

# Copyright Protection for Computer Programs and Databases in the United States (Part 1)

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This outline [which is broken up into three parts to be published over the next three issues of the Journal: Ed] highlights recent developments in copyright law as it relates to computer programs and databases. It is organised as follows:

- I Copyright Protection for Computer Programs Under US Law: Background
- II Copyright Protection for Compilations and Databases Under US Law: Background
- III Recent Judicial Decisions
- IV Legislative Developments
- V International Developments

*Please note: Covered in this issue are Parts I to III up to and including the first 10 case studies of recent copyright decisions relating to computer programs. The remaining 13 case studies in this section, together with recent US District Court decisions which completes Part III of this article will be published in the next issue of the Journal.*

## **I Copyright Protection for Computer Programs Under US Law: Background**

### **A. Computer programs are protected as Literary Works under the Copyright Act, 17 U.S.C. §§101-810**

The Copyright Act provides (17 U.S.C. §102):

#### **"§102. Subject matter of copyright: In General**

- (a) Copyright protection subsists, in accordance with this title, in original works of authorship fixed

in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include the following categories:

- 1 literary works;
- 2 musical works, including any accompanying words;
- 3 dramatic works, including any accompanying music;
- 4 pantomimes and choreographic works;
- 5 pictorial, graphic, and sculptural works;
- 6 motion pictures and other audiovisual works; and
- 7 sound recordings.

- (b) In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."

In passing the 1976 Copyright Revision Act, Congress confirmed the application of the copyright law to computer programs. The House Report accompanying the Copyright Act states:

"The term "literary works" does not connote any criterion of literary merit or qualitative value: it includes catalogues, directories, and similar factual, reference, or instructional

works and compilations of data. It also includes computer data bases, and computer programs to the extent that they incorporate authorship in the programmer's expression of original ideas, as distinguished from the ideas themselves."

H.R. Rep. No. 1476, 94th Congress, 2d Sess. 54 (1976), reprinted in 1976 U.S. Code Cong. & Ad News 5659, 5667.

Following the recommendations in the Final Report of the National Commission on New Technological Uses of Copyrighted Works (CONTU) (1978), Congress amended the Copyright Act in 1980 to include the following definition of "computer program" (17 U.S.C. §101):

*"A "computer Program" is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."*

At the same time Congress passed the current 17 U.S.C. §117, which provides:

*"§117. Limitations on exclusive rights: Computer programs*

Notwithstanding the provisions of section 106, it is not an infringement for the owner of a copy of a computer program to make or authorise the making of another copy or adaptation of that computer program provided:

1 that such a new copy or adaptation is created as an essential step in the utilisation of the computer program in conjunction with a machine and that it is used in no other manner, or

2 that such new copy or adaptation is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program

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should cease to be rightful.

Any exact copies prepared in accordance with the provisions of this section may be leased, sold, or otherwise transferred, along with the copy from which such copies were prepared, only as part of the lease, sale, or other transfer of all rights in the program. Adaptations so prepared may be transferred only with the authorisation of the copyright owner."

## B. Traditional Principles of Copyright Law apply to computer programs

Early cases established that programs are protectible by copyright whether in source or object code, and regardless of the form of embodiment. See, eg Apple Computer, Inc. v Formula International Inc. 725 F.2d 521 (9th Cir 1984), *aff'g* 562 F. Supp. 775 (CD Cal 1983); Apple Computer, Inc. v Franklin Computer Corp. 714 F.2d 1240 (3d Cir 1983), *cert dismissed*, 464 US 1033 (1984)

Cases that have addressed the scope of copyright protection for computer programs have concluded that copyright protects not just the literal text of the program code, but also its structure, sequence and organisation ("SSO"). A computer program can be infringed without duplication of the literal text. See, eg. Whelan Associates Inc. v Jaslow Dental Laboratory Inc. 797 F.2d 1222 (3d Cir. 1986), *cert denied*, 479 US 1031 (1987). See EF Johnson Co v Uniden Corp of America Inc. 623 F Supp 1485 (D Minn 1985); SAS Institute Inc. v S&H Computer Systems Inc. 605 F Supp. 816 (MD Tenn. 1985).

However, courts have not protected a computer program's SSO where there was only one or a few ways of expressing the underlying idea or where the SSO otherwise lacked originality. See, e.g. Plains Cotton Cooperative Association v Goodpasture Computer Service Inc. 807 F.2d 1256 (5th Cir), *cert denied*, 484 US 821 (1987); O-Co Industries v Hoffman, 625 F Supp 608 (SDNY 1985).

In Computer Associates International Inc. v Altai Inc., 982 F.2d 693 (2d Cir 1992) the Second Circuit articulated a three part abstraction-filtration-comparison test for determining whether there is infringement of a computer program.

## II. Copyright Protection for Compilations and Databases Under US Law: Background

### A. Compilations and Databases are copyrightable subject matter

Most databases are compilations, comprised either of separately protectible works, or of facts or data not themselves protectible, or both.

The Copyright Act (17 USC §101) defines a "compilation" as:

*"[A] work formed by the collection and assembling of pre-existing materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship. The term "compilation" includes collective works."*

Section 103(a) of the Act provides:

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

Section 103(b) makes clear that a compilation of facts or data may be protectible even though its individual components are not:

*"The copyright in a compilation or derivative work extends only to the material contributed by the author of such work, as distinguished from the pre-existing material employed in the work, and does not imply any exclusive right in the pre-existing material. The copyright in such work is independent of, and does not affect or enlarge the scope, duration,*

*ownership, or subsistence of, any copyright protection in the pre-existing material."*

Legislative history of the 1976 Copyright Act: see IA2, above.

Concerning input to a database, the CONTU Final Report states (p. 40):

*"[T]he Commission believes that the application of principles already embodied in the language of the new copyright law achieves the desired substantive legal protection for copyrighted works which exist in machine-readable form. The introduction of a work into computer memory would, consistent with the new law, be a reproduction of the work, one of the exclusive rights of the copyright proprietor... Principles of fair use would be applicable in limited instances to excuse an unauthorised input of a work into computer memory."*

The Report goes on to give examples of where fair use may be applicable.

