



FENWICK & WEST LLP



Performing an Intellectual Property Audit of Copyrights

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FENWICK & WEST LLP

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I. Introduction

For many companies in the computer industry and other information-related industries, intellectual property may comprise a substantial, if not the major, part of the company's assets. The company therefore has a crucial interest in ensuring that appropriate steps are taken to create, perfect and maintain intellectual property assets. Creditors lending to such companies also have an important interest in ensuring that such intellectual property assets are preserved and perfected, as creditors often wish to take security interests in the intellectual property assets of the company.

A growing number of companies, both large and small, are acquiring high-technology companies or the proprietary rights to state-of-the-art products. Such acquisitions quickly make available technology that would have taken years to develop internally and allow companies to move into market niches not otherwise available to them.

Acquiring technology-based assets, however, is somewhat more complicated than acquiring more traditional tangible assets such as buildings, finished goods or raw materials. Although these traditional assets can be physically inspected for most defects that would seriously affect their value, the value of a technology-based asset often depends more on how well protected it is by intellectual property rights and how well it functions. Companies acquiring intellectual property assets—from consultants by assignment, in mergers and acquisitions, and by license—must therefore ensure that they can acquire good and unencumbered title to intellectual property rights and that such title is perfected and priority established vis a vis subsequent transferees.

Companies that own intellectual property assets, companies that desire to acquire such assets from a third party, and creditors lending to technology-based companies all have a need for a reliable mechanism to determine the ownership, scope and status of intellectual property rights. An “intellectual property audit” of the company provides such a mechanism and enables the detection of defects in intellectual property rights that may affect the value of the company's assets so that corrective measures may be taken.

An intellectual property audit is appropriate before a significant acquisition of technology—through merger, stock purchase or other acquisition of assets, or by license or the taking of a security interest. An audit should also be performed in the early stages of a technology company's formation to institute systematic procedures for protecting and perfecting intellectual property rights, and at critical junctures in a company's life cycle to ensure the continuing adequacy of such procedures and to detect defects therein.

An intellectual property audit is also appropriate in conjunction with development of, or due diligence in connection with the acquisition of, a major new product, particularly if such product carries with it a demonstrable risk of infringement of the intellectual property rights

of others. Such risk might be especially high, for example, in the development of a “clone,” “workalike” or “compatible” product. An audit might be necessary to institute, or to review the adequacy of, “clean room” procedures used in the development of such a product to reduce the risk of infringement of third party rights. Clean room procedures are discussed in detail below.

Finally, an intellectual property audit of limited scope may be necessitated in response to a change or new development in the law. For example, a new case decision expanding or clarifying the scope of protection afforded by an intellectual property right—such as the scope of copyright protection for computer program user interfaces or the scope of patent protection for computer program algorithms—may necessitate review of existing products for possible infringement of the rights of others.

The remaining sections of this article provide a detailed illustration of the types of areas of inquiry that can and should be examined in the course of an intellectual property audit using copyrights as an example. Copyrights have been selected for use as an illustrative example for the following reasons:

- The full range of the general types of areas of inquiry that might be the subject of an intellectual property audit—issues of ownership, recordation of transfers, perfection of security interests, compliance with statutory formalities, infringement of third party rights, and potential defenses to charges of infringement—can be readily illustrated using copyrights as an example.
- Copyrights have long been and continue to be one of the most important forms of intellectual property protection for software. Copyrights will remain of central importance for the protection of works emerging out of new areas of technology, such as multimedia works that combine software technology with copyrighted visual, textual and other artistic content, and digitized works distributed through the Internet and other on-line channels.
- The copyright case law is ripe with many important decisions in the last few years that increase the need for fulsome audits and affect the scope and types of issues that must be addressed in the audit.

II. Audit of Copyrights

A. Ownership Issues: Background

One of the most important areas of investigation with respect to an audit of copyrights is that of ownership. The most fertile areas for potential problems occur when consultants have been involved in the creation, in whole or in part, of a company's product. Use of consultants is quite common in the computer and entertainment industries. When a consultant is involved, at least three potential ownership problems arise:

- The consultant may own title to the work under the “work made for hire” doctrine.
- The consultant may be a joint owner of the work under rules of copyright joint authorship.
- The consultant may be able to exercise termination rights afforded by the copyright statute, enabling the consultant to terminate any transfer of title or license rights after approximately thirty-five years.

Each of these problems is discussed in a separate subsection below. There has been a great deal of important new case law in the last few years relating to copyright ownership issues. Because of its importance to intellectual property audits of copyright ownership issues, this case law is discussed at some length.

B. Ownership Issues: The Work Made for Hire Doctrine

1. *The Concept of “Authorship”*

Section 201 of Title 17 of the United States Code (the copyright statute) provides that copyright in a work of authorship vests initially in the “author” of the work. “Author” is a legal term of art:

- **Works Created by Individuals.** For works created by individuals not acting within the scope of employment of another or acting as a commissioned author, the individual is the “author” of the work and the owner of the copyright, which comes into existence automatically upon creation of the work and its fixation in a tangible form.
- **Joint Works.** The authors of a joint work are co-owners of copyright in the work. Section 101 of the copyright statute defines a “joint work” to be 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.” Any joint author may exploit the copyright in the joint work without permission of the other author(s), but absent an agreement otherwise, each author must account to the other author(s) for any profits derived from exploitation of the work.

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- **Contributions to Collective Works.** Copyright in each separate contribution to a collective work is distinct from copyright in the collective work as a whole, and vests initially in the author of the contribution. In the absence of an express transfer of the copyright or of any rights under it, the owner of copyright in the collective work is presumed to have acquired only the privilege of reproducing and distributing the contribution as part of that particular collective work, any revision of that collective work, and any later collective work in the same series.

 - **Works Made for Hire.** The “work made for hire” doctrine constitutes the major statutory exception to the fundamental principle that copyright ownership vests in the individual who writes a work. In the case of a “work made for hire” (defined in the next subsection), the employer or other person for whom the work was prepared is considered the “author,” and therefore the copyright owner, of the work.

2. Statutory Definition of “Work Made for Hire”

Section 101 contains a two-prong definition of a “work made for hire”:

- (1) a work prepared by an employee within the scope of his or her employment; or
- (2) a work specially ordered or commissioned for use:
 - [a] as a contribution to a collective work,
 - [b] as a part of a motion picture or other audiovisual work,
 - [c] as a translation,
 - [d] as a supplementary work,
 - [e] as a compilation,
 - [f] as an instructional text,
 - [g] as a test,
 - [h] as answer material for a test, or
 - [i] as an atlas,

if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.

The principal issues under the first prong of this definition are whether the individual preparing the work for the hiring party qualifies as an “employee” of the hiring party, and, if so, whether the work was prepared “within the scope of employment.” Each of these issues is discussed below.

With respect to the second prong of the “work made for hire” definition, the Second Circuit recently held in *Playboy Enterprises, Inc. v. Dumas* that the agreement that a commissioned work will be a work made for hire must be reached before the work is created. The requirement that such agreement be in writing may, however, be satisfied by a later writing confirming the earlier agreement. But the Seventh Circuit has required the writing before the commissioned work is created.

The Second Circuit further held in the *Dumas* case that in order for a work to be “specially ordered or commissioned” within the meaning of the second prong, the hiring or commissioning party need not have or exercise artistic control over the work. Rather, the issue is whether the “motivating factor” in producing the work was the commissioning party’s request, an inquiry which is essentially equivalent to asking whether the work was created at the “instance and expense” of the commissioning party.

3. The Meaning of “Employee”

The United States Supreme Court, in *Community for Creative Non-Violence v. Reid*, narrowed significantly the circumstances under which a third party who is not a regular, full-time employee can be considered an “employee” within the meaning of the first prong of the work made for hire definition.

Before the Supreme Court’s decision in *CCNV v. Reid*, the lower federal courts had developed three distinct approaches to judging when a third party could qualify as an “employee” within the meaning of the first prong of the work made for hire definition:

- **The “Control” Test.** The most liberal approach to the work made for hire doctrine was developed by the Second Circuit, which adopted a rule under which even an independent consultant could be an “employee” within the meaning of the work made for hire definition if the independent consultant “were sufficiently supervised and directed by the hiring party.” Other courts adopting the Second Circuit’s approach had applied the test in one of two ways. Some required that the hiring party have had only the right to control the day to day specifics of the creation of the work. Others required that the hiring party have actually exercised day to day control in the authoring of the work.

