiments of the intellectual property (e.g., licensed copies of computer software).⁵⁹ Thus, a software licensee can retain its right to use the licensed software; it can also retain its right to obtain a copy of source code from an escrow agent pursuant to an escrow agreement that is supplementary to the license agreement.

The term “intellectual property” is broadly defined in section 101 of the Bankruptcy Code as a trade secret; an invention, process, design, or plant protected under the Patent Act; a patent application; a plant variety; a work of authorship protected under the Copyright Act; or a mask work protected under the Semiconductor Chip Protection Act.⁶⁰ Trademarks were intentionally excluded from the

(..continued)

grounds sub nom. Infosystems Technology v. Logical Software, Inc., 1987 WL 13805 (D. Mass. June 25, 1987)

⁵⁹ 11 U.S.C. § 365(n).

⁶⁰ 11 U.S.C. § 101(35A); *see In re Matusalem*, 158 B.R. 514, 521-22, 29 USPQ2d (BNA) 1519 (Bankr. S.D. Fla. 1993) (dictum; observing that secret process and formulas used to make rum products were “intellectual property” and therefore rejection of franchise agreement would not terminate franchisee’s right to use same; denying debtor’s motion to reject franchise agreement on other grounds).

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definition, because “[trademark license] contracts raise issues beyond the scope of this legislation.”⁶¹

To retain its rights, however, the licensee must continue to pay royalty amounts that come due (while on the other hand the licensor is permitted to escape any maintenance obligations it may have).⁶² A licensee is unlikely to avoid such payment obligations just because the obligations are called something other than a “royalty.” As the Ninth Circuit explained:

Section 365(n) has struck a fair balance between the interests of the bankrupt and the interests of a licensee of the bankrupt’s intellectual property. The bankrupt cannot terminate and strip the licensee of rights the licensee had bargained for. The licensee cannot retain the use of those rights without paying for them. It is essential to the balance struck that *the payments due for the use of the intellectual property should be analyzed as “royalties,”* required by the statute itself to be met by the licensee who is enjoying the benefit of the bankrupt’s patents, proprietary property, and technology.⁶³

⁶¹ S. REP. NO. 100-505, 100th Cong., 2d Sess. 7 (1988), *reprinted in* [1989] U.S. CODE CONG. & ADMIN. NEWS 3200

⁶² 11 U.S.C. § 365(n)(2).

⁶³ *Encino Business Mgmt, Inc. v. Prize Frize, Inc. (In re Prize Frize, Inc.)*, 32 F.3d 426, 428, 31 U.S.P.Q.2d 1861 (9th Cir. 1994) (emphasis supplied); .

[5] No *Ippo Facto* Termination

Section 365(e) of the Bankruptcy Code in effect renders void most so-called *ipso facto* clauses. Section 365(e) states that neither an executory contract or unexpired lease of the debtor, nor any right or obligation thereof, can be terminated or modified at any time after the commencement of the bankruptcy case solely because of a provision in such contract or lease that is conditioned on:

- the insolvency or financial condition of the debtor at any time before the closing of the case;
- the fact of commencement of the case under this title;

or

- the appointment of or taking possession by a trustee in a bankruptcy case or a custodian before such commencement.⁶⁴

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§ 13.05 The Software License Agreement as Business Plan

Virtually every software license agreement can profitably be thought of as a business plan. A modest investment of time in what-if brainstorming, reduced to writing in the license agreement, can prevent much grief down the road.

[a] Start-Up

The license/development agreement preferably specifies who will take what steps to get the software up and running. In most software license transactions, the licensor merely provides the licensee with a copy (or multiple copies) of the software and documentation in question. This is sometimes coupled, however, with a plan for customization of the software or perhaps even development of new software from scratch, by the licensor and sometimes by the licensee.

