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1988 Cumulative Supplement No. 2

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How to Use This Supplement

The 1988 Cumulative Supplement No. 2 brings *The Law of Computer Technology* up-to-date with significant developments that have occurred since the publication of the main volume. The supplement presents all the relevant judicial, legislative, and administrative developments, and it serves two purposes: It keeps your main volume current and offers a summary and analysis of recent developments in its own right.

Included in this supplement is an in-depth analysis of the application of copyright to data arrangements and adaptation programs. There is new information on bankruptcy issues, the federal Electronic Communications Privacy Act, and on the Whelan and Goodpasture copyright cases. The first "shrink-wrap" license case and new special legislation on software licenses are discussed, and there is also an extensive treatment of the international classification of software. Recent cases on fraud in computer sales are discussed. In addition, the supplement reviews recent federal case law on the patent law doctrine of equivalents.

Each entry in the supplement is keyed to a chapter, paragraph (¶) number, and page number in the main volume. An italicized instruction line located under each reference to the main volume indicates where the new material belongs in relation to text or footnotes in the main volume. To check for new developments regarding a subject in the main volume, find the corresponding paragraph number in the supplement. The sequences of the main volume and supplement are identical, and the top of each page in the supplement carries a paragraph reference.

To facilitate access to the author's treatment of new developments, this supplement contains a Cumulative Table of Cases and a Cumulative Index, which supersede the table of cases and index in the main volume. Paragraph numbers for material in this supplement are preceded by an "S" in the Cumulative Table of Cases and the Cumulative Index.

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PART I **Innovation and Incentives**

CHAPTER 1

Copyright and Computer Technology

PART A. COPYRIGHTABILITY

PART B. INFRINGEMENT

distinguishing between unprotected process and idea as opposed to protected expression.[30.3] In addition to litigation dealing with computer programs, there has been an increase of litigation regarding copyright of information or data compilations.[30.4] This has significance for computer data bases and the overall expanding value of information as a form of property.[30.5]

The major, remaining issue of copyrightability as a complete barrier to protection of computer programs focuses on the levels of programming most closely associated with machine operations. In one manifestation, this includes the copyrightability of microcode instructions in machine form. The first decision dealing with microcode held that programs of this type are copyrightable.[30.6]

More recently, substantial debate has centered on user interface aspects of data processing programs, including status and data entry screens.[30.7] The threshold question reverts back to whether or not the

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[30.3] See infra ¶ 1.08[3], this Supplement.

[30.4] See infra ¶ 1.04A, this Supplement. See also Rand McNally & Co. v. Fleet Management Sys., Inc., 600 F. Supp. 933 (ND Ill. 1984) (map compilation of mileage between points is copyrightable and infringed when mileage data was placed in a computer data base); Southern Bell Tel. & Tel. Co. v. Associated Tel. Directory Publishers, 756 F2d 801 (11th Cir. 1985) (Atlanta Yellow Pages telephone directory is copyrightable compilation); Hutchinson Tel. Co. v. Fonteer Directory Co. of Minn., 770 F2d 128 (8th Cir. 1985) (White Pages telephone directory is entitled to copyright protection); West Publishing Co. v. Mead Data Cent., Inc., 616 F. Supp. 1571 (D. Minn. 1985), aff'd, 799 F2d 1219 (8th Cir. 1986) (publisher has enforceable copyright protection in reference to page numbers and arrangement of cases in its case repoters; development by competitor of pagination system keyed to that of publisher infringes that copyright). See Financial Information, Inc. v. Moody's Investors Serv., Inc., 808 F2d 204, 1 USPQ2d (BNA) 1279 (2d Cir. 1986) (data in bond cards not copyrightable); Toro Co. v. R&R Prods. Co., 787 F2d 1208 (8th Cir. 1986); New Haven Copper Co. v. Everready Mach. Co., 229 USPQ 838 (D. Conn. 1986) (where economic data is derived from an independent analysis, court will not enjoin use of identical column headings and data in economic analysis tables in submissions to federal agency).

[30.5] See generally ¶¶ 11.05–11.10, main volume.

[30.6] See NEC Corp. v. Intel Corp., 645 F. Supp. 590 (CD Cal. 1986). See also ¶ 1.03[6], this Supplement.

[30.7] See Broderbund, Inc. v. Unison World, Inc., 648 F. Supp. 1127 (ND Cal. 1986); Digital Communications Assocs. v. Softklone Distrib. Corp., 659 F. Supp. 449 (ND Ga. 1987) (status screen of communications program copyrightable and infringed). Compare Registration and Deposit of Computer Screen Displays, Notice of Public Hearing, 52 Fed. Reg. 28,311 (1987) (Copyright Office reviews registration of screen displays). See generally Reback and Hayes, "A Modest Proposal for the Registration of Computer Screen Displays," 4 Comp. Law. 1 (Aug. 1987).

lar data could be effectively portrayed.[50.1] The fact that the interface features of the program may contribute substantially to marketability, however, indicates that for many programs the interface features are substantially more than mere inert and unexpressive forms or structures. To the extent that the "form" includes expressive matter, the format is entitled to at least some protection. While a mere cross-hatched layout of data does not merit any protection, titles, arrangements of fields, highlighting, and similar effects may be highly expressive and consequently protectable.

Some courts have responded to the need to protect the original developer, finding potential infringement in the "look and feel" of data programs, and by implication holding that the structures and forms are copyrightable. One example of this outcome is in a decision protecting the original developer of a computer printing program. In *Broderbund, Inc. v. Unison World, Inc.*,[50.2] the court held that the various menu screens, input formats, and sequences of operation in a printing program entitled the "Print Shop" were distinguishable from the underlying ideas and, consequently, protectable under copyright. "[The] structure, sequence, and layout of the audiovisual displays in 'Print Shop' were dictated primarily by artistic and aesthetic consideration and not by utilitarian or mechanical ones . . . any designer of any program that performed the same functions as 'Print Shop' had available a wide range of expression . . . ."