- **The Test of Common Law Agency.** The Fifth Circuit and the D.C. Circuit adopted an “agency” test, holding that in order to qualify as an “employee” within the work

made for hire doctrine, the party producing the work at issue must be an “employee” of the hiring party within the meaning of common law agency rules. Under common law agency rules, the right to control the work of the hired party is one factor to be considered in establishing an agency relationship, but is not by itself determinative, as it was under the “control” test developed by the Second Circuit.

- **The Strict Literal Approach.** The Ninth Circuit adopted a strict literal approach, ruling that to qualify as a work made for hire, the party creating the work must be a formal, salaried employee (in the ordinary sense of the term) of the party requesting that the work be prepared.

4. The CCNV Case

In 1985, the Community for Creative Non-Violence (CCNV) entered into an oral agreement with Reid, a sculptor, to produce a statue dramatizing the plight of the homeless. After the completed work was delivered, the parties, whose agreement did not address copyright in the sculpture, filed competing copyright registration certificates. CCNV claimed copyright under the work made for hire doctrine.

The Supreme Court, noting the divergent split that had developed in the lower courts concerning the meaning of the two prong definition of work made for hire, concluded that general common law agency principles must be first applied to determine whether the work was prepared by an “employee” or independent consultant. If prepared by an “employee,” then the first prong of the work made for hire definition governs, and the employer is deemed the “author” and copyright owner of the work. If under common law agency rules the hired party does not qualify as an employee, then the work can be a work made for hire if and only if it satisfies the requirements of the second prong of the definition. Thus, the Supreme Court concluded, contrary to the approach of some of the lower federal courts before *CCNV*, that the two prongs of the work made for hire definition are mutually exclusive.

The Supreme Court noted that the following factors are among those that are relevant under rules of common law agency in determining whether a hired party qualifies as an “employee,” although the Court noted that this list of factors is not exhaustive, nor is any one factor determinative:

[1] the hiring party’s right to control the manner and means by which the work is accomplished;

[2] the skill required;

[3] the source of the instrumentalities and tools;

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

The *CCNV* test is to be applied retroactively so as to affect all past and existing relationships among authors and hirers.

5. The Need for Written Assignments from Consultants

The *CCNV* case significantly narrows the circumstances under which a hired work will be deemed to be a “work made for hire.” Most independent computer programmers and computer consultants will probably not fall within the definition of “employee” under common law agency rules. Moreover, software does not fit generally into any of the nine enumerated categories of the second prong of the definition of work made for hire. Although some programs prepared by independent consultants might be characterized as a “translation” (from one computer language to another, for example), as a “supplementary work” (such as an “add-in” program that works with another program), as part of an audiovisual work (when a consultant creates screen displays, for example), or as a collective work (when a consultant creates a segregable module, such as interface code that is distinct from the main “engine” code), many—indeed probably a majority—of computer programs prepared by independent consultants will probably not fall into the nine enumerated categories of the second prong of the definition.

The practical result is that most independent consultants will own the copyright in the work that they produce, absent a written agreement that transfers ownership of the copyright to the hiring party. Accordingly, it is crucial that written agreements assigning ownership of the

work and all intellectual property rights therein to the hiring party be executed before commencement of any work on a project by an independent consultant.

An intellectual property audit of copyrights should ensure that such written agreements exist. If they do not, remedial action must be taken to secure them.

C. Ownership Issues: Joint Authorship

As noted earlier, section 101 of the copyright 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.”

A majority view has developed in recent cases that in order to qualify as a “joint” author, one must contribute copyrightable authorship to the work, not merely ideas or other noncopyrightable contribution.

1. Recent Case Law

(a) Ashton-Tate Corp. v. Ross

The case of *Ashton-Tate Corp. v. Ross* is the leading case in the Ninth Circuit concerning ownership of joint works. That case involved Ashton-Tate’s spreadsheet product “Full Impact.” In 1984 two programmers, Richard Ross and Randy Wigginton, decided to collaborate on the development of a computer spreadsheet program for the Apple Macintosh computer. Ross wrote the “engine,” or computational portion of the product, and Wigginton wrote the “user interface” portion of the product. In the course of a “brainstorming” session between the two during development of the spreadsheet program, Ross gave Wigginton a handwritten list of user commands on a sheet of paper, organized into groups of subcommands, that he thought the program should contain.

In 1985, Ross and Wigginton began to disagree about how they would publish and market their new program, which the court refers to in its opinion as the “MacCalc prototype.” Ross wanted to publish the product through his company, Bravo Technologies. Wigginton wanted to use a more established company, and approached Ashton-Tate.

When Ross found out that Wigginton had approached Ashton-Tate, the two had a falling out and decided to go their separate ways. Wigginton took his user interface code from the MacCalc prototype to Ashton-Tate, where it was combined with an engine already owned by Ashton-Tate known as “Alembic,” to create the “Full Impact” product. Ross took his engine from the MacCalc prototype and wrote new user interface code for it to create a competing spreadsheet product which he marketed as “MacCalc.”

On the eve of Ashton-Tate's commercial release of Full Impact, Ross asserted that he was entitled to compensation for his "contribution" to the Full Impact program. Ross asserted three bases for his claim:

(1) That Ross' contribution of ideas and guidance for the user interface of the MacCalc prototype made him a joint author of the user interface of Full Impact;

(2) That Ross' handwritten list of commands constituted copyrightable expression which, because it was incorporated into Full Impact, made Ross a joint author of Full Impact; and

(3) That Ross became a joint author of Full Impact because Full Impact was a derivative work based upon the MacCalc prototype, of which he was a joint author.

In response to Ross' claims, Ashton-Tate brought an action for declaratory judgment against Ross to establish that Ashton-Tate owned all existing copyright interest in Full Impact and Ross was not entitled to any compensation from its marketing.

With respect to Ross' allegations of joint authorship, the Ninth Circuit confirmed and strengthened an earlier ruling (discussed in the next subsection) that in order to be a joint author of a work, one must make an independently copyrightable contribution to the work. Accordingly, the court rejected Ross' first theory that he was a joint author of Full Impact merely by virtue of his contribution of guidance and ideas for the user interface of the MacCalc prototype, many of which were incorporated into Full Impact.

The court further affirmed the district court's ruling that Ross' handwritten list of commands did not constitute copyrightable authorship, and Ross could therefore not assert joint ownership of Full Impact on the basis that such commands were contained in Full Impact. The Ninth Circuit explicitly endorsed the district court's reasoning for its ruling, which was as follows:

There is nothing innovative or novel about the labels that Ross proposed Wigginton use for the program or the order in which they are listed on the document. The single sheet of paper does not contain any source code. . . . Ross merely told Wigginton what tasks he believed the interface should allow the user to perform. This list of commands is only an idea that is not protected under federal law.

(b) *S.O.S. Inc. v. Payday Inc.*

In the case of *S.O.S. Inc. v. Payday Inc.*, the plaintiff claimed joint authorship of a computer program on the basis of contributions to the design of the program in the form of specifying what tasks the program was to perform and how it was to sort data. The Ninth Circuit concluded, "A person who merely describes to an author what the

commissioned work should do or look like is not a joint author for purposes of the Copyright Act. . . . To be an author, one must supply more than mere direction or ideas; one must “translate[] an idea into a fixed, tangible expression entitled to copyright protection.”

(c) *Cases from Other Circuits*

Courts in the Second, Eleventh and Seventh Circuits have now adopted the majority view that in order to qualify as a joint author of a work, one must contribute copyrightable expression to the work, and not merely ideas. In *M.G.B. Homes, Inc. v. Ameron Homes*, the Eleventh Circuit ruled that M.G.B. Homes did not become a joint author of architectural plans for a house merely because an employee of M.G.B. had provided a thumbnail sketch of the desired floor plan to be produced, had reviewed the drawings in progress, made suggestions and corrections, and had final approval authority over the work. The court concluded that the employee had contributed only noncopyrightable ideas, and such contribution was insufficient to make M.G.B. a coauthor of the resulting plans.

In *Childress v. Taylor*, the Second Circuit stated: “It seems more consistent with the spirit of copyright law to oblige all joint authors to make copyrightable contributions, leaving those with non-copyrightable contributions to protect their rights through contract.” Most recently, in *Erickson v. Trinity Theatre Inc.*, the Seventh Circuit held that in order for a work to be considered a joint work in the absence of an express agreement designating it as such, each of the collaborators must be an “author,” defined in the copyright statute as one “who translates an idea into a fixed, tangible expression entitled to copyright protection.” And in *Balkin v. Wilson*, a district court in Michigan adopted the Seventh Circuit’s test in *Erickson* in ruling that a collaborator’s contribution to a project must be independently copyrightable in order for the resultant product to be a joint work under the copyright statute.