[b] Normal Operations

In virtually every software license agreement, the licensor and licensee agree on a moderately detailed plan by which the licensee is to engage in specified licensed activities. The licensed activities may include e.g., use of the software for internal use, distribution of copies, development of improvements, etc. The plan may set out both negative requirements (e.g., number of simultaneous users; restrictions on copying or modification) and/or affirmative requirements (e.g., desired performance goals such as sales targets in distribution-type licenses).

Almost incidentally, the licensor agrees not to sue the licensee even though the licensed activities technically infringe the licensor's legal exclusionary rights.⁸⁰

[c] Trouble and *Big* Trouble

Virtually every business relationship encounters trouble (and occasionally *big* trouble) at some point in time. Software license relationships are no different; the licensor and/or licensee can encounter a variety of troublesome situations such as:

- Failure of the software to perform as expected because of bugs, changes in hardware, changes in supporting software (e.g., operating systems), etc.;
- Third-party damage claims arising from failure of the software;
- Interference by malicious code such as viruses;
- Interference by third-party claimants under the intellectual-property laws, e.g., patent or copyright owners;
- Breach of restrictive covenants by the licensee.

A software license agreement preferably defines how various events will be handled if they occur. The parties thereby agree to allocate specified costs and risks between them.

Sometimes it is impossible to specify in advance how particular costs or risks should be allocated. In such event, the license agreement preferably specifies a *process* for deciding how to handle the situation.

⁸⁰ A transfer of title to the software may go beyond a mere covenant not to sue, and convey some or all of those legal rights to an assignee in their entirety. See Chapter 20 (title transfers).

[d] Shut-Down

Every business relationship comes to an end. Software license agreements should provide for an orderly wrap-up of the license relationship.

§ 13.06 Warranty and Remedy Issues

Perhaps the most intensely negotiated provisions in software license agreements are those concerning risk allocation, particularly warranties, remedies, and limitations or exclusions thereof. Some of the major risks to be allocated fall into three categories: Nonperformance by the software; interference with the licensee's use of the software by surreptitious code (e.g., "viruses" or "time bombs"); and interference by a third party claiming infringement of a copyright, patent or trade secret.

(In one sense, the term "warranty" is a misnomer and perhaps even misleading. As a practical matter, a warranty is simply a covenant that if certain events occur, the warrantor will take certain specified actions, pay money, etc. Most agreements attempt to limit the warranties that are made and the remedies available for breach. Casual use of the term "warranty," however, can give clients a false sense of security. It might make business sense for lawyers and clients simply to drop the notion of a warranty altogether, and to focus instead on the performance obligations that will follow if particular events occur.)

[a] Performance Warranties

The most immediate concern of the typical software licensee is whether the software "does what it is supposed to do." While some license agreements set out an "as is war-

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rancy”⁸¹ (which combined with the appropriate disclaimers is no warranty at all), comparatively few do so. At least in negotiated licenses, some kind of performance warranty is usually necessary as a practical matter. Few licensees will pay for as-is licenses.

On the other hand, few *licensors* wish to be insurers of their customers’ businesses. A customer’s use of software can put the licensor into harm’s way in a big way. Consider the canonical worst-case scenario: A fully-loaded passenger aircraft crashes into a skyscraper at rush hour. One of the defendants in the subsequent mass-tort litigation turns out to be the small software company that developed a standard library of number-crunching functions. That library had been incorporated in the CAD software used to design the aircraft. The plaintiffs allege that defects in the number-crunching software caused the design of the aircraft to be defective and thereby caused the crash.

The typical licensor has *no* desire to carry anything approaching that level of risk. The typical licensee wants some assurance that the licensor is taking its obligations seriously. A compromise of some kind obviously is necessary.

In the software license provisions below, the basic approach to performance warranties and remedies is as follows.

- The licensor makes an “as-documented” performance warranty. That is, the licensor warrants (subject to certain exclusions and a remedy limitation) that the software will perform in accordance with the user documentation, and perhaps also in accordance with any functional specifications written into the agreement (e.g., response-time

⁸¹ See note 177 (“as is” warranty disclaimer).

specifications). This practice takes advantage of the fact that user documentation is normally fairly specific about what the software can and cannot do under what circumstances.