With regard to the scope of protection for a database, the Report states (p. 42):

*"Similar also to a telephone directory, copyright in a dynamic data base protects no individual datum, but only the systemised form in which the data are presented.... The retrieval and reduplication of any substantial portion of a data base, whether or not the individual data are in the public domain, would likely constitute a duplication of the copyrighted element of a data base and would be an infringement. In any event, the issue of how much is enough to constitute a copyright violation would likely entail analysis on a case-by-case basis with considerations of fair use bearing on whether the unauthorised copying of a limited portion of a data base would be held noninfringing. Fair use should have very limited force when an unauthorised copy of a data base is made for primarily commercial use."*

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### B. *Judicial Approaches to the Protection of Compilations*

There were two lines of judicial authority as to what constitutes the protectible authorship in a compilation or database.

Some of the older cases, and the Seventh and Eight Circuits, focused on the compiler's labor and effort (ie. "sweat of the brow"). See e.g. Schroeder v William Morrow & Co. 566 F.2d 3, 6 (7th Cir 1977); Hutchinson Telephone Co v Fronteer Directory Co. 770 F.2d 128, 130-1 (8th Cir. 1985); Leon v Pacific Telephone and Telegraph Co. 91 F.2d 484 (9th Cir. 1937).

Other cases (e.g. those from the Second Circuit and the Eleventh Circuit) focused on the selection and arrangement of the data and took the position that the compiler's labor and expense are irrelevant. See, e.g. Financial Information Inc. v Moody's Investors Service, 808 F.2d 204, 207-8 (2d Cir 1986), *cert denied*, 484 US 820 (1987); Southern Bell Telephone & Telegraph Co. v Associated Telephone Directory, 756 F.2d 801 (11th Cir 1985); Eckes v Card Prices Update, 736 F.2d 859 (2d Cir. 1984).

In Feist Publications Inc. v Rural Telephone Service Co., 499 US 340 (1991), the Supreme Court repudiated the "sweat of the brow" rationale for copyright protection. See the discussion of Feist in section III.A. below

### III. *Recent Judicial Decisions*

#### A. *Supreme Court*

##### 1. Fogerty v Fantasy, Inc. 114 S Ct 1023 (1994).

This was a copyright infringement action involving a rock song in which defendant had prevailed. The Ninth Circuit had affirmed the district court's denial of a fee award (pursuant to 17 USC §505) to the prevailing defendant under its "dual standard"; prevailing plaintiffs were entitled to fees as a matter of course; prevailing defendants were awarded fees only if the suit were frivolous or brought in

bad faith. The Supreme Court reversed. It held that prevailing plaintiffs and prevailing defendants may not be held to different standards under §505. Moreover, it stated that neither party is entitled to attorney's fees as a matter of course; awarding fees is a matter of the court's discretion.

##### 2. Feist Publications, Inc. v Rural Telephone Service Co. 499 US 340 (1991).

The Supreme Court held that the white pages of Rural's telephone directory were unprotectible by copyright since they lacked "originality".

Feist specialises in publishing phone directories covering a wide geographic area. In developing the directory at issue, Feist approached 11 local phone companies for a license to their listings. Only Rural refused. (The lower court found Rural had violated the antitrust laws, but that issue was not before the Supreme Court.)

Feist proceeded to use Rural's listings without its consent, verifying the names and phone numbers and in many instances adding the addresses. Nevertheless, four fictitious listings Rural had seeded in its directory made their way into Feist's, and Rural sued for copyright infringement.

The district court held in favour of Rural on the copyright claim, and the Tenth Circuit affirmed. The Supreme Court reversed.

The Court stated that "originality" is a constitutional requirement. Originality requires "independent creation plus a modicum of creativity." Facts are uncopyrightable because they do not "owe their origin to an act of authorship". But "[f]actual compilations, on the other hand, may possess the requisite originality." The Court explained:

"The compilation author typically chooses which facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by the readers. These choices as to selection

and arrangement, so long as they are made independently by the compiler and entail a minimal degree of creativity, are sufficiently original that Congress may protect such compilations through the copyright laws ... Thus, even a directory that contains absolutely no protectible written expression, only facts, meets the constitutional minimum for copyright protection if it features an original selection or arrangement."

However, the Court emphasised that copyright in a factual compilation is "thin": "Notwithstanding a valid copyright, a subsequent compiler remains free to use the facts contained in another's publication to aid in preparing a competing work, so long as the competing work does not feature the same selection and arrangement."

The Court completely repudiated the "sweat of the brow" basis for protection of compilations, which it said "flouted basic copyright principles", since it extended protection beyond the selection and arrangement to the facts themselves.

The Court stated: "The statute identifies three distinct elements and requires each to be met for a work to qualify as a copyrightable compilation: (1) the collection and assembly of preexisting materials, facts or data; (2) the selection, coordination, or arrangement of those materials; and (3) the creation, by virtue of the particular selection, coordination, or arrangement, of an "original" work of authorship."

The Court emphasised that the originality requirement is not a stringent one: "Presumably, the vast majority of compilations will pass this test [independent selection and arrangement and some minimal level of creativity], but not all will."

According to the Court, Rural's white pages were "devoid of even the slightest trace of creativity." Its white pages do nothing more than publish the names, towns and phone numbers of Rural's subscribers, alphabetically arranged. The Court stated: "[W]ere we to hold that Rural's white pages

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pass muster, it is hard to believe any collection of facts could fail.”

### 3. Community for Creative Non-Violence v Reid, 490 US 730 (1989).

CCNV, an organisation dedicated to eliminating homelessness, entered into an oral agreement with Reid, a sculptor, to do a sculpture dramatising the plight of the homeless. Reid worked at his own studio, but during the course of the work, CCNV members visited him and offered suggestions and direction, much of which Reid accepted. After the sculpture was completed, the parties disputed copyright ownership, which had not been discussed.

The district court held that CCNV was the owner of copyright pursuant to the work made for hire provisions in §101 of the Copyright Act. The DC Circuit reversed.

The Supreme Court affirmed the decision of the DC Circuit. It held that:

a To determine whether a work is a work made for hire, one must first determine, on the basis of agency law, whether the author is an employee or an independent contractor. Depending on the outcome, one then applies either §101(1) or §101(2) of the Copyright Act. The Court rejected CCNV's argument that a work meets the §101(1) definition whenever the hiring party actually controls, or retains the right to control, the work.

b Reid was an independent contractor, as evidenced by numerous factors, including: (i) he supplied his own tools and worked in his own studio; (ii) he was retained for a relatively short period of time and had discretion over how he would work during that time to meet his deadline; (iii) CCNV had no right to assign additional projects to him; (iv) CCNV paid him a lump sum, a manner in which independent contractors are often compensated, and did not pay payroll taxes or provide employee benefits to him; and (v) CCNV wasn't in the business of creating sculptures. Since CCNV clearly could not meet the requirements of §101(2) of the statute ("sculpture" is not one of the

nine enumerated categories, and there was no written agreement), Reid was the owner of copyright in the work.

c The Court remanded the case, leaving open the possibility that CCNV's participation was sufficient to make it a joint author of the sculpture.