(d) *Napoli v. Sears, Roebuck and Co.*

The recent case of *Napoli v. Sears, Roebuck and Co.* illustrates the importance that the joint authorship doctrine can have to companies who use independent consultants to create copyrightable works. In that case Sears hired a consultant named Joan Napoli to develop a computer program designed to improve the quality and efficiency of the services offered by the Home Fashions Department at Sears. Sears and Napoli ultimately had a falling out, and Napoli demanded that Sears return her source code. Sears did so, but continued to use the software on the theory that Sears was a joint author of the program. Although Sears employees did not participate in writing any of the source code of the program, Sears claimed joint authorship of the program by virtue of the following contributions to the work: the graphic design of both the screens and the reports that the program was to produce, the information that was to be contained therein, the text of the reports, and new terminology to accompany the introduction of the program into Sear’s business environment.

The district court's first ruling in this case was decided before the Seventh Circuit's decision in *Erickson*. Accordingly, the court looked to the *Childress* and *Ashton-Tate* cases, noting that those cases required that contributions of each joint author be separately copyrightable, but further noting that the Seventh Circuit had not yet ruled on the issue. The court stated, however "that Sears' contributions (*e.g.*, the graphic design of the reports and screens) are arguably copyrightable." The court then denied Napoli's motion for summary judgment that Sears was not a joint author on the ground that "Sears has demonstrated sufficient involvement in [the development] process that we can not say, as a matter of law, that Sears is not a joint author."

Napoli moved for reconsideration after the Seventh Circuit's *Erickson* decision came down, and Sears cross-moved for summary judgment that it was a joint author of the program. Upon reconsideration, the court denied both motions. With respect to Napoli's motion, the court found that a question of fact existed as to whether Napoli had incorporated some source code into the final program from earlier work she had done while working for Sears through a brokerage. Because the brokerage had an agreement with Sears that any work produced would be a work made for hire, any work done by Napoli through the brokerage would be owned by Sears, and Napoli was therefore not entitled to a summary judgment that she was the sole owner of the program.

With respect to Sears' cross motion for summary judgment, the court noted that if Sears was actually the author of the screen designs and reports, then Sears would be a joint author of the program. The court denied summary judgment on the issue, however, because Napoli had submitted an affidavit attesting that Sears' initial screen designs and reports played no part in her work, and that she completely ignored those original designs in redesigning the program. Accordingly, the court found that a factual issue existed, despite the obvious similarities between the reports generated by Napoli's program and those original designs, as to whether Napoli had in fact independently created the screen and report designs in the final program. Nevertheless, the case illustrates an important way in which a company that has hired a consultant to work on a program without the necessary written agreement may nevertheless claim joint ownership in the final work product on which the consultant worked.

2. Implications for the Intellectual Property Audit

If a consultant works with employees of the company to create a work of authorship, the consultant may well end up as a joint author of the work—and therefore a joint owner of the copyright—since the consultant's work and the work of the company's employees would usually be intended to be merged into interdependent parts of a unitary whole. Absent an agreement assigning the consultant's rights in the work to the company, the consultant would be free to exploit the copyright in the work without the permission of the company,

subject only to a duty to account for profits, and, worse, would be entitled to an accounting of profits from the company for its exploitation of the work.

The intellectual property audit should inquire into whether any consultants worked with employees of the company in creating products of the company. If so, a written agreement assigning all ownership rights of the consultant to the company should be secured, if not already in place. If there is no written agreement in place, and the consultant is unfriendly, refuses to sign an agreement, or cannot be located, the audit should inquire into the precise contribution made by the consultant to determine whether an argument can be made that the consultant did not contribute copyrightable authorship to the work and is therefore not a joint author under the majority view exhibited in recent case law. Conversely, if the company participated substantially in the development of the work, the company may be able to argue, as in the *Napoli* case, that it contributed sufficient authorship to the work to be a joint author of the resulting work, entitling the company to exercise at least joint ownership rights.

3. The Related Issue of Derivative Works Based on a Joint Work

An issue related to the issues of joint authorship just discussed concerns whether a joint author of one work can claim joint authorship—and joint ownership—of any derivative works based on the original joint work, regardless of whether the joint author has contributed any new copyrightable authorship to the joint work.

In the *Ashton-Tate v. Ross* case, in ruling on Ross' theory that Ross automatically became a joint author of Full Impact because Full Impact was a derivative work based upon the MacCalc prototype (of which Ross was a joint author), the Ninth Circuit held that “[j]oint authorship in a prior work is insufficient to make one a joint author of a derivative work.” The court concluded that, at most, Ross could assert a claim for an accounting of profits against *Wigginton*, his coauthor of the MacCalc prototype, for exploitation of portions of the MacCalc prototype in Full Impact. Ross, however, could assert no copyright claim against *Ashton-Tate*, which rightfully owned the derivative work copyright in Full Impact since Full Impact was created as a derivative work with permission from Wigginton, a joint author of the underlying work on which Full Impact was based.

In *Weissmann v. Freeman*, the Second Circuit had earlier reached the same result as the *Ashton-Tate* case in a plurality opinion. The reasoning of the plurality opinion, although not joined in all parts by one of the judges (and not joined at all by another judge who wrote a dissent), nevertheless persuaded the Ninth Circuit to rule as it did in *Ashton-Tate*.

In *Weissmann*, Weissmann and Freeman had jointly authored a syllabus used by medical residents to study for specialty board exams. Weissmann then created a derivative work based on the syllabus. Freeman later deleted Weissmann's name from the derivative work and distributed copies under his own name. Weissmann sued Freeman for copyright

infringement, and Freeman defended on the ground that, as a joint author of the syllabus, he was automatically a joint author of the derivative work, even though he did not contribute to the derivative work.

The plurality opinion concluded that joint authorship of an earlier work does not make one a joint author of a derivative work based on the earlier work where one makes no contribution of copyrightable authorship to the derivative work. The court reasoned that a contrary holding “would convert all derivative works based upon jointly authored works into joint works, regardless of whether there had been any joint labor on the subsequent version. If such were the law, it would eviscerate the independent copyright protection that attaches to a derivative work that is wholly independent of the protection afforded the preexisting work.”

The concurring judge, however, stated that the fact that Freeman was not the author of any new material in the derivative work would not, of itself, preclude that derivative work from being “joint,” if Weissmann’s intent when she wrote the derivative work had been that the work be “joint.” Thus, the law in the Second Circuit on this point must be viewed as not entirely settled as of this date.

Because the law is not entirely settled on the point in view of the foregoing cases, if derivative works are examined in an audit, the auditors should inquire into whether any predecessor versions of the work were jointly authored. If so, a written assignment should be obtained assigning all rights of the other joint authors to the company in all versions of the work, and disclaiming any rights in all versions of the work, including future versions.

D. Ownership Issues: Termination Rights

Under section 203 of the copyright statute, in the case of any work other than a work made for hire, the exclusive or nonexclusive grant of a transfer or license of copyright or any right under a copyright may be terminated by an author or his statutory successors within a five-year window beginning 35 years after the grant, or in the case of a grant covering rights of publication, 35 years from the date of publication, or 40 years from the date of execution of the grant, whichever is earlier. In the case of a grant executed by two or more authors of a joint work, termination of the grant may be effected by a majority of the authors who executed it (which may be only one).

Termination is effected by serving an advance notice of election to terminate not less than two or more than ten years before the effective date of termination. As a condition of its taking effect, a copy of the notice must be recorded in the U.S. Copyright Office before the effective date of termination. Section 203(5) provides that termination rights may be exercised notwithstanding any agreement to the contrary, including an agreement to make any future grant.

In addition to the ownership problems previously discussed, termination rights pose an additional problem when using independent consultants, rather than employees, to create software or other works of authorship. If an independent consultant is used, the consultant may terminate transfer of the copyright or any license grants after 35 years. Because termination rights do not apply to works made for hire, the problem does not arise with respect to software written by employees.

The problem of termination rights is more complicated with respect to joint works. If an independent consultant has been used to create a joint work with employees of the company, the consultant will have a termination right after 35 years, but the company will not (since the company's interest in the work is as a work made for hire, for which termination rights do not apply). Conceivably, an independent consultant or the consultant's successors could terminate a grant of rights to the company and demand an accounting for any future profits derived by the company thereafter.