The district court in *Digital Communications Associates v. Softklone Distributing Corp.*,[50.3] also protected the screen interface independent of the underlying code. The court dealt with a status screen for users of a popular communications program for microcomputers. While it initially concluded that the status screen was not protected as a copy of the underlying program, since many different programs could produce the same screen, the court concluded that the screen itself contained protectable expression. The court found: "[The] 'idea' is the process or manner by which the status screen . . . operates and the 'expression' is the method by which the idea is communicated to the user." In this

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[50.1] See New Haven Copper Co. v. Everready Mach. Co., 229 USPQ 838 (D. Conn. 1986). Compare Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1987).

[50.2] 648 F. Supp. 1127, 231 USPQ (BNA) 700 (ND Cal. 1986). See also M. Kramer Mfg. Co. v. Andrews, 783 F2d 421 (4th Cir. 1986) (holding that copyright of audiovisual displays also protects the underlying program code). Compare Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F2d 1256 (5th Cir. 1987) (no infringement based on structure and organization).

[50.3] 659 F. Supp. 449 (ND Ga. 1987).

that video games involved were subject to valid copyright protection); United States v. Steerwell Leisure Corp., 598 F. Supp. 171 (WDNY 1984) (in criminal prosecution, defendants had adequate notice that their unauthorized distribution of pirated video games was illegal).

Page 1-22:

Add at end of runover paragraph.

Copyright protection based on substantial repetition of sights and sounds of an audiovisual work has received widespread application. It extends beyond works that fall into the ordinary video game format. For example, one district court has held that the movements and character of an animated toy bear operated by a program represented a copyrightable work that was infringed when a totally different program was developed to operate the same toy. The court held that the toy itself was an audiovisual work because it produces a series of related images and sounds. "The term audiovisual work should be broadly construed to refer to any set of images displayed in some kind of unit." [57.1]

For copyrightability, either an animated toy or a video game must nevertheless encompass original material not in the public domain. This barrier arises most importantly in reference to video or computer-assisted games that enact traditional games such as poker or chess, where both the method of play and the character of the items used in the game are dictated by widely understood and unchangeable principles. Despite this, however, it has been held that a computerization of the poker card games represented a copyrightable work. In *M. Kramer Manufacturing Co. v. Andrews*,[57.2] a game based on draw poker rules was held to be copyrightable by the Court of Appeals for the Fourth Circuit, and the court sustained an infringement claim against an independently developed program that performed in substantially the same manner. The Fourth Circuit held that the game was not merely an unprotected idea. While there could be no copyright over the idea of playing poker or creating a video poker game, there was copyrightable expression in "the shape and characteristics of the cards and the shapes, sizes, color sequences, arrangements and sounds . . . ." The program met standards of originality even though substantial portions of the game were in the public domain.

> The . . . changes, additions, and modifications . . . to the underlying works, introduced a completely separate game, adding the flashing card feature in the play mode, which is a series of card faces with

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[57.1] Worlds of Wonder, Inc. v. Vector Int'l Inc., 33 PTCJ (BNA) 10 (ND Ohio 1986).

[57.2] 783 F2d 421 (4th Cir. 1986).

or even directly examine the identity between process and code in the context of copyrightability issues. Instead, the identity of process and expression becomes a topic in reference to issues relating to infringement.[89.2]

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of Am., 623 F. Supp. 1483 (D. Minn. 1985) (data communications program); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1986). See also Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F2d 1256 (5th Cir. 1987) (no infringement based on structure or organization of program output).

[89.2] See infra ¶ 1.08[3], this Supplement.

Page 1-35:

Add the following new subsection.

[c] Structure and Organization [New]

Any analysis that supports copyrightability of coded programs requires a determination of what aspect of the program constitutes the protected expression. It is possible to find expression in the output of the program, in the specific coding, or in the functions of the program.[89.3] An additional possibility involves the organization and structure of the program itself.

In the cases adopting the view that expression exists in the organization of a computer program, the primary issues actually involve infringement, rather than copyrightability of the program.[89.4] The cases clearly establish that the detailed organization of a complex program constitutes expression and that copying of this organization infringes the copyright.

A similar analysis applies in reference to copyrightability. Failing to find expression that is to be protected in any other manner, it may be possible to conclude that the organization of the commands and

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[89.3] See supra ¶¶ 1.03[4][a]–1.03[4][c] and 1.03[5][a], 1.03[5][b], main volume. See also Midway Mfg. Co. v. Strohon, 564 F. Supp. 741 (ND Ill. 1983).

[89.4] See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985) (statistics program); EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1483 (D. Minn. 1985) (data communications program); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1986). See also Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F2d 1256 (5th Cir. 1987) (no infringement based on structure or organization of program output).

Under current technology, most colorization procedures involve computer-assisted modification of the original. In June 1987, the Copyright Office determined that colorized works made by computer methods were registerable as derivative works if they show a "certain minimum amount of individual creative human authorship." [95.1]

The Office's decision and explanation thereof provides some insight into how computer-assisted creative works will be treated in the future. The Copyright Office noted that its decision to allow registration was a close one and narrowly drawn. It reflected testimony that a colorization process involved selection of as many as 4,000 colors from a palette of over 16 million possibilities.

> [We do] not consider registration would be justified based on claimed arrangement or combination of colors because the original black and white film predetermines the arrangement of colors. Our decision is limited to existing computer-coloring technology. We will monitor technological developments and may reconsider the issue if the *role of the computer* in selecting the colors becomes more dominant.