- The licensor commits to providing a specified level of corrective-maintenance service if problems arise.
- The license agreement defines a(n exclusive) pull-the-plug “Backup Remedy,” negotiated in advance, that comes into play if corrective maintenance fails and additionally in certain other events (e.g., a third party successfully asserts an infringement claim that materially interferes with Licensee’s bargained-for use of the Licensed Software, and Licenser is unable to make arrangements to avoid the claim). The Backup Remedy can take the form of “cover” damages (i.e., the cost of procuring or developing substitute software, perhaps including retraining and data conversion costs); liquidated damages; or capped direct damages, to name but a few possibilities.
- As permitted by the UCC, all other performance warranties (including the implied warranties of merchantability and fitness for a particular purpose) are conspicuously disclaimed,⁸² and all other remedies are excluded.⁸³

Most courts appear to be willing to enforce provisions of this kind, at least in a negotiated license agreement between parties who do not have grossly uneven bargaining power.⁸⁴

The underlying concept of the Backup Remedy is that of risk allocation. A software licensor normally is in the business of “selling” software, not business insurance. The

⁸² See notes 163, 176-183.

⁸³ See notes 163, 186.

⁸⁴ See note 176, 186.

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licensor's pricing typically reflects that fact. Accordingly, the license agreement will normally limit the risk that the licensor must assume, *vis a vis* the licensee, in a pull-the-plug situation.

Of course, the Backup Remedy can be drafted to include all direct and indirect damages and expenses suffered by the licensee. Indeed, some licensees will legitimately take a negotiating stance like that of one client of the author's. The software for which a license was being negotiated was mission-critical to the client in a very time-sensitive business; in the unlikely event that the software not only failed completely but that all corrective attempts failed as well, the client was probably going to be out of business. A high-level executive of the client remarked to his opposite number in the negotiation — only partly in jest — that "if we go down because of your software, we're taking you with us."

[b] No Viruses, Time Bombs, Etc.

The licensee's concern for performance usually includes a healthy fear of "viruses" and other potentially disruptive program routines in the software designed to permit unauthorized access; to disable, erase, or otherwise harm software, hardware, or data; or to perform similar actions. A related licensee concern is that the software not include any undisclosed licensor self-help routines such as "time bombs" that disable the software after a certain time period has passed (thus giving the licensor considerable leverage in any disputes with the licensee).

The Model Provisions include express warranties that the licensed software contains (1) no surreptitious code, e.g., viruses, and (2) no *undisclosed* self-help code, e.g., time bombs. Many if not most licensors should be able to give a flat-out warranty of this kind, because they will be in control of their source code and/or can check out third-party execu-

table code (e.g., compiler libraries, which are preexisting program routines for managing screen displays, performing mathematical computations, and the like) for viruses and the like. Furthermore, regardless of the scope of other warranties (e.g., relating to performance or noninfringement), most licensees will expect their licensors to “stand behind” their code at least to the extent of such a warranty.

[c] Noninfringement of Third-Party Rights

A sticky negotiation point can be: Who will bear the risk that a third party might seek to enjoin the licensee’s use of the software because that use allegedly infringes a patent, copyright, or trade secret right owned by the third party?

Licensees frequently assert that the licensor should “stand behind” its product. It is often impossible for licensors to know with any reasonable certainty, however, that some portion of the licensed software was not developed by an employee while working for a former employer, as in the *Plains Cotton* case.⁸⁵ Similarly, in the unreported *Computer Associates v. Goal Systems* case of July, 1990, according to trade-journal accounts an employee of the defendant included in the defendant’s software some routines that he had written while formerly employed by the plaintiff; reportedly the case settled quickly after the plaintiff executed an ex parte seizure of the defendant’s software under the Copyright Rules.⁸⁶ Still another software company likewise found itself at the business end of a Computer

⁸⁵ *Plains Cotton Coop. Assn. v. Goodpasture Computer Service, Inc.*, 807 F.2d 1256, 1262-64 (5th Cir) (affirming denial of preliminary injunction), *cert. denied*, 484 U.S. 821, 108 S. Ct. 80 (1987).