Section 203(b)(1) provides that a derivative work prepared under authority of the grant before its termination may continue to be utilized under the terms of the grant after its termination, but this privilege does not extend to the preparation after the termination of other derivative works based upon the copyrighted work covered by the terminated grant. Thus, if an independent consultant prepares software and later exercises the termination right, the company might be unable to create new versions of the software or maintain existing versions.

Although the 35 year period at which the termination right becomes exercisable will be beyond the commercial life of much software or other works of authorship, some "core" technology—such as UNIX code, for example—could easily have a useful commercial life long enough to implicate the termination rights. In those cases, consideration of termination rights should be weighed in the decision whether to use independent consultants to create software or other important core technology. If consultants have been used in the development process, the report generated at the end of an intellectual property audit should point out the potential problem of termination rights so that the company can be prepared, if necessary, to deal with the possible exercise of such rights in the future.

To combat the problem of termination rights, the written agreement with the consultant could contain a clause granting the company a right of first refusal to obtain a further grant in the event the first grant is terminated. Conceivably, the agreement could also contain a covenant not to exercise termination rights. Although the copyright statute allows exercise of termination rights notwithstanding such a clause, the clause arguably would give rise to a breach of contract action in such event. There is a substantial chance, however, that a court would view such clause as circumventing the policies embodied in the termination provisions of the copyright statute and would refuse to allow a breach of contract claim to be based on such a clause. In view of these risks, insertion of such a clause may do nothing

more than alert the independent consultant to the existence of rights of which the consultant might not otherwise have been aware.

Note that the same traps of ownership and termination rights can arise when incorporating into a company product code that has been licensed or purchased from another company if such code was not a work made for hire of such company and is therefore subject to termination rights of a third party individual programmer. Thus, if the company has licensed or purchased code from a third party for incorporation into a product, the audit should inquire into whether such code constitutes a work made for hire that is not subject to termination rights. If the licensed or purchased code is not a work made for hire, the company should be apprised of the possibility of termination rights.

To remedy the problem in future scenarios in which the company needs to acquire code that is not a work made for hire, the company should consider demanding a warranty from the entity supplying the code that no termination rights will arise within the term of the contract that will interfere with use of the acquired code, coupled with an indemnity against damages in the event of breach of the warranty.

E. Ownership Issues: Recordation of Transfers & Security Interests

There are a number of issues surrounding recordation of transfers and security interests in copyrights that should be the subject of inquiry in an intellectual property audit. Several of those issues are summarized in this section.

1. Exclusive Rights May Be Separately Transferred

Under section 106 of the copyright statute, the owner of a copyright in a work has the exclusive rights, among others, to reproduce the work, to prepare derivative works based upon the copyrighted work, and to distribute copies of the work to the public by sale or other transfer of ownership, or by rental, lease, or lending. Under section 201(d), any of the exclusive “bundle” of rights under the copyright may be “unbundled” and transferred and owned separately. This area of the law was very important during the ascendancy of television as a popular new medium, and again later with the growth of videocassettes, as many contracts were unclear as to whether an assignment of “motion picture” rights included telecasting or videocassette rights. Such issues are again undergoing scrutiny in view of the rapid growth of multimedia technology.

2. Requirement of a Writing

Section 204(a) provides that a transfer of copyright ownership, other than by operation of law, is not valid unless an instrument of conveyance, or a note or memorandum of the transfer, is in writing and signed by the owner of the rights conveyed or such owner’s duly authorized agent. The requirement of a writing may be satisfied by the owner’s later execution of a writing that confirms a prior oral agreement, at least where there is no evidence of any dispute between the parties as to the validity of the alleged oral grant.

However, a recent decision of the Ninth Circuit takes the view that because an oral transfer is not valid in the absence of a writing, a later written “confirmation” may not be sufficient.

A transfer agreement need not necessarily mention “copyright” in order to satisfy the requirement of Section 204(a), at least where it can be inferred from the circumstances that the parties intended to transfer the copyright. Registration of copyright in a work by a transferee made prior to a valid transfer of ownership is invalid.

Under section 101, a “transfer of copyright ownership” is defined to include an exclusive license, whether or not it is limited in time or place of effect. Thus, exclusive licenses must be in writing in order to be valid. Moreover, a lien on a copyright has been construed to constitute a “transfer” within the meaning of the copyright statute. A lien holder is therefore subject to the copyright statute’s priority provisions governing conflicting transfers and not the priority provisions of the Uniform Commercial Code.

3. Recordation of Transfers

Section 205 contains provisions for recording transfers of copyrights with the U.S. Copyright Office. Recordation will constitute constructive notice of the facts stated in the recordation only if:

- (i) the recorded document specifically identifies the work to which it pertains so that, after indexing by the Copyright Office, it would be revealed by a reasonable search of Office records; and
- (ii) the copyright in the work has been registered with the Copyright Office.

4. Priority Between Conflicting Transfers

Under section 205(d), as between two conflicting transfers, the one executed first prevails if it is recorded in a manner that satisfies the constructive notice provisions, within one month after its execution in the United States (or within two months after its execution outside the United States), or at any time before recordation in such manner of the later transfer. Otherwise the later transfer prevails if:

- recorded first in a manner that satisfies the constructive notice provisions, and
- if taken in good faith, for valuable consideration or on the basis of a binding promise to pay royalties, and
- without notice of the earlier transfer.

The auditors in an intellectual property audit should therefore inquire into whether all transfers (including exclusive licenses) affecting a copyright of interest to the company have

been properly recorded with the U.S. Copyright Office in a timely manner and in satisfaction of the constructive notice provisions.

5. Perfection of Security Interests in Copyrights

(a) The Peregrine Case

A recent very important case, *In re Peregrine Entertainment Ltd.*, changed the general practice for perfecting security interests in a copyright, ruling that in order to perfect a security interest in a copyright, the document granting the security interest must be recorded in the U.S. Copyright Office. The court concluded that the recordation provisions of the copyright statute preempt the provisions of the Uniform Commercial Code (UCC) with respect to copyrights. Accordingly, the court further concluded that the filing of a UCC-1 financing statement does NOT perfect a security interest in a copyright AND ITS RELATED ACCOUNTS RECEIVABLE.

In *Peregrine*, National Peregrine, Inc. (NPI) filed for reorganization under Chapter 11 of the federal bankruptcy laws as a debtor in possession. Its principal assets consisted of a library of copyrights and distribution rights to approximately 145 films. One of NPI's principal creditors, Capitol Federal Savings and Loan Association of Denver (Capitol), extended a six million dollar line of credit to NPI secured by a security interest in NPI's film library. Capitol attempted to perfect its security interest by filing a security agreement and a UCC-1 financing statement describing the collateral as "[a]ll inventory consisting of films and all accounts, contract rights, chattel paper, general intangibles, instruments, equipment, and documents related to such inventory, now owned or hereafter acquired by the Debtor." The security interest was not recorded with the Copyright Office.

The court concluded that, in order to perfect a security interest in a copyright and its related accounts receivable, a recordation must be made in the Copyright Office, rather than under the UCC, and that because Capitol had not recorded in the Copyright Office, its security interest in the copyrights of NPI's films and the receivables they had generated was unperfected. NPI was therefore entitled under bankruptcy law to avoid Capitol's interest and preserve the receivables generated by the copyrights for the benefit of the bankruptcy estate.

Note that an important difference exists between the priority provisions of the copyright statute and the priority provisions of Article 9 of the UCC. Unlike Article 9, the copyright statute priority provisions permit the effect of recording with the Copyright Office to relate back for one month (in the case of transfers executed in the U.S.) or two months (in the case of transfers executed outside the United States). Under section 9-312(5) of the UCC, by contrast, priority between holders of conflicting security interests in intangibles is generally determined by who perfected his or her interest first.

(b) Problems Raised by the *Peregrine* Case

The *Peregrine* case raises a number of important problems that should be noted by those performing an intellectual property audit, particularly on behalf of a bank, venture capitalist or other entity contemplating lending money to a debtor owning valuable copyrights and wishing to perfect a security interest in such copyrights:

(i) Accounts receivable

The *Peregrine* court ruled that a security interest in accounts receivable from a copyright is also not perfected unless the security interest in the copyright is recorded in the Copyright Office. Where security interests in copyrights have not been properly recorded with the Copyright Office, the auditor should inform the lender that the lender does not have a perfected security interest in any accounts receivable generated by the debtor's copyrights. In the event the security interest in a copyright is not properly recorded, it is unclear how a court will partition accounts receivable when such are attributable to both a copyright and other intellectual property rights such as a patent.