### B. Other Recent Copyright Decisions: Computer Programs

#### 1. Advanced Computer Services of Michigan Inc. v. Mai Systems Corp. 845 F Supp 356 (ED Va 1994).

Independent Service Organisations (ISOs) filed antitrust and other claims against MAI, who counterclaimed alleging, inter alia, copyright infringement. The court granted summary judgment on the copyright infringement and antitrust claims to MAI.

MAI claimed that the ISOs, in servicing MAI computers, loaded MAI's operating system software and diagnostic software, creating unauthorised copies of RAM. The ISOs argued that RAM is too ephemeral and transitory to consider a work in RAM sufficiently "fixed" to qualify as a copy under the Copyright Act. The court rejected plaintiffs' argument because "the Act does not require absolute permanence for the creation of a copy. Rather the Act requires only that the representation created in RAM be a "material object" that is "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration." 17 USC 6.

Alternative three Party agreement between CCI, Optus Communications and PBL draft 6 17/12/94101." *Id* at 363. The court concluded that software in RAM met this definition. Acknowledging that the copy would disappear when the computer was turned off, the court also noted that a computer could be left on - and the copy existent - for extended periods of time.

The court rejected plaintiffs' fair use defence primarily because of (i) the

commercial nature of use; (ii) the fact that programs are essentially creative works; (iii) the ISOs copied the entire work; and (iv) plaintiffs' use deprived MAI of license fees. It also found contributory infringement, concluding that MAI's licensees weren't entitled to allow the ISOs access to the software under 6.

Alternative three Party agreement between CCI, Optus Communications and PBL draft 6 17/12/94117, since they weren't owners of the software copies, and their license prohibited them from allowing third party access to the software. The court rejected plaintiffs' claims of tying and monopolisation. (NB, plaintiffs apparently conceded that they could repair MAI computers without accessing MAI software.)

#### 2. Allen-Myland, Inc. v International Business Machines, Inc. 746 F Supp 520 (ED Pa 1990) and 770 F Supp 1004 (ED Pa 1991).

On IBM's counterclaim for copyright infringement of its 3090 microcode, the court held that AMI infringed the copyrights when it made unauthorised copies of the microcode, compiled them and stored them in a library, and used them to perform "reconfigurations" and "splits" of IBM 3090 computer systems.

However, because the court also found that IBM's pricing policy for the 3090 microcode violated an earlier consent decree, it held that IBM was estopped from asserting its infringement claim with respect to system "splits". IBM was not estopped, however, from asserting its claim with respect to reconfigurations.

**Copyrightability** - The court rejected AMI's challenge to the copyrightability of the 3090 microcode, made primarily on the ground that the second of the five microcode tapes consists of uncopyrightable subject matter. The court said it was incorrect to analyse one tape in isolation from the rest, and noted that the instructions, software tools and data on that tape were a substantial and necessary part of a single work, the 3090 microcode.

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AMI also argued that, by designing the 3090 system so that it can't be modified without changing the microcode, IBM improperly used its copyright to control the ability of 3090 system owners to use modify and alter their machines. Accordingly, AMI argued, copyright protection for the microcode would extend beyond expression to the underlying ideas or utilitarian functions.

The court rejected this argument, finding that IBM could have written the microcode in many different ways "to perform the various processor controller functions and to enable the 3090 system to run."

The court found the question whether it would be economically feasible for AMI to write its own program to perform the same functions as IBM's 3090 microcode "not relevant to the idea/expression distinction":

*"Otherwise, a computer program so complex that vast expenditures of time and money would be required to develop different programs expressing the same idea would not be protected, even if innumerable different programs expressing that idea could be written, while a simpler program requiring less significant expenditures of time and money might be protected. So long as other expressions of the idea are possible, a particular expression of the idea can enjoy copyright protection, regardless of whether a copying party possesses the resources to write a different expression of the idea." Id at 533 (footnotes omitted).*

**Fair Use** - The court rejected AMI's fair use defence because, inter alia, the copying was done for commercial purposes; key portions were copied; and AMI's activities harmed the actual and potential market for the 3090 microcode. AMI also argued its copying activities were "a form of reverse engineering permissible as fair use." The court, however, found that AMI's activities constituted copying, not reverse engineering or fair use.

**Section 117** - The court rejected AMI's argument that its activities were permissible under 17 USC 6. §117,

concluding AMI's copying was not "an essential step" in the use of the microcode with the 3090 system, nor was it done merely for archival purposes. Moreover, AMI's modified versions of the 3090 microcode did not qualify as permissible "adaptations" under §117(1), since they were merely partial duplicates of different versions of the microcode produced by IBM.

**Exhaustion** - The court rejected AMI's argument that the "first sale" or "exhaustion" doctrine in 17 USC §109 permitted its activities. The court held that even if AMI could establish that IBM had sold the microcode, §109 doesn't authorise adaptations and reproductions of a copyrighted work.

In a subsequent decision issued in 1991 and reported at 770 F Supp 1004, the court denied AMI's motion for reconsideration based on the Supreme Court's ruling in Feist (see section III A). AMI argued that (i) Feist required IBM to establish the originality of each element of microcode alleged to be infringed; and (ii) the standard for originality of factual compilations was applicable, and Tape 2 failed to meet that standard.

The court rejected both arguments, holding that Tape 2, the tape in issue, shouldn't be analysed separately from the rest of the 3090 microcode, since Tape 2 was not a freestanding work (as distinguished from the white pages in Feist). It is an integral part of the microcode (containing instructions, software tools and data) and has a dynamic relationship to the rest of the 3090 microcode.

The court also rejected application of the Feist standard of originality to Tape 2. Feist applies to compilations of preexisting facts; the material on Tape 2, in contrast, owes its origin to IBM programmers. The court concluded that evidence of originality could be found anywhere on Tape 2 and was not limited to the section, coordination or arrangement of materials on that tape. The court emphasised that much of Tape 2's contents reflected programming choices by IBM and could have been written in a number of ways.