Registration criteria require that there be numerous color selections made by humans from an extensive inventory of colors and that the ranges and extent of added color be more than mere trivial variation that modifies the overall appearance of the work. The copyright covers only the new material.

[95.1] 52 Fed. Reg. 23,443–23,501 (June 22, 1987).

Page 1-37:

Add the following new section.

¶ 1.04A INFORMATION AND DATA ARRANGEMENTS [NEW]

One by-product of computerization is that "information" has an increasingly recognizable value. Significant industries exist that are related to electronic publishing and data base systems.[95.2] Copyright issues inexorably trace this development because, under current law, copyright represents the only existing legal system for protecting aspects of information released to the public.

[95.2] See ¶¶ 11.07[1]–11.07[3], main volume.

trary, the protection is based largely on the inherent value and effort of obtaining the entire list rather than on an alphabetical arrangement of the names.

The independent value of information is also reflected in dealing with copyright of published maps. For example, one court held that mileage figures from various points on a map were copyrightable and could not be directly read into a computer data base.[95.8] Presumably, the defendant could have found the mileage on its own, but he improperly avoided this effort by relying on the plaintiff's published compilation. Similarly, information on a real estate plat map describing the property involved was held to be copyrightable.[95.9]

Extending beyond a focus on the information, the original author can protect the organization and arrangement of the data, especially where this aspect is critical to the work and involves some identifiable selectivity by the compiler. This flows from the language of the statute defining arrangement and selection as the central features of a copyrightable compilation.[95.10] Protection of organizational features as the basis of copyrightability requires proof of significant selectivity in an overall work that is relatively large and complex.[95.11] It does not require

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ship entitled to copyright protection); Southern Bell Tel. & Tel. Co. v. Associated Tel. Directory Publishers, 756 F2d 801 (11th Cir. 1985) (Atlanta Yellow Pages telephone directory is copyrightable compilation). See Rural Tel. Serv. Co., v. Feist Publications, Inc., 663 F. Supp. 214 (D. Kan. 1987) (White Pages of telephone directory are copyrightable and infringed by competing directory publisher).

95.8 Rand McNally & Co. v. Fleet Management Sys., Inc., 600 F. Supp. 933 (ND Ill. 1984). See Rand McNally & Co. v. Fleet Management Sys., Inc., 634 F. Supp. 604, 230 USPQ (BNA) 59, 1986 Copyr. L. Dec. (CCH) ¶ 26,007 (ND Ill. 1986) (on a motion for reconsideration, the court reaffirms its original position. The map publisher's mileage guides were copyrightable material, and hence a copyrightable compilation. By copying the mileage data from the map publisher's compilation and putting data directly into a computer data base, the defendant engaged in copyright infringement). Compare NADA Servs. Corp. v. Business Data of Va., 651 F. Supp. 44 (ED Va. 1986) (no infringement or, in the alternative, fair use where defendant copied information on used car value into computer form where computer use is the same as intended use of book of information itself).

95.9 Rockford Map Publishers, Inc. v. Directory Serv. Co. of Colo., 768 F2d 145 (7th Cir. 1985) (plat map indicating location, ownership, and other material facts concerning real estate parcels is copyrightable work; it is infringed where second publisher takes first author's output).

95.10 Copyright Act of 1976, 17 USC §§ 101, 103.

95.11 See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985); EF Johnson Co. v. Uniden Corp. of Am., *Publishing,* the objective of the secondary party was to access the primary or original database for purposes of enhancing the marketability of its own product. Toro, the plaintiff, was a leading lawn mower manufacturer. The alleged infringment was by R&R, a manufacturer of a limited number of replacement parts for Toro systems. R&R sells through a catalogue and it uses Toro replacement part numbers as an index. R&R part numbers are identical to the Toro system, except that the letter "R" is added.

The court observed that the numbering system was not equivalent to an unprotected idea but was nevertheless not protected because it lacked originality in the sense of creative authorship. There was no evidence here that any "particular series . . . of numbers denoted a certain type or category of parts or that the numbers used encoded any kind of information at all." They were purely arbitrary and random. Presaging its ruling in the West case, however, the court noted that many numbering systems may be protected. "[Any system] that uses symbols in some sort of meaningful pattern, something by which one could distinguish effort of content, would be an original work."

A similar result occurred in a case where the data in a replacement parts catalogue was entered into a computer database by a competitor who desired to cross-reference these numbers to its own replacement parts. The court held that the numbers in the cross-reference system were unprotected "facts." [95.15] "[Plaintiff] might have a copyright in the creative arrangement of the catalog, it did not have a protectible interest in the 'facts' [contained] therein . . . The arrangement and manner of expression is all that is entitled to protection. Otherwise, the free flow of new expression would cease as authors captured various pieces of factual information."

The act of entering factual data into a computer data base for cross-referencing purposes consistent with the intended use of the data by an owner of a copy of the original work might also be protected "fair use". This approach was suggested in *NADA Services Corp. v. Business Data of Virginia,*[95.16] where the defendant had transcribed data about used car prices into a database for its own use in making governmental appraisals. The court held that the transcription of this factual information into a computer data base was not an infringement of the copyrights since the use made in the computerized form was essentially the same use that was intended for the books, copies of which had been properly purchased by the defendant. Even if there was an infringement

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[95.15] Gem Prods., Inc. v. Robershaw Control Co., 1986 Copyr. L. Dec. (CCH) ¶ 25,975 (CD Cal. 1986).