(ii) Multiple recordations

Because the Copyright Office recordation provisions have no equivalent of the Article 9 “floating lien” in all assets of the borrower (including after-acquired assets), separate recordations must be made each time a new copyright comes into existence. This will necessitate a flood of recordations, for example, each time a new version of a computer program is created by a debtor, and the auditor should look to see whether all necessary recordations have been accomplished. “Due diligence” searches by the auditors in connection with a financing or acquisition may, for the same reason, produce a flood of documents. The auditors should also, on behalf of the lender, see that some mechanism is established to ensure that the debtor notifies the lender when new versions are created and that such new versions get registered and recorded with the Copyright Office.

(iii) Multiple registrations

The priority provisions of the copyright statute require that the copyright be registered prior to the recordation in order to take priority. Thus, a concurrent flood of new registrations will be necessary to protect security interests in copyrights. Where multiple versions of a work such as a computer program are created and not all interim versions are registered with the Copyright Office, the auditor should inform a secured lender that it may not have the protection with respect to the unregistered part of the copyrighted work that it thought it had.

(iv) Delay

The Copyright Office is very slow in both the registration and the recordation processes, which can each take six months or more to complete. Thus, the auditors

should be aware that a due diligence search may not reveal any security interests submitted for recordation in the past six months or more. Similarly, a financing may need to be held up for a significant period of time while the copyrights are registered and a security interest recorded. This emphasizes the need to begin an intellectual property audit as early as possible in advance of the closing of a contemplated acquisition.

(v) Statutory grace period

Because the copyright statute allows a one month grace period in which to record in order to have the recordation relate back to the date of execution of the security interest, a lender could, unknown in advance, later find its interest subordinated to that of an earlier transferee who recorded after the lender but within the grace period. Auditors should be especially cognizant of this possibility when informing a lender of its status of superior rights.

(vi) Risk of loss of recordation priority

The Copyright Office regulations require very specific things for a document to be recordable. For example, it must be either a signed original or a verified copy thereof, must specifically identify the work to which it relates (a general assignment document of all inventions or works produced is not sufficient), and if the document contains reference to an exhibit or other agreement and the exhibit or other agreement is not included, the document may not be recordable. Thus, there is a good chance of making an error in the process, causing the Copyright Office to deny the recordation, thereby missing the grace period and losing the recordation priority. If the audit reveals the need for recordations, great care should be taken to ensure that they are made correctly. The auditors should also inform the company of the potential pitfalls in the recordation process for future recordations the company will need to make as a matter of course.

(vii) Incomplete rules of priority

The copyright statute's priority provisions are not exhaustive of all situations—they do not cover, for example, priority between two unrecorded security interests. Presumably, auditors will need to turn to the provisions of Article 9 to fill in the “cracks.”

(viii) Different procedures for patents and trademarks

Because the reported decisions have generally ruled that the patent and trademark statutes do not preempt the recordation provisions of the UCC, different procedures may be followed to perfect security interests in patents and trademarks (and trade secrets—a right under state law) than for copyrights. Auditors must be aware that a single UCC-1 filing, often relied on in the past to cover all intangible assets, is no longer sufficient.

(ix) Perfection of security interests in copyright licenses

The *Peregrine* court did not explicitly address the issue of whether a security interest in a copyright license (as opposed to the copyright itself) must be recorded with the Copyright Office in order to be perfected. However, there are several reasons to suggest an affirmative answer. First, NPI's assets included exclusive distribution rights to several copyrighted films, in addition to ownership of copyrights in other films. The factual context in which the case was decided thus encompassed at least exclusive copyright license rights.

Second, because the copyright statute treats exclusive licenses as a transfer of part ownership in the copyright, and because transfers of copyrights are subject to the priority and recordation provisions of the copyright statute discussed above, it is reasonable to presume that the rationale underlying the *Peregrine* court's decision would apply at least to security interests in exclusive copyright licenses.

The situation with respect to nonexclusive licenses is considerably less clear, however. The copyright statute treats a nonexclusive copyright license as not being a transfer of ownership in the underlying copyright, so one could argue that security interests in something that is not itself a property interest in the copyright should not be governed by the copyright statute.

Moreover, the copyright statute contains separate priority provisions that govern nonexclusive licenses. Section 205(e) provides:

A nonexclusive license, whether recorded or not, prevails over a conflicting transfer of copyright ownership if the license is evidenced by a written instrument signed by the owner of the rights licensed or such owner's duly authorized agent, and if—

(1) the license was taken before execution of the transfer; or

(2) the license was taken in good faith before recordation of the transfer and without notice of it.

Although this section contains explicit priority provisions for nonexclusive licenses, it does not make priority turn on recordation of the license, as do the priority provisions of section 205(d) governing "transfers." Because priority of the nonexclusive license itself (as opposed to a security interest therein) does not turn on recordation with the Copyright Office, one could argue that security interests therein should similarly not turn on a system of recordation with the Copyright Office.

On the other hand, one could argue that, because the recordation provisions of the copyright statute do encompass nonexclusive licenses (as a “document pertaining to a copyright”), the rationale underlying the Peregrine decision should apply to security interests in nonexclusive licenses as well, at least with respect to perfection of security interests therein. One could further argue that security interests in all forms of copyright licenses—exclusive and nonexclusive—should, for reasons of policy, be treated the same. There is, unfortunately, no case law on point at this time, and the conservative approach for auditors to follow is to record a security interest in a copyright license with both the Copyright Office and through the state UCC filing system.

F. Ownership Issues: Employee Agreements

In addition to obtaining written agreements from consultants, it is a good idea as a precautionary measure to have employees who will invent or produce works of authorship execute an employee agreement upon commencement of employment assigning ownership of all such inventions and works of authorship, and all intellectual property rights therein, to the company. These agreements can be particularly important in the event an employee does some work at home or after hours, as is often the case in the computer industry nowadays, or produces work not within the scope of the employee’s ordinary employment that may get incorporated into a product of the company (such work might not fall within the first prong of the work made for hire definition because outside the scope of employment).

The need for such agreements is well illustrated by the recent case of *Avtec Systems, Inc. v. Peiffer*. In that case, an employee of Avtec Systems named Peiffer wrote a computer program to perform various orbital simulations for satellites. The first version of the program, called the “.309” version, was demonstrated to Avtec’s president in 1985. Peiffer made modifications to the program suggested by the president, charging the time spent to an Avtec account. Another Avtec employee presented a later version containing some bug fixes to a client in 1990. In 1992, Peiffer refused to demonstrate a new derivative version of the program he had created, called the “2.05” version, to an Avtec client, and his employment with Avtec was terminated. Peiffer then began marketing the 2.05 version through a separate company. A dispute arose between Peiffer as to who owned both the .309 and 2.05 versions of the program.

At a first trial, the court determined that Peiffer owned both the .309 and 2.05 versions of the program. On appeal, the Fourth Circuit implicitly affirmed the finding that Peiffer owned the later 2.05 version of the program, but remanded for a determination of whether the .309 version had been created within the scope of Peiffer’s employment and might therefore be owned by Avtec.

On remand, the court determined that, although under the factors of the Restatement of Agency definition of “employee” adopted by the Supreme Court in its *CCNV* decision, Peiffer

was an employee of Avtec, he was not acting within the scope of his employment in creating the .309 version of the program. The court relied on the Fourth Circuit's ruling in its opinion that gave rise to the remand that one must look to the test set forth in section 228 of the *Restatement (Second) of Agency* to determine whether Peiffer was acting within the scope of his employment during his authorship of the .309 version. The applicable portions of section 228 are as follows:

- (1) Conduct of a servant is within the scope of employment if, but only if:
 - (a) it is of the kind he is employed to perform;
 - (b) it occurs substantially within the authorized time and space limits;
 - (c) it is actuated, at least in part, by a purpose to serve the master, . . .
- (2) Conduct of a servant is not within the scope of employment if it is different in kind from that authorized, far beyond the authorized time or space limits, or too little actuated by a purpose to serve the master.

The court held that the three elements of this test must be applied in the conjunctive, and Avtec had the burden to prove that each element exists in order to establish that the .309 version was authored in the scope of Peiffer's employment. As to the first element of the test, the court found that creation and development of the .309 version was to a sufficient degree related to the work Peiffer was employed to perform at Avtec to satisfy the requirement that such work be "of the kind" Peiffer was employed to perform. Peiffer's job descriptions contemplated computer programming and satellite orbit simulation and algorithm design, and during his years at Avtec he had generated computer programs that performed functions similar to those found in the .309 version.