3. **Apple Computer Inc v Microsoft Corp and Hewlett-Packard Co**, 35 F 3d 1435 (9th Cir 1994), cert denied, 115 S Ct 1176 (1995).

Apple's suit charged that Microsoft's Windows and HP's NewWave infringed the copyright in the graphical user interface (GUI) in Lisa Desktop and Macintosh Finder. The Ninth Circuit affirmed summary judgment for defendants. It held that the district court did not err in permitting a license from Apple to Microsoft to serve as a partial defence, in dissecting plaintiff's GUI and eliminating unprotectible and licensed elements from comparison of the works as a whole, or in adopting a "virtual identity" standard for comparison of the works at issue.

The Ninth Circuit summarised the district court's rulings [709 F Supp 925 (ND Cal 1989); 717 F Supp 1428 (ND Cal 1989); 759 F Supp 1444 (ND Cal 1991); 779 F Supp 133 (ND Cal 1991); 799 F Supp 1006 (ND Cal 1992); 821 F Supp 616 (ND Cal 1993)], as follows:

*"[T]he district court construed the agreement to license visual displays in the Windows 1.0 interface, not the interface itself; determined that all visual displays in Windows 2.03 and 3.0 were in Windows 1.0 except for the use of overlapping windows and some changes in the appearance and manipulation of icons; dissected the Macintosh, Windows and New-Wave interfaces based on a list of similarities submitted by Apple to decide which are protectible; and applied the limiting doctrines of originality, functionality, standardisation, scenes a faire, and merger to find no copying of protectible elements in Windows 2.03 or 3.0, and to limit the scope of copyright protection to a handful of individual elements in New Wave. The court then held that those elements in New Wave would be compared with their equivalent Apple elements for substantial similarity, and that the New Wave and Windows 2.03 and 3.0 works as a whole would be compared with Apple's works for virtual identity. When Apple*

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*declined to oppose motions for summary judgment of noninfringement for lack of virtual identity, however, judgments in favour of Microsoft and HP were entered." 35 F 2d 1438.*

Apple sought reversal of these rulings, arguing that the district court made fundamental errors in reasoning: (i) it should not have allowed the license for Windows 1.0 to serve as a partial defence; and (ii) the district court erred in "dissecting Apple's works so as to eliminate unprotectible and licensed elements from comparison with Windows 2.03, 3.0 and New Wave as a whole, incorrectly leading it to adopt a standard of virtual identity instead of substantial similarity." *Id* at 1438-39.

The Court of Appeals concluded that "[t]he district court's approach was on target." *Id* at 1439. "[I]t is clear that treatment of Apple's GUIs, whose visual displays are licensed to a great degree and which are a tool for the user to access various functions of a computer in an aesthetically and ergonomically pleasing way, follows naturally from a long line of copyright decisions which recognises that works cannot be substantially similar where analytic dissection demonstrates that similarities in expression are either authorised, or arise from the use of common ideas or their logical extensions." *Id*.

**License** - The Ninth Circuit rejected Apple's contention that a 1985 agreement acknowledging "that the visual displays in [Windows 1.0] are derivative works" of Apple's GUIs, and licensing Microsoft "to use these derivative works in present and future software programs and to license them" did not carry forward to later Windows products. *Id* at 1440 & n8. The court found that "[t]he plain language of the Agreement" disposed of Apple's argument, since "these derivative works" can only refer to Microsoft's acknowledgment that the 'visual displays' generated by Windows 1.0 'are derivative works

of" Apple's GUIs. *Id* at 1440.

Apple argued that the district court's copyright analysis deprived its works of meaningful protection by dissecting them into individual elements and viewing each element in isolation." The court summarised Apple's copyright arguments as seeking "an overall comparison of its works for substantial similarity rather than virtual identity." *Id* at 1442. In responding to Apple's arguments, the Ninth Circuit first observed:

*"The fact that Apple licensed the right to copy almost all of its visual displays fundamentally affects the outcome of its infringement claims. Authorised copying accounts for more than 90% of the allegedly infringing features in Windows 2.03 and 3.0, and two thirds of the features in New Wave. More than that, the 1985 Agreement and negotiations leading up to Microsoft's license left Apple no right to complain that selection and arrangement of licensed elements make the interface as a whole look more "Ma-like" than Windows 1.0." *Id**

Consequently, the court found that it did not "start at ground zero" in analysing Apple's copyright claims. *Id*. "Rather, considering the license and the limited number of ways that the basic ideas of the Apple GUI can be expressed differently, we conclude that only 'thin' protection, against virtually identical copying, is appropriate." *Id* The court concluded that Apple's appeal, which depended on comparing its interface as a whole for substantial similarity, must therefore fail.

**Test for Infringement** - The court articulated a three part test for infringement: (1) "The plaintiff must identify the source(s) of the alleged similarity between his work and the defendant's work." *Id* at 1443. (2) "Using analytic dissection, and if, necessary, expert testimony, the court must determine whether any of the allegedly similar features are protected by copyright." Where a license agreement is involved, the court must determine the scope of the

license. Then the "relevant limiting doctrines" must be applied to unlicensed expression. *Id* (3) "[T]he court must define the scope of the plaintiff's copyright - that is, decide whether the work is entitled to 'broad' or 'thin' protection. Depending on the degree of protection, the court must set the appropriate standard for a subjective comparison of the works to determine whether, as a whole, they are sufficiently similar to support a finding of illicit copying." *Id*

**Identification of Sources of Alleged Similarity** - Apple had submitted, at the district court's request, a list of particular features in its works that it considered similar to features in the defendants' works. The Ninth Circuit rejected Apple's argument that it was somehow inappropriate for the district court to ask for such a list and to rely on it, instead of considering the works as a whole. It stated that the request was well within the district court's discretion, and indicated that the district court had an opportunity to view "numerous videotapes and demonstrations of the GUIs 'as a whole'". *Id*

**Analytic Dissection** - The court employed "analytic dissection" to identify features that were not protected by copyright because they were ideas, expression that had merged with an underlying idea, *scenes a faire*, or lacked originality. The court considered the graphical user interface generally, and the desktop metaphor in particular, to be ideas for which "Apple cannot get patent-like protection..." *Id* Although Apple concededly "put those ideas together creatively with animation, overlapping windows, and well designed icons... it licensed the visual displays which resulted." *Id*

The district court found five other "basic ideas embodied in the desktop metaphor" to be unprotectible: use of windows to display multiple images on the screen; representation of familiar objects from the office as icons; manipulation of icons to convey information and control the computer; use of menus; and opening and closing of objects to store, retrieve and

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move information. *Id* at 1443-44. It also agreed with the lower court that the doctrines of merger, *scenes a faire*, and lack of originality precluded protection for such elements of Apple's GUIs as an iconic image of a page to represent a document, the use of overlapping windows and the use of iconic images that were borrowed from earlier works by Xerox and IBM. *Id* at 1444-45.