[95.16] 651 F. Supp. 44 (ED Va. 1986).

whether such use of the work is wrongful. If . . . the work is unprotected by federal law because of lack of originality, then its use is neither unfair nor unjustified.[95.18]

State law claims were also held to have been preempted in *Del Madera Properties v. Rhodes and Gardner, Inc.*[95.19] *Del Madera* dealt with state law claims of unfair competition and unjust enrichment arising from a defendant's appropriation of a tentative subdivision map developed by a former joint venturer. The court concluded that these claims covered the same ground that the federal copyright laws cover and that allegations of a breached fiduciary duty or an implied promise did not, in this case, provide the extra element necessary to avoid preemption. The misappropriation claim involved ownership issues covered under copyright law and "an implied promise not to use or copy materials within the subject matter of copyright is equivalent to the protection provided by Section 106 of the Copyright Act."

[95.18] See National Republican Congressional Comm. v. Legi-Tech, 795 F2d 190 (DC Cir. 1986). The copyright claim is invalid if the use of the federal election contribution lists sought by Legi-Tech is authorized by the election law. "Inasmuch as Congress expressly provided . . . for public dissemination of the precise type of compilation at issue here, the provisions of the Copyright Act . . . dealing with compilations generally, must be construed in a manner that will accommodate the [election law]."

[95.19] 820 F2d 973 (9th Cir. 1987).

PART B. INFRINGEMENT

¶ 1.06 GENERAL STANDARDS

Page 1-41:

Add at end of note 112.

For certain works, the copyright statute grants exclusive rights of public performance. See Columbia Pictures Indus., Inc. v. Aveco, Inc., 800 F2d 59 (3d Cir. 1986) (Providing cassettes of movies for rental and providing viewing rooms that could be rented for viewing these movies violated the public performance rights of the copyright owner).

Page 1-46:

Add at end of subsection.

In dealing with whether an infringement occurred because of substantial similarity, courts must blend consideration of legal analysis re-

> thetic consideration and not by utilitarian or mechanical ones . . . any designer of any program that performed the same functions as 'Print Shop' had available a wide range of expression. . . .

In a case analogous to *Broderbund,* the district court in *Digital Communications Associates v. Softklone Distributing Corp.,*[136.2] held that a data communication program infringed the expressive portion of the status screen of its competitor. The court emphasized that portions of the status screen associated with the process or idea were unprotected, but that copyright protection extended to aspects of the screen layout that were unrelated to and not dictated by how the program operates. These were infringed in a context where "there [was] some difference between the two screen displays in their arrangement of the "window" list of commands, the upper portion of the two screens are virtually identical . . . ."

In *Worlds of Wonder, Inc. v. Vector International Inc.,*[136.3] the court granted a preliminary injunction in a case involving an animated toy bear based on a conclusion that the infringing work substantially recreated the "look and feel" of the infringed work. The bear (Teddy Ruxpin) was operated by a cassette tape with two coordinated tracks, one of which operates a voice audio and the other implements movements by the bear. The court found an infringement by comparing the "work" produced when the bear was operated by the Vector cassette to the work created by the original cassettes. "Such comparison revealed not only general similarity as to the concept and feel of the two works but also specific similarities." These were in the "character" movements involving such matter as visual impression of eye, nose, and mouth movement.

Although the level of litigation regarding computer video game infringement has fallen off along with the commercial market for such products, cases still reach the courts regarding such products. Consistent with the analysis of idea and expression discussed in the main text, the court in *Frybarger v. IBM,*[136.4] held that the only similarities between two video games were the result of similarities in unprotected ideas and in the indispensable expression of those ideas in the video game format. While it held that no infringement was present, the court made the common error of indicating that the ideas of the first game "may be protected only against virtually identical copying." As a matter of law, when dealing solely with the indispensable expression of an idea, there is no protection under copyright law, even against literal duplication.

[136.2] 659 F. Supp. 449 (ND Ga. 1987).

[136.3] 33 PTCJ (BNA) 10 (ND Ohio 1986).

[136.4] 812 F2d 525 (9th Cir. 1987).

gram codes can be used to produce the same screen display. In its most classic example, the number "4" can be created by various adding and subtracting equations which have nothing in common, except that they lead to the same output. As a result, a screen display standing alone cannot be used to reproduce the underlying program code because it offers no way of selecting among potentially infinite alternatives to reach that outcome. As a result, under the language of the Copyright Act, the display is not a "copy" of the coding.[151.4]

The issues become important when a copyright is perfected in one facet of the two part program, but not in the other, or when a competing program duplicates, or is substantially similar to one facet, but not the other.

In *M. Kramer Manufacturing Co. v. Andrews*,[151.5] the court concluded that the screen displays were a separate work and separately protected. It held further, however, that the "fact that the computer program could have been separately copyrighted does not mean that the audiovisual copyright may not protect the computer program which implements the audiovisuals. . . . In effect, the program code was treated as a copy of the display consistent with both the technology and the statutory definition of what constitutes a copy of a work.

This analysis was also adopted by the court in *Digital Communications Associates, Inc. v. Softklone Distributing Corp.*[151.6] The court there upheld protection of a status screen display in a data communications program. It expressly noted that

> a computer program is considered a copy of a screen display but a screen display is not considered a "copy" of a computer program. This apparent anomaly is created because of the unusual nature of computers. . . . [If] one has a fixed computer program, one can, with the aid of a computer, repeatedly produce the same screen display. . . . The converse, however, is not true.

One court apparently became confused by the apparent logical anomaly in the foregoing analysis, suggesting that a copyright of a computer program code necessarily covers and protects the display.[151.7] Because the two are separable, however, the proper interpretation is that duplication of a computer display does not necessarily infringe the underlying program code copyright. In a given case, whether infringement

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[151.4] 17 USC § 101.

[151.5] 783 F2d 421 (4th Cir. 1986).

[151.6] 659 F. Supp. 449 (ND Ga. 1987).

[151.7] Broderbund, Inc. v. Unison World, Inc., 648 F. Supp. 1127 (ND Cal. 1986).