As to the second element of the test, the court found that the creation of the .309 version did not occur substantially within Avtec's authorized time and space limits based on the following facts: (i) whenever the program was utilized in Avtec's business, Peiffer was requested to demonstrate the program himself; (ii) Peiffer acquired the computer equipment necessary to create and develop the program at his own expense; (iii) Peiffer performed virtually all of the required work at his home without compensation; (iv) Peiffer maintained possession of the program at his home except when requested to demonstrate it; and (v) there was no evidence that any Avtec employee other than Peiffer ever made any contribution to the authorship of the program or used it in the course of his or her employment with Avtec.

As to the third element of the test, the court concluded that Avtec had not submitted enough evidence that Peiffer's creation of the program was sufficiently actuated by a purpose to

serve Avtec. The court noted that the evidence did not disclose whether Avtec's payment of the \$5,000 bonus to Peiffer was intended as a reward for the superior performance of duties by Peiffer as an employee or whether it was intended as a reward for Peiffer's willingness to utilize his own property for the benefit of his employer. Thus, the court viewed the award of the bonus as a neutral factor rather than a factor supporting Avtec's position. Although the court noted that the demonstration by Peiffer of the program which led to Avtec's obtaining a contract was strong evidence that Peiffer was partly actuated by serving his employer in creating the program, the court nevertheless noted that the evidence disclosed that Peiffer did this on only one or possibly two other occasions, and demonstrations were always under his control. Further, the court noted that Peiffer's refusal in 1992 to demonstrate version 2.05 of the program was, although a questionable act for an employee, consistent with his assertion of ownership.

Accordingly, the court concluded that Avtec had not met the second and third elements of the test, and had therefore not proved that Peiffer was acting within the scope of his employment in creating the program at issue. The court therefore held that Peiffer was the copyright owner of both versions .309 and 2.05 of the program.

On a second appeal, the Fourth Circuit affirmed the district court's factual findings, stating that although the factual issues under the second and third elements of the test were "close," the district court's findings on them were not clearly erroneous. With respect to the third element—whether Peiffer were sufficiently motivated in creating the computer programs by a purpose to serve Avtec's interests—the Fourth Circuit noted that any evidence that Peiffer might have been motivated to serve Avtec's interests with the program related to incidents that occurred after the initial fixing of the program in a tangible medium of expression, at a time when copyright ownership was already set. Mere demonstration of the program for Avtec's benefit after such fixation was insufficient to convert it from Peiffer's property to Avtec's, because at the time of fixation, Peiffer was not being compensated for the program by either a salary, hourly wages, or a bonus; the program was not related to any particular project that Peiffer was charged with performing for Avtec; he was not working on a way to improve the efficiency of his job or Avtec's business; and he was not receiving any direction from Avtec. Accordingly, the district court's finding that Peiffer owned the copyrights in both versions of the program was affirmed.

Two other recent cases went the opposite way from *Avtec*. The first of these, *Cramer v. Crestar Financial Corp.*, also out of the Fourth Circuit, held that an employee was acting within the scope of employment in writing a computer program even though he did so at home, outside regular work hours, on his own initiative and using his own equipment, because the work was of the kind the employee was hired to perform and his job required him to work long hours and frequently at home. Similarly, in *Miller v. CP Chemicals, Inc.*, the court held that a computer program written at home on an employee's own time was nevertheless a work made for hire created within the scope of employment because it was

directly related to a specific product of the employer and the employee's job responsibilities, and was done for the primary benefit of the employer.

These cases point out the uncertainty of whether work done by an employee at home or after hours on his or her own equipment may be deemed to be "within the scope of employment." The cases—particularly the *Avtec* case—emphasize the need for the auditors to inquire into whether employee agreements exist, at least with respect to the key developers on a project and examine the language of such agreements for adequacy. If the language is inadequate, or the agreements do not exist, the auditors should inquire into whether any employees have done work at home or after hours, or have produced work not within the scope of the employee's ordinary employment, to which the company may not have clear title.

G. Ownership Issues: Summary

In view of the principles discussed in the preceding sections concerning ownership, transfers and recordation of copyrights, the auditors should inquire into whether the following steps have been taken by a company to obtain and perfect title to copyrights, and if not, remedial measures should be recommended:

1. Before commencing any work, all employees and consultants should be required to sign written agreements transferring ownership of all works of authorship produced by them, and all intellectual property rights therein. Such agreements should also contain clauses obligating the signatory to execute confirmatory assignment documents with respect to specific works of authorship that can be recorded with the Copyright Office.
2. The copyright in all works of authorship owned by the company and of significance to the company should be registered promptly with the U.S. Copyright Office for the following reasons:
 - Registration is a prerequisite to filing a lawsuit for infringement of any copyrighted work whose "country of origin" (as defined in the copyright statute) is the United States.
 - Registration is a prerequisite for the recordation of a transfer with respect to the work to be eligible to take priority over other transfers.
 - A registration certificate constitutes prima facie evidence of the existence of a valid copyright in an infringement action—the defendant then bears the burden of proving that the copyright is not valid.
 - No award of statutory damages (damages that a court may award in its discretion without proof of actual damages) or attorneys' fees can be made with respect to

any infringement that commenced prior to registration of the work.

- Registration is required to cut off certain defenses of so-called “innocent infringers.”

Section 412 of the copyright statute allows a three month grace period after first publication of a work in which to register to preserve all the copyright owner’s rights. (Note, however, that if a security interest in the copyright is involved, registration of the copyright and recordation of the security interest must be accomplished within one month in order to preserve priority of the security interest.)

3. Confirmatory assignment documents specifically naming the copyrighted work by title, at least for those works produced by independent consultants, should be obtained immediately after completion of the work and should be recorded with the U.S. Copyright Office within one month after execution.

4. If independent consultants are used by a company, the company must be aware of the potential difficulty raised by termination rights, even if assignments of ownership are obtained. Careful records should be kept of what code the independent consultant created and what code, if any, employees created, so that in the event termination rights are exercised, the company can segregate the code its employees created and continue to exploit it. Similarly, if a company licenses or purchases title to code from another company for incorporation into a product, it should, if possible, make sure such code constitutes a work made for hire of the licensor/transferor that is not subject to termination rights.

5. Exclusive license agreements, which the copyright statute treats as a transfer of part ownership in the copyright, should be recorded with the U.S. Copyright Office within one month after execution.

6. Security interests in copyrights should be recorded with the U.S. Copyright Office within one month after execution.

7. The parties to a transaction should make great effort to anticipate possible new media or uses of the work and to have the agreement clearly set forth the scope of rights granted with respect to such new media or uses.

H. Compliance with Statutory Formalities

1. Errors in the Registration Process

(a) The *qad* Case

The recent case of *qad, inc. v. ALN Associates Inc.*—in which a federal district court found it to be a misuse of the plaintiff’s copyright to seek to enforce a copyright in a computer program in part because of the plaintiff’s failure to disclose in its copyright

registration applications that the program was a derivative work—makes it extremely important that all companies who have valuable copyrights reexamine carefully their copyright registration certificates to determine whether they might contain any errors of the sort that were involved in the court decision. This decision will no doubt encourage copyright defendants in future cases to attack the validity of the plaintiff's copyright registrations and to invoke the defense of copyright misuse based on errors that may be contained in such registrations.

In the *qad* case, the plaintiff brought an action against the defendant for infringement of the plaintiff's copyrights in its computer program known as "MFG/PRO." The plaintiff had registered its computer program as an original work, and had represented to the court that it was an original work. The court issued a preliminary injunction, based largely on expert testimony submitted by the plaintiff to the effect that a great many of the data fields and naming conventions were the same in the plaintiff's and the defendant's programs.

Upon a motion for summary judgment by the defendant, the court vacated the preliminary injunction and granted summary judgment for the defendant on the ground that the plaintiff had misused its copyrights. The court found that many of the elements of the plaintiff's program that the plaintiff alleged were copied by the defendant—such as data field structures and file and procedure naming conventions—were in fact copied by the plaintiff from an earlier computer program from Hewlett Packard known as the "HP250." The court ruled that it was a misuse of the plaintiff's copyright to assert ownership over such elements against the defendant, when in fact the plaintiff had copied such elements from another computer program and had failed to so inform either the court or the Copyright Office in the applications for copyright registration. Such misuse rendered the plaintiff's copyright unenforceable against the defendant.