The Ninth Circuit stated that GUIs are "partly artistic and partly functional. They are a tool to facilitate communication between the user and the computer..." *Id* at 1444. It stated that "hardware constraints limit the number of ways to depict visually the movement of a window on the screen.... Design alternatives are further limited by the GUIs purpose of making interaction between the user and the computer more 'user-friendly'. These, and similar environmental and ergonomic factors which limit the range of possible expression in GUIs, properly inform the scope of copyright protection." *Id* at 1445.

The court rejected Apple's arguments that the district court should not have "dissected" its works. The court cited a number of cases in other contexts, such as video games or nonliteral elements of computer programs other than the user interface, for the proposition that dissection is appropriate. *Id* at 1445-46. The court also found that the district court's dissection did not "run afoul of the enjoinder in such cases as Johnson Controls, Krofft, and Roth to consider the 'total concept and feel' of a work. Here the court did not inappropriately dissect dissimilarities, and so did nothing to distract from subjectively comparing the works as a whole." *Id* at 1446 (citations omitted).

**Standard for Comparison of the Works** - The court endorsed the district court's use of the "virtual identity" standard in comparing the works as a whole.

*"By virtue of the licensing agreement, Microsoft and HP were entitled to use the vast majority of features that*

*Apple claims were copied. Of those that remain, the district court found no unauthorised, protectible similarities of expression in Windows..., and only a handful in NewWave. Thus, any claim of infringement that Apple may have against Microsoft must rest on the copying of Apple's unique selection and arrangement of all of these features. Under Harper House and Erybarger, there can be no infringement unless the works are virtually identical."* *Id*

Apple argued that the virtual identity standard, which arose from cases involving factual works such as game strategy books and pocket organisers, should not be applied to complex audiovisual works like Apple's GUIs, and that the "the broader protection accorded artistic works is more appropriate." *Id* at 1446-47. The court disagreed, finding that Apple's works fall closer to the end of the "continuum" occupied by works with a narrow range of available expression than the end occupied by artistic works with a broad range of expression. *Id* at 1447.

Concluding, the court stated:

*"We therefore hold that the district court properly identified the sources of similarity in Windows and NewWave, determined which were licensed, distinguished ideas from expression, and decided the scope of Apple's copyright by dissecting the unauthorised expression and filtering out unprotectible elements. Having correctly found that almost all the similarities spring either from the license or from basic ideas and their obvious expression, it correctly concluded that illicit copying could occur only if the works as a whole are virtually identical."* *Id*

4. **Ashton-Tattoo Corp v Fox Software Inc.** 760 F Supp 831 (CD Cal 1990).

In a two page order (subsequently rescinded, 1991 US Disc. LEXIS 6577 (CD Cal 1991)), the court granted defendant's motion for summary judgment, holding that Ashton-Tattoo's copyrights on its dabs line of computer programs are invalid as a

result of inequitable conduct by Ashton-Tattoo. According to the court: (I) Ashton-Tate repeatedly failed to disclose to the Copyright Office that its dBase programs derived from public domain software; (ii) this failure was "done knowingly and with an intent to deceive"; and (iii) as a result of Ashton-Tate's inequitable conduct, the copyrights on its dBase line of programs are invalid.

As a result of this decision, Register of Copyrights Ralph Oman filed a declaration with the court setting forth Copyright Office procedures for copyright registrations and corrections thereto, particularly as they relate to derivative works. Declaration of Ralph Oman (Jan 24, 1991). Oman emphasised that the Copyright Office does not create copyrights, but merely registers them (in contrast to the Patent Office, which issues patents), and noted that the Copyright Office does not undertake any examination of prior art. Oman stated that if Ashton-Tate had disclosed in its original registration certificates the information later disclosed in its supplementary registration certificates (including the existence of additional prior works), the registrations would still have been issued. He further stated:

*"Where an applicant submits a claim for registration of a derivative work that is based on a series of pre-existing works, the Copyright Office requests only a general disclaimer of those works on their copyright applications. The Copyright Office does not believe that the failure to list each and every pre-existing work on an application violates copyright registration requirements."*

Shortly after Register Oman's affidavit was filed, the court rescinded its earlier order, without explanation.

5. **Ashton-Tate Corp v Ross**, 916 F 2d 516 (9th Cir 1990).

The court affirmed summary judgment for Ashton-Tate in its action for a declaratory judgment that it owns the copyright rights in the Full Impact spreadsheet program. The court held, inter alia, that Ross's contribution of ideas and guidance to

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a user interface was insufficient to establish a claim of joint authorship of the interface.

Ross and Wigginton developed the prototype for a new spreadsheet program. Ross wrote the engine, Wigginton the user interface. During a development meeting to discuss ideas and concepts, Ross gave Wigginton a list of user commands that he felt should be included in the interface.

A dispute arose between the parties. Wigginton subsequently joined Ashton-Tate, where he prepared an adaptation of his user interface, which, combined with an Ashton-Tate engine, became the "Full Impact" program.

The court rejected Ross's claim of joint authorship in the user interface, holding that to be a joint author, one must make an independently copyrightable contribution to the work. According to the court, Ross's list of commands didn't qualify as copyrightable expression.

The court held it was unnecessary to decide whether Ross and Wigginton were joint authors of the entire prototype (i.e. whether Ross, through creation of the engine, became a joint author of the entire prototype, including the user interface) since, even if Ross were a joint author of the prototype, that is insufficient to make him a joint author of a derivative work (ie, the Full Impact program).

The court acknowledged that if Ross were deemed a joint author of the interface, he'd have a claim for a share of the proceeds Wigginton received for us of the prototype's user interface, but that would be a claim against Wigginton, not Ashton-Tate.