¶ 1.09 DERIVATIVE WORKS

[1] User Modifications

Page 1-57:

Add at end of first full paragraph.

Arguably, at least, this same principle protects actions that are oriented toward discovering the content of a program through reverse engineering or decompilation. Where the reverse engineer later produces a program that does not infringe the first, the reverse compilation can constitute an infringement only if it is held that loading the program into the computer for this purpose is an infringement or there is an enforceable contract prohibition against such use.[155.1]

[155.1] See Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987) (decompilation and loading into memory are not an infringement and shrink wrap license does not create an enforceable contract restriction against such use). Compare Bly v. Banbury Books, 638 F. Supp. 983 (ED Pa. 1986) (defendant admits infringement based on acts of loading diskette containing program into computer and using it to print correspondence and advertising copy in a certain typeface; court agrees that loading the program produced an infringing copy for some period of time).

[2] Modification Kits and Programs

Page 1-61:

Add after last full paragraph.

In *Hubco,* the infringement by the modification kit occurred in the modifying program itself. Where the modification program merely enables the computer to disregard or circumvent restrictions placed in the original work, there may be no infringement. This result occurred in *Vault Corp. v. Quaid Software Ltd.*[165.1] where, by reverse engineering a valid copy of Prolock software, the defendant produced a modification program allowing users to circumvent the barrier to copying created in the Prolock program. The court noted that the reverse engineering was not an infringement and that the resulting copy-permitting program had no substantial similarity to the Prolock program code.

[165.1] 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

are most important. Of course, describing a feature as commercially significant does not necessarily protect it against all subsequent use. Protection might unduly impinge other interests and to that extent should be limited.

The original author's protections should increase if protection relates to avoiding harm to existing markets, while it should be reduced if the alleged infringement pertains to markets that the first developer is unlikely to enter. A desire to establish "compatibility" or to replicate all aspects of an original has a strong effect on the original market. Compatibility is an effort to exploit markets created by the first program, supplanting the original. In contrast, the market effect of adapting a program to a computer on which the original cannot be used is less clear, but it does affect a market that the original developer may pursue. Creating a totally new program with new functions or features has a low impact even if some aspects or methods of the first program are reproduced.

The second party's position is strengthened to the extent that foreclosing its actions creates de facto control over replicating the operations of a system.[165.5] This flows from the statutory requirement that copyright does not extend to processes and the fact that this distinguishes copyright from patent law. The analysis is not equivalent to the "process-expression" identity analysis, however, since it does not stop with the conclusion that there are alternative methods of producing the same operations. The infringement issues examine the degree of preemption. One author can describe a historical event in many ways, but there is no copyright protection for the historical fact.

The second party's position is also strengthened to the extent that protecting the copyright owner creates artificial barriers to subsequent work in the field. This also requires a preemption analysis. Protection of a copyright claim should be structured to reduce its potential to distort future work on the same subject.[165.6] Elements, the protection of which significantly distorts future work, may be construed as idea content or as generic methods that are unable to be protected. Subsequent technology developers have a right to use aspects of new techniques and ideas central to their science. Especially in a technical field, the risk of copyright liability creates a chilling effect, inducing developers to avoid

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[165.5] See infra ¶ 1.10[5][b], main volume.

[165.6] But see West Publishing Co. v. Mead Data Cent., Inc., 799 F2d 1219 (8th Cir. 1986) (publisher of law case reporter system entitled to enjoin competitor's use of pagination in its reporters). See ¶ 1.04A, this Supplement.

[1] Structure and Sequence: Computerization

The issue of structure and sequence arises in transformations of manual or mechanical methods and procedures into computer environments. Insofar as technology rather than games are involved, the transformation process entails adapting methods and organization from a manual or other statement of procedure into commands for a computer. In one view, this represents mere translation from one language to another (English into "computer"), even though the process actually entails quite different activities, since a computer operates in ways that are distinct from those suitable for humans.[165.8] An alternative view regards the transformation as analogous to adapting copyrighted works to different media, such as by adapting a novel into a motion picture. The copyright proprietor claims control of both activities.

As is often true in computer law issues, easy analogies distort significant distinctions. In this case, there are differences between converting methods and systems rather than characters and plots. Copyright does not protect methods of calculation, processes of analysis, or other procedures; it extends only to expression. The plot of a novel identifiably transformed into a motion picture or the list of characters in a play represents a taking of protected expression from the original author. By contrast, converting an operations manual or system of computation to a computer transfers the method and process. A judgment must be made about when this element of a technology that is incapable of protection can be protected by the original "author." Because of the statutory mandate, the judgment cannot grant de facto control over the process or method to the original author in the guise of protecting against adaptive infringement of copyright.

Even with inadequate similarity in code, infringement can exist in the reproduction of program sequence or structure. In copyright, this requires a conclusion that the sequence or structure of the program constitutes protected expression independent of the particular code. Sequence and structure are an important aspect of a program that may contribute to performance, speed, and capability. Protecting structure rather than aesthetic appeal or code, however, risks substantial restraints on subsequent design and development. It grants the copyright proprietor some control over methods or processes of machine operation. Control in this form can be justified, but the justification must be closely examined in each case.

The earliest case dealing with sequence and structure was *Synercom*

[165.8] See EF Johnson Co. v. Uniden Corp., 623 F. Supp. 1485 (D. Minn. 1985).

a small part of the larger program. The defendants creatively designed their own product and translated the plantiff's manual operations into a computer environment. The circumstances yielded a strong case for protecting the second developer's use. The scope of reproduction was limited to a particular feature of the original and did not involve mere literal copying, but adaptive work of some creativity. Although market competition resulted, the products nevertheless were distinguishable based on the larger, uncopied analysis programs to which the data-entry process attached. The original author did not contemplate development of a new analysis program such as the one used by the defendants.