The court explicitly noted in its opinion that it was leaving open the question whether the mere failure to state on its copyright registrations that the MFG/PRO program was a derivative work of the HP250 was by itself a misuse or otherwise rendered such registrations—or the underlying copyright itself—invalid. Rather, the court concluded that the misuse lay in the plaintiff's attempt to assert against the defendant ownership over the elements it had failed to disclose were copied from other sources.

(b) *The Ashton-Tate v. Fox Case*

A second decision, although later vacated by the court, illustrates further the importance of searching for errors in copyright registration applications in the course of an intellectual property audit. In 1988, Ashton-Tate Corporation, original publisher of the "dBASE" line of personal computer database software products, filed a lawsuit against Fox Software, Inc. and The Santa Cruz Operation, Inc., alleging that the

defendants' "FoxBASE" line of software products infringes Ashton-Tate's copyrights in its dBASE products.

On December 12, 1990, a district court in Los Angeles entered an order dismissing all of Ashton-Tate's claims against the defendants on the ground that Ashton-Tate, when it filed its original applications for copyright registration of the dBASE products, repeatedly failed to disclose to the United States Copyright Office that the dBASE line of computer programs was derived from "JPLDIS" (an early database computer program developed by the Jet Propulsion Laboratory and now in the public domain), and that dBASE III was derived from dBASE II.

Because the court found Ashton-Tate's failure to disclose such information to the Copyright Office to have been done knowingly and with an intent to deceive, the court ruled that Ashton-Tate's copyrights on its dBASE line of computer programs are invalid. The court reached its conclusion despite uncontradicted testimony in the case from Ashton-Tate's former in-house counsel who filed the copyright registrations at issue that any alleged errors in information contained in the copyright registration applications were made inadvertently and without an intent to deceive.

The court later vacated its decision without opinion, perhaps because the court's decision was unprecedented in copyright law, representing a draconian punishment—entire loss of copyright protection—for some seemingly innocent errors made in the copyright registration process. Since the court vacated its decision, Borland International has acquired Ashton-Tate, and has agreed, pursuant to an agreement with the Department of Justice that allowed the acquisition to go through, that Borland will not assert copyright rights in the dBASE language itself.

(c) *The Hi-Tech Video Case*

Another recent case illustrates the potential enormous pitfalls that may arise from errors in the copyright registration process. In *Hi-Tech Video Productions Inc. v. Capital Cities/ABC Inc.*, the plaintiff had registered a copyright in a videotape of northern Michigan vacation spots as a work made for hire. The court found, however, that the video was not a work made for hire, because several freelance subcontractors who worked on the video (an aerial videographer, a scriptwriter/narrator, and the principal videographer) were not "employees" under the agency test of *CCNV*.

Accordingly, the Court held that the copyright (not just the copyright registration) in the video was invalid because it had been improperly registered as a work made for hire. In a dissenting opinion, one panel member asserted that the video could be copyrighted as a work made for hire since most of the work was done by the producer, who was an employee of the production company asserting ownership of the copyright in the video.

This case is puzzling in several ways. First, it is unclear why the Court took the draconian step of invalidating the entire copyright in the video, rather than merely the copyright registration, as a result of the errors in the registration process. Second, it is puzzling why the decision lacked any discussion of a possible joint authorship relationship between the producer and the freelance assistants.

(d) Implications for an Intellectual Property Audit

These decisions evidence a growing trend by the courts to take seriously errors or misrepresentations in the copyright registration process, particularly where such errors or misrepresentations have the effect of allowing a copyright claimant to assert copyright ownership over previously existing materials not created by such claimant. In view of these decisions, companies should take a very close look at their copyright registration certificates to determine whether any possible errors, omissions, or misrepresentations may have been made in the registration process, such as:

- Failure to list preexisting works or portions thereof upon which a registered work may have been based
- Failure to list all authors of the registered work
- Failure to list earlier versions of the same work upon which the registered version may have been based

These decisions raise particularly difficult issues in deciding whether to identify a registered work on a copyright registration application as “derivative” of a preexisting “interface”—such as Microsoft “Windows” or IBM’s Systems Application Architecture Common User Access interface (SAA CUA)—especially where the code of the registered program is entirely original.

2. Copyright Notices

In addition to compliance with the registration and recordation procedures already noted, the auditors should inquire into whether a proper copyright notice appeared on all publicly distributed copies of the work. Prior to March 1, 1989—when the United States became a member of the international copyright treaty known as the Berne Convention—the copyright statute required that a copyright notice appear on all copies of the work publicly distributed under the authority of the copyright owner. Since the United States joined the Berne Convention, copyright notice is no longer required by the copyright statute, although its use is still strongly encouraged in order to cut off defenses of “innocent infringement.”

For works distributed after January 1, 1978 (when the Copyright Act of 1976 took effect) and before March 1, 1989, omission of notice is not fatal to the copyright if notice was omitted from a relatively small number of copies, the distribution without notice was not authorized,

or if certain cure provisions are undertaken. Under the Copyright Act of 1909, however, publication without copyright notice destroyed the copyright.

The auditors must determine, therefore, whether copies of a copyrighted work were distributed under authority of the owner without notice and, if so, when such copies were distributed. If such distribution was prior to January 1, 1978, the omission is fatal to the copyright. If after January 1, 1978 and before the Berne Convention took effect in the United States, the auditors must determine whether such lack of notice is excusable, perhaps because the distribution was not authorized by the copyright owner or because only relatively few copies were distributed without notice.

The auditor should also consider whether such failure to affix proper notice may still be cured by taking certain remedial action detailed in section 405(a) of the copyright statute. Under that section, the copyright owner must register the work with the Copyright Office within five years after the publication without notice and make “a reasonable effort . . . to add notice to all copies . . . that are distributed to the public in the United States after the omission has been discovered.” The recent case of *Charles Garnier, Paris v. Andin Int’l Inc.*, held that, if the omission of notice commenced before the Berne Convention took effect in the United States, then the cure provisions of section 405(a) require that the copyright holder attempt to add notice to all copies of the copyrighted work still in inventory in the distribution channel, even if such copies were first distributed after the date of the Berne Convention’s effectiveness in the United States. The Court held that the copyright owner in that case had failed to cure the omission of notice (and therefore had forfeited its copyright) because it had made no effort to determine whether its retailers had any copies of the work still in inventory to which notice should be added.

3. Other Statutory Formalities

Other statutory formalities that the auditors should inquire into include whether older copyright registrations (made prior to the Copyright Act of 1976 taking effect) may have required applications for renewal and payment of renewal fees to the Copyright Office to retain copyright protection beyond the initial term of 28 years provided for under the Copyright Act of 1909. In addition, if the copyrighted work or any portion thereof has been publicly distributed overseas, the auditors should consider the requirements of foreign copyright laws and international treaties.

I. Issues of Infringement: Rights of Third Parties

The auditors may need to look into whether the copyright rights of third parties may be infringed by any of the company’s products. The following methodologies can be useful in examining this question:

1. Audit of the Development Process

With respect to each work in question, the auditors should interview the authors and determine whether any preexisting material was incorporated into the work and, if so,

whether permission to use such material to create a derivative work was needed and obtained. The auditors should carefully examine all outside sources and persons that contributed to or were consulted in the creation of the work, such as third parties, customers, employees, consultants, textbooks, articles, other computer programs, documents and other materials.

A determination must be made in each instance whether source material that was consulted or contributed to the work is public domain material or owned by a third party. If owned by a third party, the terms pursuant to which such contributions were made must be analyzed to identify any parties who may have rights to the work or portions thereof. Particular inquiry should be made to determine whether any copyrightable material contributed by employees in fact belongs to a former employer.

2. Substantial Similarity Analysis

Where other works were consulted without permission, or in the event there is a high risk of claims of infringement from a particular third party, the auditors may need to conduct an analysis of substantial similarity between a company product and the product of a third party. For traditional types of works, such as books, the analysis is generally relatively straightforward.

In the case of computer programs, however, the analysis is much more difficult and sophisticated. In general, the computer programs at issue should be reviewed by auditors who are familiar not only with the copyright laws but with the relevant programming language, functions of the programs, and the hardware upon which they are designed to operate. Familiarity with the technical possibilities and limitations inherent in the computer programs and the hardware on which they execute will allow the auditor to focus on or dispose of individual points of similarity as they are found.