6. **Atari Games Corp v Nintendo of America Inc.**  
Nos C-88-4805-FMS, C-89-0027-FMS, C-89-0824-FMS, slip op (ND Cal Mar 5 1991) and (ND Cal Mar 27 1991) aff'd 975 F.2d 832 (Fed Cir 1992).

In its March 5, 1991 opinion, the district court denied Atari's motions

for summary judgment and for a preliminary injunction.

The district court held, inter alia, that the inclusion of a provision in Nintendo's licensing agreements with third-party software developers prohibiting them from providing games licensed to Nintendo to other video game systems for a period of two years didn't constitute patent or copyright misuse. The court distinguished Lasercomb on the ground that the license provisions there were "materially different", ie, the non-compete there extended for 99 years, and further stated: "[I]nsofar as Lasercomb modifies in any way the intend of Congress codified in 35 USC §271, this Court declines to follow it." The court also found that Atari failed to demonstrate probability of success on the merits of its claim that Nintendo engaged in an "overall scheme to monopolise" and thus declined to enter a preliminary injunction on antitrust grounds.

In its March 27, 1991 decision, the district court granted Nintendo's motion for a preliminary injunction against Atari's manufacture and sale of its "Rabbit" program contained in videogame cartridges compatible with the Nintendo system.

Atari had attempted to reverse engineer the security system designed to prevent non-Nintendo cartridges from being played on a Nintendo game console. The security system consists of the "IONES" program on a patented computer chip, which permits the console to communicate with Nintendo-compatible programs.

Atari filed a false declaration in the Copyright Office to gain access to the materials Nintendo had deposited in connection with the program, which allowed it to "correct and verify" material obtained in its earlier unsuccessful attempts to reverse engineer the program.

Atari argued that its copying was justified by the merger doctrine, since the similarity was essential to achieving functional indistinguishability between its programs and Nintendo's. The court rejected this argument, stated that "the

purpose of being indistinguishable from a copyrighted item is not one recognised in law." According to the court:

*"Atari's conception of the 'idea' of the IONES program would eviscerate copyright protection for computer programs. This perspective would turn both equity and copyright law upside down. In essence, Atari would have the Court vie the would be infringer the right to determine what is important in a copyrighted work, and thereby bestow the right to copy whatever the infringer thinks is worth having."*

The court rejected Atari's argument that it was necessary to take the entire "song" (a metaphor used by the parties for a portion of the "lock" or "master" program in the console), even though only a small fraction of the "song" is necessary to obtain a functioning key program. According to the court, the possibility that Nintendo might in the future make nonfunctional notes in the song into functional ones does not justify Atari's extensive copying.

The court explained:

*"Atari is free to develop a lockout program for its own video game machines. Nintendo cannot copyright that idea. By contrast, Atari is not free to appropriate Nintendo's specific technique for 'locking' its own game console. More important, Atari cannot identify changes that it fears Nintendo could make to its copyrighted program; then redefine those features as functional and unprotected. Things that are admittedly non-functional at the time of copying are not made functional by the infringer's efforts to preempt reactions to its infringement."*

The court also rejected Atari's argument that "intermediate copying" was justified as long as the copier's final program was not substantially similar to the copied program.

**Appellate Decision** - The Federal Circuit (which had jurisdiction because of the patent claims in the case) applying Ninth Circuit law,



affirmed the preliminary injunction granted to Nintendo. 975 F 2d 832. It concluded that Nintendo was likely to succeed on the merits of its copyright infringement claim.

The court concluded that Nintendo could establish copyright infringement either by showing Atari literally copied IONES or by showing that it had produced a program substantially similar to the non-literal protectible expression in IONES.

In determining whether Nintendo's program contained protectible expression, the court followed the Ninth Circuit's "analytic dissection" approach in Brown Bag to separate the unprotectible components from the protectible expression. 975 F2d at 839. It stated that before comparing the programs at issue:

*"The court must filter out as unprotectible the ideas, expression necessarily incident to the idea, expression already in the public domain, expression dictated by external factors (like the computer's mechanical specifications, compatibility with other programs, and demands of the industry served by the program), and expression not original to the programmer or author." Id (citations omitted).*

The court found that IONES did contain protectible expression, since it contains "more than an idea or expression necessarily incident to that idea." According to the court, Nintendo's program incorporated "creative organisation and sequencing unnecessary to the lock and key function;" many alternate expressions of the idea were available; and its design wasn't dictated by external factors. Id at 840.

**Intermediate Copying** - Concerning the verbatim copying that took place in the course of Atari's "reverse engineering" of Nintendo's program, the court found it to be infringing because Atari had copied an unauthorised copy of the IONES program that it had obtained from the Copyright Office under false pretences. Id at 841-43.

However, the court stated that Atari's

intermediate copying would have been fair use if it hadn't been facilitated by its use of the unauthorised copy of IONES. The court did not analyse each of the fair use factors in 17 USC § 107, but rested its conclusion on "society's... interests in the free flow of ideas, [and] information" that it stated would be impeded by the otherwise "unintelligible" nature of the object code. Id at 842-43.

**Substantial Similarity of Rabbit and IONES** - The court upheld the evidentiary findings on the issue of substantial similarity, stating: "[T]he district court correctly considered expert testimony recounting striking similarities between the... programs." Id at 844-45. The court noted these similarities were not necessary to the programs' function or to accommodate the programming environment.

The court also upheld the district court's rejection of Atari's claim that it had to incorporate unnecessary program instructions to insure future compatibility.

**Copyright Misuse** - Finally, the court rejected Atari's copyright misuse defence. It stated that "copyright misuse may be a viable defence" against a copyright infringement claim in the Ninth Circuit. Id at 846. However, it concluded that in any case, Atari's misconduct in dealing with the Copyright Office would deprive it of the defence under the "clean hands" doctrine. Id

**Decision on remand** - After remand, the district court granted summary judgment to Nintendo on its copyright infringement claim. Atari Games Corp v Nintendo of America Inc., Copyright L Dec (CCH) 27,114 at 26,546 (ND Cal May 17, 1993). The court declined to reconsider its earlier holding concerning copying to achieve future compatibility:

*"Program code that is strictly necessary to achieve current compatibility presents a merger problem, almost by definition, and is thus excluded from the scope of any copyright. A defendant may not only make*

*intermediate copies of an entire program to discover the existence of such code, but it may also copy that code into its final product. In contrast, program code that relates only to future compatibility has no current function and thus cannot merge with the expression of any idea. Such code is therefore entitled to copyright protection..." Id at 26,548 (footnotes omitted).*

The court indicated sympathy for Atari's claims that Nintendo would purposely change its program to defeat future compatibility, but concluded that "[l]imiting copyright protection is not the proper response.... If there is a remedy for the behaviour feared by Atari, it may be provided by the antitrust laws and the copyright misuse doctrine." Id at 26,548 n2.