⁸⁶ 17 U.S.C.A. foll. § 501.

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Associates complaint for the same reason, in *Computer Associates v. Altai*.⁸⁷

Nor can a licensor readily know whether some third-party patent might dominate the licensed software—a U.S. patent can issue years after the filing of the underlying patent application, and the application is kept secret until issuance.⁸⁸ This means that a dominating patent application could be pending without the licensor's knowledge, although any counterpart foreign applications likely would be published 18 months after the U.S. application's filing date. (At this writing, legislation is pending in Congress to provide for publication of pending U.S. patent applications in similar fashion.)

Another difficulty is that the damages awarded for, say, patent infringement might be all out of proportion to the software license fee—potentially the patent owner's lost profits⁸⁹ and by statute not less than a reasonable royalty,⁹⁰

⁸⁷ *Computer Associates International, Inc., v. Altai, Inc.*, 775 F. Supp. 544, 553-54 (E.D.N.Y.) (Pratt, Circuit Judge of Second Circuit, sitting by designation) (granting judgment of noninfringement; noting that the allegedly infringing source code in the defendant's software traced its origins to a copy of the plaintiff's source code in the possession of an employee of the defendant, who was a former employee of the plaintiff), *affirmed in pertinent part*, 982 F.2d 693 (2d Cir. 1992).

⁸⁸ See 35 U.S.C. § 122.

⁸⁹ E.g., *Kalman v. Berlyn Corp.*, 914 F.2d 1473, 1484 (Fed. Cir. 1990) (enumerating factors to be proved by patentee to be entitled to lost profits).

⁹⁰ 35 U.S.C. § 284; see generally, e.g., *Trell v. Marlee Electronics Corp.*, 912 F.2d 1443, 1445 (Fed. Cir. 1990); *Polaroid Corp. v. Eastman Kodak Co.*, 16 U.S.P.Q. (BNA) 1481 (D. Mass 1990)

perhaps trebled in the case of willful infringement or other exceptional circumstances.⁹¹ The licensor could take the position that it is selling software, not insurance.

One possible compromise is for the licensor to give a non-infringement warranty solely with respect to (1) copyrights and trade secrets, because the licensor is in the best position to minimize the risk of noninfringement, and (2) issued U.S. patents (and/or published patent applications in specified non-U.S. jurisdictions, e.g., the European Patent Office). That approach at least permits the licensor to search the patent files; it does not, however, limit the licensor's exposure in case of a problem.

Another approach is that taken by the Model Provisions: the licensor gives a *no-knowledge representation* about infringement, instead of an outright noninfringement warranty. The licensor is nevertheless required to defend the licensee against infringement charges—something most licensors will want to do anyway because of the implicit threat to their business. If the licensee is enjoined from using the software, the licensor has the option of converting the licensee to a noninfringing version (by negotiating a license with the successful plaintiff, by changing the software to make it noninfringing, or by acquiring substitute noninfringing software).

(..continued)

(total award, based on lost profits and reasonable royalty plus prejudgment interest, in excess of \$900 million).

⁹¹ See 35 U.S.C. § 284 (court may increase damages up to three times amount found or assessed); *cf. Modine Mfg. Co. v. Allen Group, Inc.*, 917 F.2d 538, 543 (Fed. Cir. 1990), *cert. denied*, 111 S. Ct. 2017 (1991) (affirming denial of enhanced damages notwithstanding jury finding of willful infringement, and holding that statute authorizes but does not mandate increased damages).

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If the licensor fails to do any of these, the licensee has the option of terminating the license and invoking the back-up remedy described above, but the licensor is not otherwise liable to the licensee. This does not relieve the licensee from all threat of harm, but at least both parties have a better idea of what their respective risks might be.

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