The auditor may be substantially aided in the analysis of similarity by a computer program capable of methodically comparing either the source code or the object code instructions of the two programs at issue and reporting instances of similarity found. In the case of source code, the comparison is based on matches in the text of the source instructions themselves. In the case of object code, the comparison is based on matching patterns of binary digits (ones and zeros) in groups of a predetermined size using a criterion specifying how many bits within the group must match in order to record as a “hit.” A binary comparison program of this type has been provided to the United States Custom Service by IBM, and it is believed that such program is routinely being used by Customs to determine whether imported computer programs may infringe the copyrights of IBM or others who have recorded their copyrights with U.S. Customs.

In some cases, particularly in the event that the company has not had access to the source code or object code of a third party’s computer program, the analysis of substantial

similarity may be restricted to consideration of the screen displays and other aspects of the user interface and the manner in which the programs operate.

J. Issues of Infringement: Clean Room Procedures

“Clean room” procedures are often used to reduce the risk that a new computer program will infringe the copyright rights of the owner of another program which the new program is designed to emulate, be compatible with, or otherwise function in conjunction with. Clean room procedures can be of crucial importance in the context of an intellectual property audit.

1. The Legal Theory Underlying Clean Room Procedures

Copyright law protects only the “expression” of ideas, and not ideas themselves. To establish a case of infringement, a plaintiff must prove ownership of a copyright and “copying” of copyrighted expression.

“Copying” may be proved by direct evidence, such as testimony from someone who witnessed direct copying. Because direct evidence of copying is seldom available, copying is usually proved through indirect, or circumstantial, evidence under a two part test: (i) proof that the defendant had “access” to the plaintiff’s copyrighted work, and (ii) “substantial similarity” between the plaintiff’s copyrighted work and the defendant’s allegedly infringing work.

The clean room procedure seeks to avoid infringement by ensuring that no “access” to copyrighted expression occurs during development. If one can prove no “access,” then the first part of the “access plus substantial similarity” test will not be satisfied, and there should in theory be no finding of infringement, regardless of whether or not there is substantial similarity. In other words, where there has been no access, any substantial similarity is presumed to be the result of independent development, rather than the result of copying.

The clean room procedure is very fragile from a legal point of view. Most of the legal benefit of the clean room procedure is to eliminate the need to prove absence of substantial similarity as a result of proof of no access. If access to copyrightable expression is had by the program coders at any point in the process, then much of the legal benefit of the process will be instantly lost, for the access portion of the infringement test will be satisfied. Thus, careful legal review must be performed at every step of the procedure to ensure that the rules of the process are strictly followed and that the programmers have no access to copyrightable expression.

Although, in theory, if there is no access, there can be no infringement (even if substantial similarity is present), as a practical matter, a company must be concerned with substantial similarity even under a clean room procedure. If there is a high degree of substantial

similarity, a court is going to be much more likely to infer that there must have been access to copyrighted expression.

2. Mechanics of the Clean Room Process

The clean room process requires review of various items by legal counsel throughout the entire process. One person at the company should be designated as the in-house clean room “supervisor” with the responsibility to oversee the clean room process and to ensure that all material requiring legal review is sent to legal counsel for that review.

The clean room process begins with the formation, at a minimum, of a “specifications group” of engineers and a “coding group.” Members of the specifications group are the only persons who are permitted to have access of any kind to the computer program, called the “Target Software,” that the software under development, called the “Compatible Software,” is to emulate, be compatible with or otherwise function in conjunction with.

Members of the specifications group may review and analyze the Target Software and associated documentation to distill the ideas or functions therefrom and to prepare written technical specifications for the development of the Compatible Software. The written specifications should give a general functional description of the Compatible Software but must not suggest how the functions are to be implemented and must not give a description of the particular steps—even in broad outline form—that are to be taken to accomplish the functions.

The written technical specifications must be reviewed carefully by legal counsel before being given to the coding group to ensure that they do not contain protectable expression.

All members of the coding group should be persons who can certify through affidavit that they have never before disassembled, decompiled or otherwise translated into human-readable form the Target Software, or seen, read, examined or otherwise had access to, directly or indirectly, the Target Software. Separate written affidavits of continued non-access should be executed at periodic intervals thereafter throughout the clean room process, such as every three months.

The coders prepare the Compatible Software using only the written specifications from the specifications group and, in appropriate circumstances, publicly available documentation that has been pre-cleared for use by legal counsel.

Programming should preferably be conducted at a different site—and preferably in a different building—from the site where members of the specifications group are located. The coders should at no time in the development process have oral contact (even on an informal, social basis) with members of the specifications group. All communications between the coders and the specifications group must be only in writing.

During the development and debugging phases, questions from the coders concerning the technical specifications must be passed in writing to the specifications group through legal counsel. Legal counsel must approve each question for answering by the specifications group, and the answers must be screened by legal counsel for possible passing of copyrightable expression before the answers are passed back to the coders. A detailed logbook of all questions and answers, and legal counsel's decision as to whether each is accepted or rejected for passing between the two groups, should be kept. This legal review of questions and answers is especially important during the debugging phase, when the temptation is the greatest for the specifications group to look at the code of the Target Software to determine why a specific problem is happening and to suggest a specific solution.

The coders should keep meticulous records of the development process. The coders and the members of the specifications group should maintain daily laboratory notebooks, and all drafts, working papers, and interim versions of code should be saved in order to demonstrate independent development. All written communications between the coders and the specifications group should be saved.

3. Clean Room Procedures and the Intellectual Property Audit

Clean room procedures can be relevant to an intellectual property audit in a number of ways. First, the audit may reveal unacceptable similarity or other risks of infringement in a company product, and the company may elect to do a redevelopment of all or a portion of the product using clean room procedures.

Second, if clean room procedures were used in the development of a product that is the subject of the audit, the auditors must review all the details of the actual implementation of the process to determine whether at any point in the process there was "access." If so, as noted above, much of the legal benefit of the clean room procedures will be lost in the event of litigation, because errors in the clean room process may make the company unable to prove no access, causing the infringement analysis to revert back to that of substantial similarity.

To assess the integrity of the clean room process in detail is a laborious and expensive task. The auditors should in theory review literally every scrap of paper produced in the clean room process to determine whether copyrightable expression was at any point passed to the coders.

Because a strict clean room process is very tedious, time consuming and expensive, and because it typically produces great resistance among the engineers who are asked to follow it, it is often the case that a company is unable to follow the procedures throughout the entire process in pristine form. Where a company holds itself out as having followed a clean room development, it will be important that a prospective purchaser, licensee or investor

conduct a thorough audit of the process actually followed to determine whether it is vulnerable to attack later in litigation, especially if the risk of infringement claims is high.

Of course, even a clean room process that sprang a few “leaks” along the way can still be of great benefit in producing a final product that is much more likely in fact to be not substantially similar to the Target Software. Nevertheless, a prospective purchaser, licensee or investor should for planning purposes and risk assessment understand through an audit the extent to which the process actually implemented is legally vulnerable.

K. Issues of Infringement: Potential Defenses

The final issues relating to infringement of relevance to the audit involve consideration of whether any rights in the work may have been forfeited or limited through any other action or inaction of the copyright owner. The most common concerns stem from the copyright doctrines of abandonment, estoppel and laches.

Copyright abandonment may occur when the copyright owner, through an overt act, indicates an intent to place copyrighted material in the public domain. Abandonment makes the material available for all to use and generally cannot be retracted. Copyright estoppel occurs when a third party unknowingly undertakes infringing conduct with the copyright owner’s knowledge and relies on actions or inactions of the copyright owner such that enforcement of the copyright by the copyright owner will unjustly injure the infringing defendant. Unlike abandonment, estoppel generally applies to a specific party only, and does not provide those who did not reasonably rely on the copyright owner’s actions with any rights to the copyrighted work.

Copyright laches arises when a copyright owner, fully aware of an infringement claim, fails to bring it in a timely manner, allowing the infringer to expend substantial additional resources in pursuit of the infringing activity during the delay. In such case, the copyright owner may be denied a claim for damages where the infringer can show that recovery after an unreasonable delay by the copyright owner would unjustly prejudice the infringer.

The auditors should determine whether any parties are known to be making use of the work in an unauthorized manner and, if so, whether any action has been taken which the other party could interpret as acquiescence in its activities. The significance of such unauthorized use to the company or to any party potentially acquiring rights in the affected work should be examined and possible remedial actions analyzed.

III. Conclusion

An intellectual property audit can provide an invaluable mechanism for companies owning intellectual property assets, companies desiring to acquire such assets from a third party, and creditors lending to technology-based companies to determine the ownership, scope and status of intellectual property rights. As intellectual property rights continue to grow in importance in the information age, intellectual property audits should become a more and more vital tool.