The court concluded that analytic dissection of the programs was mandated, since plaintiff has no rights in unprotected elements. It applied an abbreviated Computer Associates abstraction-filtration-comparison test, focusing on the program elements the parties focused on - "similarities between the way specific modules are designed and constructed", and to a "lesser extent" on "similarities based on the existence of modules with identical functions in both programs, a somewhat higher level of abstraction." Id at 26, 549-50.

The court concluded that the primary "filter" was its own earlier ruling that "no copyrightable expression exists in the specific data points set from the cartridge to the console at predetermined times". Accordingly, instructions necessary to produce a signal stream that will unlock the current IONES console "must be filtered out under basic merger principles". Id at 26,550.

The court stated that infringement can occur not only as a result of similarities at lower levels of abstraction, but at any level of abstraction that survives the filtration process.

The court identified six similarities that were probative of copying and that couldn't be eliminated by

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filtration. According to the court, these were "more than sufficient to constitute infringement, particularly given the presence of Nintendo program elements in Atari's program that served no function in the latter." *Id* at 26,554.

7. **Atari Games Corp v Oman**, 888 F 2d 878 (DC Cir 1989) and 979 F 2d 242 (DC Cir 1992).

The court held that the Copyright Office abused its discretion in failing to "intelligibly account" for its refusal to register a copyright in the audiovisual work in Atari's video game "BREAKOUT". The court vacated the summary judgment in favour of the Register of Copyrights entered by the district court and remanded with instructions to return the matter to the Copyright Office for further consideration.

The court stated that it was "unable to discern from the final agency action disqualifying BREAKOUT from registration just how the Register is applying the relevant statutory prescriptions". The concerns expressed by the court related to (1) the Office's apparent focus on the discrete elements of the work, rather than the work as a whole; (2) the standard of creativity employed by the Office in determining whether to register the work; and (3) possible confusion between the registrability of a work and the extent of copyright protection.

**Copyrightability of the work "as a whole"** - In refusing to register BREAKOUT, the Office subjected the work to a component by component analysis, emphasising the "non-copyrightability of the work's several parts - the wall, paddle, ball and tones". The court pointed out that the definition of "audiovisual work" refers to a "series of related images" and concluded that "the Register's focus, even if initially concentrated on discrete parts, ultimately should be on the audiovisual work as a whole, i.e. the total sequence of images displayed as the game is played". *Id* at 883 (emphasis in original).

**The creativity threshold** - The court stated that the level of creativity "necessary and sufficient for copyrightability has been described as 'very slight', 'minimal', 'modest'." The court cited a number of cases in which simple shapes, "selected or combined in a distinctive manner indicating some ingenuity" have been accorded copyright protection, and questioned how the refusal to register BREAKOUT harmonises with prior decisions. *Id* at 883.

**Idea/expression, scenes a faire, and the distinction between registrability and the scope of protection** - The court rejected the argument that the "arrangement" in BREAKOUT was dictated by functional considerations, observing that Atari had demonstrated that a large number of different arrangements or designs might have been devised.

The court also rejected the notion that it was "necessary or sufficient" for Atari to register a claim in the underlying computer program to protect is audiovisual work.

Finally, the court rejected use of the *scenes a faire* doctrine to distinguish copyrightable from uncopyrightable subject matter. The Register had argued that the symbols displayed were "so ordinary and commonplace as to fail under *scenes a faire* analysis" (ie, they were indispensable, or at least standard, to treatment of a given idea). The court concluded that the *scenes a faire* doctrine limits the scope of protection for a work, not its copyrightability.

After remand, the Register again refused registration of BREAKOUT. In its opinion reported at 979 F 2d 242, the DC Circuit, reviewing that decision under an "abuse of discretion" standard, held that "the rejection of BREAKOUT was unreasonable when measured against the Supreme Court's instruction that the requisite level of creativity [for copyrightability] is extremely low." *Id* at 243, quoting Feist Publications v Rural Tel Serv Co, 111 S Ct 1282, 1287 (1991). The court criticised the Register's conclusion that the game

was too trivial for protection. The court concluded that although the elements (eg. the geometric shapes) that comprise BREAKOUT may be individually unprotectible, their assemblage into the game as a whole could have been done in many ways, was not dictated by function, and demonstrated the requisite creativity for copyright.

8. **Autoskill Inc. v National Education Support Systems Inc**, 793 F Supp 1557 (DNM 1992) *aff'd* 994 F 2d 1476 (10th Cir), cert denied, 114 S Ct 307 (1993).

The district court held that the Plaintiff was likely to succeed on the merits of its claim that defendant's program NESSI infringed the copyright in plaintiff's "Autoskill program" designed for the testing, diagnosis and training of reading skills, and entered a preliminary injunction.

Autoskill did not allege copying of its source code, but instead charged NESS with copying the "structure, sequence and organisation" and the "total concept and feel" of its program.

At the outset the court refused to apply CCNV v Reid retroactively to invalidate plaintiff's copyright.

The court rejected defendant's argument that the Autoskill program was a functional work, barred from copyright protection under 17 USC §102(b). It turned then to defendant's claim that plaintiff was trying to protect ideas. It adopted the "filtering approach" suggested in Nimmer on Copyright for excluding unprotectible elements from consideration before undertaking the substantial similarity inquiry. 793 F Supp at 1565 (citing Nimmer on Copyright § 13.13[F]).

The court discussed Whelan but declined to adopt its reasoning, calling its approach "a temptingly simplistic and bright line test, [which] cannot account for the reality that many ideas may exist in a given work." *Id* at 1566.

The court relied instead on Judge Learned Hand's "abstractions test". It concluded a reading training program that identifies three sub-types of

reading deficiencies was an unprotectible idea, but the "manner in which Autoskill utilises those ideas and communicates them to students and teachers in the context of its reading program amounts to expression". *Id*

The court concluded that the ideas in Autoskill's program were capable of various modes of expression. It eliminated certain aspects as unprotectible, however - the use of thirteen skill categories based on letter/sound relationships in the English language, and the "silent sentence" and "silent paragraph" exercises which are common in reading programs. *Id* at 1568.