Translation from manual to computer contexts is an economically significant activity. Decisions about such translation define the scope of the original copyright in arguably "traditional" works and, equally important, the range of material available for the program developers to engage in technologically and commercially significant development. The adaptive environment resembles transforming a fictional work into a motion picture, but the direct involvment of technology and methods significantly alters the analysis. In cases dealing with such technology, the computer developer directly transforms the forms of organization, the calculation and the performed operations to a structure, and schemata consistent with computer operations. Granting the first author protection of these is not equivalent to protecting the plot developed by a novelist, since there is not only a statutory bar against protecting processes, but a practical fact that protection distorts future development of technology. Creation of an original work describing a method of calculus does not give the author control of that method in all environments. Even patent protection cannot extend to mathematical formulas and operations as such.[165.11]

The issues about protection lessen as the degree of detailed translation increases, although even when there is literally exact reproduction of an initial procedure, the second party's rights remain strong. The district court case of *Williams v. Arndt*[165.12] demonstrates the risks of accepting the premise that the first author's protection extends to computer applications of methods. The court misplaced the analysis by protecting procedures, methods, and results in the name of protected expression.

Arndt involved a system for commodities trading developed and marketed by the plaintiff. The system was described in manuals that the court held to be copyrightable and protected. The manuals outline a detailed, step-by-step set of procedures in commodities investment

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165.11 See discussion at ¶¶ 2.04[1]–2.04[2], main volume.

165.12 626 F. Supp. 571 (D. Mass. 1985).

> [The] source code contained similarities which generated identical signals in the vast majority of comparisons. Arndt merely translated Williams's work from English into computer language. . . . which produced substantially similar results. . . . The most graphic evidence of substantial similarity was the comparison of the FTM results with both programs Arndt had offered. . . . James Stack went through a step-by-step process of both systems. . . . The FTM result was essentially the same as the result reached by running the Trend Counter Trend system.[165.14]

What the court describes as the most striking example of substantial similarity is, in fact, no evidence of actionable similarity at all. Copyright does not deal with or protect analytical results, nor should it. The first author of a new theory or computation system does not obtain control over the results of the system even under patent law.

The *Arndt* result is supportable, if at all, only because of the detailed character of the copyrighted manuals and the defendant's literal and comprehensive reproduction of the operations they describe. Even then, the preoccupation with the creation of comparable "results" in output indicates that the court failed to focus on the portion of the manual able to be protected, if any such existed. Sequence and structure of a complex program can be protected expression to the extent that literal copying occurs, but care must be exercised to avoid protecting analytical methods that create desired results.

The clear risk is that technically and economically significant activity can be foreclosed in the name of protected expression. Courts must clearly and explicitly balance competing rights. To avoid improperly foreclosing important activity in cases where no identifiable character, story line, or item of literary fiction value is taken, at least three conditions should coexist before protection to the first author applies:

1. There must be comprehensive transcription of a complex and lengthy product and not merely selective taking of portions of the technology;
2. The result must be directly competitive with the original in a market into which the first author is likely to enter; and
3. The transcription must represent the majority or essential core of the original and the new product must create direct and pervasive competition based on the first author's work.

These conditions were not met in *Synercom,* and the court properly rejected the copyright claim against the input format. In *Arndt,* the ap-

[165.14] Id.

transported to protection of calculations, methods, or outcomes. The features of the complex program able to be protected beyond its particular code are the organization, sequence, and other "expressive" structural characteristics. At some level, at least, close and comprehensive replication of the sequence and structure of a complex program can be barred without substantially deterring future development work, since it is seldom essential to use a large, complex system in its entirety in order to develop new products and technologies.

The cases deal with transcriptions whose effect is to transport an entire, complex program to a new hardware environment. The translation substantially replicates the original, with no modifications added to improve or alter performance. The decisions protect the structure and sequence of the complex, original program if there is evidence of literal and comprehensive replication.

In *Whelan Associates v. Jaslow Dental Laboratory, Inc.,*[165.17] the first program ("Dentlab") was developed by the predecessor of Whelan working with the defendant. The dispute focused on the defendant's subsequent program for the IBM PC, which was developed by modifying the code of the original. It substantially duplicated the video display and operating functions of the original and was sold under the name Dentlab.

The two programs did not contain a similar code because they were written in a different programming language adapted for a different computer. As the court acknowledged, even if literal reproduction is desired, it is inefficient and might be impossible to simply transcribe code from one language to another. Instead, the process "requires a study of the manner in which the information flows from one function to another. Once this is understood, one may copy this exact manner of operation for use in a computer that responds to commands written in a different source code language." The infringement claim focused on similarity in sequence and operation.

In *Whelan,* the claims of the original author were factually strong. The defendant desired a literal copy of the first program in a new environment, duplicating the operations of the original rather than developing a different and distinct program. To users, the products appear identical. Visual and interactive similarity was enhanced by a marketing strategy using a similar name and suggesting that the new product *was* the original adapted to a less expensive environment. The market for the new program was substantial. The original author had actually developed its own product based on its original program for this same market.

[165.17] 609 F. Supp. 1307 (ED Pa. 1985), aff'd, 797 F2d 1222 (3d Cir. 1986).

identical to SAS, but closely followed the complex organization and structure of the SAS program and contained some identical code.

The factual circumstances strongly favored the original developer. The second product affected a market that SAS was preparing to enter. The translation replicated all significant statistical analyses and data formats in SAS. It encompassed aspects that made SAS unique and contributed to its market value. S&H made no significant effort to *improve* the original or to *modify* it beyond the changes necessitated by the new machine. S&H simply reproduced, insofar as was possible, all attributes and characteristics of SAS.