Turning to the issue of substantial similarity, the court found significant similarities in the testing and training components of the programs, crediting expert testimony that these were the "guts" or "key elements". *Id*. It acknowledged differences between the programs but concluded they were insufficient to disprove substantial similarity of protected elements. The court declined to employ a "total concept and feel" test.

**Decision on appeal** - The Tenth Circuit affirmed preliminary injunction. 994 F 2d 1476 (10th Cir 1993). The court (disagreeing with the district court) concluded that *CCNV v Reid* should be applied retroactively. However, it concluded that while the question whether Autoskill's programmers were employees remained "a fair ground for litigation", NESS's arguments were insufficient to justify reversing the injunction. 994 F 2d at 1489.

Concerning the probability of success on the copyright claim, the court affirmed the conclusion of the district court, concluding that it had used "a permissible method of analysis and reached reasonable conclusions". *Id* at 1492. The court declined to decide "precisely the correct method of analysis for a final copyright judgment" until an appeal required it to do so. *Id* at 1491.

The court rejected NESS's arguments that the district court had erroneously

applied the abstractions analysis by looking at similarities at the highest level of abstraction, and that the court failed to properly apply §102(b), thus precluding use of educational processes and methods.

It also rejected NESS's claim that the district court failed in the filtration stage to exclude public domain elements and unprotectible *scenes a faire*. *Id* at 1494.

9. ***Avtec Systems Inc v Peiffer***  
21 F 3d 568 (4th Cir 1994)  
aff'g in part, rev'g in part,  
805 F Supp 1312 (ED Va  
1992).

The district court had held that software written by defendant Peiffer while employed by Avtec was not a work made for hire, but that Avtec nevertheless had trade secret rights in the program

Peiffer was a full time employee of Avtec, a company that markets space related computer services, eg satellite orbital analysis. He developed a program known as "Orbit" (with input and debugging assistance from other Avtec employees, but the district court found no joint ownership). He conceded that some of the knowledge of orbital analysis he gained at Avtec was incorporated into Orbit. Avtec used Orbit to demonstrate to potential customers its capability on client specific work, but not as a marketable stand alone program.

When a dispute as to ownership arose, Avtec sued. The district court held that although Peiffer's job description included programming simulations, Orbit was not a work made for hire. The court reasoned that Peiffer wrote it primarily at home during nonworking hours, on his own personal computer equipment, and in furtherance of his hobby and not to satisfy work obligations.

The Fourth Circuit vacated this portion of the district court's opinion. It found that the district court had focused almost exclusively on whether Peiffer owned the copyright in a revised version of the Orbit program, and failed to consider whether the original program was

owned by Avtec. It observed that if the district court concluded that Avtec owned the original version, it would then have to consider whether defendants infringed the copyright by creating unauthorised derivative works.

The district court had also found that Avtec, through its contributions to and use of Orbit, acquired trade secret rights in the program's use for these purposes "in a similar manner as an employer may possess 'shop rights' to an employee's patented innovation". 805 F Supp at 1320. Consequently, it imposed a constructive trust entitling Avtec to 15% of the gross revenues realised by Peiffer and his licensee from the Orbit program. *Id* at 1322. The court of appeals vacated and remanded the trade secret ruling and remedy. It reasoned that if the district court determined that Peiffer owned the copyright in the original version of the program, then Avtec would have only an implied nonexclusive license, which would be inconsistent with trade secrecy.

The court of appeals affirmed the district court's finding that Peiffer breached a fiduciary duty to Avtec by entering into an exclusive agreement with another company to market and distributing Orbit without Avtec's knowledge while still a full time Avtec employee.

On remand, 1994 US Dist LEXIS 16946, the district court found that Peiffer owned all rights in the Orbit program, because the original version was not a work made for hire, and that Avtec held only a non-exclusive license revocable at will. The court awarded no damages to either party.

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10. **Aymes v Bonelli, 47 F 3d 23 (2d Cir 1995) and 980 F 2d 857 (2d Cir 1992), rev'g [1991] Copyright L Dec (CCH) 26,805 (SDNY Sept 25, 1991) and memorandum on reconsideration, 1991 US Dist LEXIS 16307 (SDNY Nov 12, 1991).**

In its 1992 decision, the Second Circuit reversed the district court and held that computer programming created by Aymes was *not* a work made for hire owned by Bonelli. Bonelli, and Island Swimming Sales had retained Aymes to write computer programs, but the parties had no written agreement as to ownership.

The court reasoned that because the parties never signed an agreement, the programs could be works made for hire only if they were written by Aymes as an employee within the scope of his employment. Evaluating the factors cited by the Supreme Court in CCNV v Reid (discussed in Section IIIA), the court concluded Aymes was not an employee, but an independent contractor.

In support of its conclusion, the court reasoned that Bonelli had not paid Aymes any employee benefits or deducted or paid any payroll taxes on his behalf. It also noted that Aymes

was a skilled professional. The court acknowledged that Bonelli's right to control Aymes' work (and his exercise of that right) supported the conclusion that Aymes was an employee, but held that this factor was outweighed by the other factors. It evaluated and dismissed as inconclusive a number of other CCNV factors, eg. Bonelli's right to assign additional projects to Aymes, the location of Aymes' work, etc.

On remand, the district court again dismissed the infringement claim. On appeal, Aymes argued that he owned the copyright in the program, and any modifications that Island made - even for its own internal use - constituted copyright infringement. Island did not dispute that it created a derivative work, but claimed it was permitted to do so under 17 USC §117. The Second Circuit affirmed the district court's decision. It concluded that Aymes was the owner of a copy of the program, having paid Aymes more than \$70,000 to design a program specifically for its use. It concluded that the changes Island made were permissible under

§117 because they were "necessary measures in their continuing use of the software in operating their business". 33 USPQ 2d at 1770. The court relied on language from the CONTU Report and on Foresight Resources Corp v Pfortmiller, 719 F Supp 1006, 1009 (D Kan 1989) (stating that the right of adaptation under §117 includes the right to add new features). The court concluded that the parties were aware when they entered their agreement "that modifications would be essential for the continued functioning of the program on an upgraded computer system, and ... the system was continually being upgraded to keep up with Island's growth". 33 USPQ 2d 1771. There was no evidence that Island had used the program for anything other than its own internal business purposes.

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[Part 2 of this article will appear in the March 1997 issue: Ed]