The court correctly concluded that the S&H program was an infringing copy of the SAS program. The infringement involved substantial similarity in *both* code and in structure and organization. The court found at least 44 documented instances of literal duplication of code. It concluded that additional literal duplications were erased after the dispute arose. Erasure and modification did not

> represent any effort to improve the S&H product, but rather represent an effort to mask and disguise evidence of copying. The S&H product incorporated undocumented and incomplete options identical to options in the SAS program, but which served no purpose in either program. The similar code did not reflect similarity of idea, but of expression. S&H presented no evidence that the functional abilities, ideas, methods and processes of SAS could be expressed in only very limited ways. On the contrary, the Court finds that to the extent that similarities between SAS and the S&H product have existed, they represent unnecessary, intentional duplication of expression.[165.19]

The court's standard incorporates the idea-expression identity test, but the reference to unnecessary and intentional duplication creates a potentially useful focus. Copying occurs when the second programmer *chooses* to duplicate rather than to create in a context where a realistic choice exists. Repetitive choices to duplicate contradict claimed new product development.

The court found actionable similarity in structure and organization. S&H alleged that it adopted the SAS structure and then independently developed code. The trial court concluded that this procedure was not actually followed, but even if it had been, duplication of a complex organization created substantial similarity of expression. The detailed organization and structure of the SAS program was protected expression.

165.19 Id. at 821.

effectively organizing information. This defines the strength of the third party's claim. *SAS* is characteristic of the extreme case of copying as contrasted to necessary use. A market leader is selected as a "model" for the new work. Within the detailed outline of the original, some new text and some research are added. Slight name and reference changes may conceal the scope of duplication. The overall process transparently seeks to reproduce the original with minimal modifications.

These considerations were important in *SAS* and led to a conclusion that infringement occurred. The combination of verbatim copying and unnecessary design choices that duplicate the original program created a similar result in *E.F. Johnson Co. v. Uniden Corporation of America.*[165.22] In *Uniden,* the defendant reverse engineered software central to a two-way, land-based mobile radio transmission system. Uniden developed its new system by disassembling the competing Johnson software, reproducing it in readable form, and studying flowcharts of the program and hardware service manuals. The Uniden product used a Hitachi microprocessor, while the Johnson product used an Intel microprocessor. The microchips have different performance requirements and capabilities.

As in *SAS,* the court found an infringement involving both literal re-creation of the original program and numerous design choices making the organization of the "new" program identical with the original. As in other cases, these "development" choices were intended to reduce independent design costs and create a compatible system.

The court found substantial similarity under both the ordinary-observer test and what it described as the iterative approach.[165.23] The court acknowledged that transferring a program to another language and hardware environment is not comparable to translating a book, but entails greater analysis and adaptation of underlying organization. Furthermore, "disassembled versions of the same program would not exhibit line-for-line correlation. . . . For these reasons . . . line-by-line comparison [is] unconvincing."[165.24] Nevertheless, there was substantial verbatim copying, including the reproduction of unnecessary code from the Johnson software. This reflects duplication rather than independent

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[165.22] 623 F. Supp. 1485 (D. Minn. 1985).

[165.23] This approach requires proof that the original program was "used" in preparing the copy and that the "defendant's work is an iterative reproduction, that is, one produced by iterative or exact duplication of substantial portions of the copyrighted work." Note, "Copyright Infringement of Computer Programs: A Modification of the Substantial Similarity Test", 65 Minn. L. Rev. 1264, 1294–1300 (1984).

[165.24] 623 F. Supp. 1483 (D. Minn. 1985).

patibility needs, and other compatible programs existed without infringement. The cumulative effect of numerous, equally acceptable design and structural options creates a situation in which precluding repetitively duplicative structure does not significantly limit future work in the field. Other developers remain free to compete and produce similar functional programs or systems, but "may not do so by pirating plaintiff's mobile radio programs, if an alternative is available." The readily available alternatives involve systems where a significant portion of the design choices reflect independent expression, rather than copying.

Analyses involving transportation to different hardware and language environments require sensitivity to when the actions of the second party should be protected rather than precluded. The court deals not only in uncharted waters but also in a field defined by complex technology and necessary, permissible overlap and duplication. Given the protected objective of creating similar processes in the new environment, the code and structure of two programs will necessarily be similar. Accepted styles, necessary operations, and known subroutines contribute to similarity that cannot be described as actionable without severely impinging future technology development. Nevertheless, in the new hardware, new language setting, these similarities may be the only available benchmarks of comparison between the programs. This requires circumspection in attributing similarity to copying as contrasted to functionally similar objectives even when the code of the original is known.

In *Q-Co. Industries v. Hoffman,*[165.26] the district court found a lack of infringement in two programs designed to permit use of personal computers as prompters for television. The case also involved trade secrecy questions, since the source of information about the original program was the second developer's initial association with the first company.

The new program created prompter capability for an IBM computer, whereas the original was used in Atari computers. Because the IBM computer lacks graphics hardware present in the Atari, the IBM programming was significantly more complex and lengthy. Nevertheless, and despite the use of different languages, the court noted a similarity between the two games. It concluded that this was not infringement, even though the program was prepared in a format similar to that found in the *SAS* case. The similarities were of ideas rather than expression.

> Notwithstanding these facts, there is no testimony establishing any unique expression based on the existence of the VPS-500 modules, since the same modules would be an inherent part of any prompting

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[165.26] 625 F. Supp. 608 (SDNY 1985).

concluded that this truncation was sustainable for a computer program case: "the ordinary observer test . . . was developed in cases involving novels, plays and paintings, and . . . is of doubtful value in cases involving computer programs on account of the programs' complexity."

In measuring whether the similarity of the programs was due to utilitarian (function or idea) similarity, the court drew the line between idea and expression based on the functions or objective sought by the program. "Where there are various means of achieving the desired purpose, then the particular means chosen is not necessary to the purpose; hence there is expression." The purpose of the program in this case was to aid in the operations of a dental lab. The structure of the infringed program was not necessary for this purpose, clearly, since there are many other competing programs on the market with a similar function.

Based on this very broad conception of the purpose of the program, the court held that "The detailed structure of the Dentalab program is part of the expression, not the idea, of that program."

The fact that there was substantial effort involved in translating the structure of the first program to a new language and environment was not material to the outcome. Furthermore, the court rejected the idea that, since structure was essential to ease and speed of operation, it was part of the unprotected, functional part of the system. The court characterized its approach and resulting finding of infringement as necessary to give proper incentive to developers, while preventing them from assuming a stranglehold over new programs in the same market.

Relying on the decision in *Whelan*, the court in *Broderbund, Inc. v. Unison World, Inc.*[165.29] held that the various menu screens, input formats, and sequences of operation in a printing program entitled the "Print Shop" were distinguishable from the underlying ideas and were protected under copyright against a program designed as an "enhanced" version of the original for operation of a different computer. The court noted: "The functions [of the programs] . . . are . . . substantially the same [and so therefore are the ideas. But the] menu screens . . . sequence of screens [and] the entire structure and organization of the user interfaces are different."

Adaptation to a new environment necessitates implementing in full detail the original work and incorporating its unique elements. Ordinarily, the adapted environment represents a realistic potential market for the original author. The second author does not add to the program. Use of the entire structure of a complex program is not essential to continued development of the art. This same result, however, does not apply if the translation involves substantial developmental work or where

[165.29] 648 F. Supp. 1127, 231 USPQ (BNA) 700 (ND Cal. 1986).

[3] Interface: Look and Feel [New]

Especially for mass-marketed software, one aspect of competitive, value-added development involves the creation of entirely new programs that replicate the user interface of popular programs, thus facilitating ease of use by persons accustomed to the other programs. If viewed primarily from the perspective of infringement of program code, such new programs often have little resemblance to the original. Frequently, they are developed for use in computer environments different from that of the original program.[165.31]

The most direct challenge to such programs must, therefore, focus on the appearance of similarity and the degree to which the user interface replicates the "look and feel" of the original program in a manner that constitutes infringement of the copyright. In resolving this question, it is important to recall that copyright protections ordinarily do not extend to forms and tabular structures. Often, the so-called look and feel of a program entails exactly these details. The fact that the first program's value stems in part from the ease and utility of these features should not deflect from the underlying judgment that no protected rights attach to many types of purely organizational structures.

Copyright protection of program output involving primarily structures and forms involves potentially significant economic issues for the original developer. The eonomic issues revolve around the extent to which competing developers are free to design competing spreadsheet or other data processing programs that do not infringe program code but replicate the user interface and data entry processing that may have made the original highly marketable.

In part, the issue involves traditional doctrinal prohibitions on protecting pure structure. For example, an economic data table with identical headings was held not to infringe a prior compilation because of the limited number of ways in which the particular data could be effectively portrayed.[165.32]

Other courts, however, have responded to the need to protect the original developer, finding potential infringement in the "look and feel" of data programs, and by implication holding that the structures and forms are copyrightable. The most recent example of this outcome is in a decision protecting the original developer of a computer printing pro-

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[165.31] See supra ¶ 1.09A[2], this Supplement.

[165.32] See New Haven Copper Co. v. Everready Mach. Co., 229 USPQ 838 (D. Conn. 1986).

command terms could have been made consistent with the idea of a status screen.

In a related "look and feel" decision, the court in *Worlds of Wonder, Inc. v. Vector International Inc.*[165.35] granted a preliminary injunction in a case involving an animated toy bear based on a conclusion that the infringing work substantially recreated the "look and feel" of the infringed work.

The animated bear (Teddy Ruxpin) was operated by a cassette tape with two coordinated tracks, one that operates a voice audio and the other that implements movements by the bear. Worlds of Wonder was the exclusive licensee of an audiovisual copyright on the animated bear. Vector, without authorization, produced its own tapes for use in the toy causing the bear to recite and "perform" fairy tales.

The court found an infringement by comparing the "work" produced when the bear was operated by the Vector cassette to the work created by the original cassettes. "Such comparison revealed not only general similarity as to the concept and feel of the two works but also specific similarities." These were in the "character" movements involving visual impressions of eye, nose, and mouth movement.

[165.35] 33 PTCJ (BNA) 10 (ND Ohio 1986).

¶ 1.10 CONTRIBUTORY INFRINGEMENT

Page 1-63:

Add at end of note 170.

See also Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987) (distribution of program that enables users to break copy protection scheme on program disks is not a contributory infringement because Section 117 allows the creation of archival copies and this software merely makes a noninfringing use possible in permitting others to make archival copies).

¶ 1.11 STATUTORY EXCEPTIONS

[1] Section 117: Owners of Copies

Page 1-64:

Add after first sentence in last paragraph.

Based on the assumption that loading a program into a computer constitutes the creation of a copy, the defendant in *Bly v. Banbury Books*[173.1]

[173.1] 638 F. Supp. 983 (ED Pa. 1986). Compare NADA Servs. Corp. v. Business Data of Va., 651 F. Supp. 44 (ED Va. 1986) (entry of data

Page 1-66:

Add at end of subsection.

In connection with the right to make adaptations, a major issue exists concerning the right of the owner of a copy to decompile or reverse engineer copies of software, rightfully in its possession, for purposes of discovering the character of the coding or altering the code to permit duplication or other activity. The issue has significance both with respect to defining the scope of copyright protections and with respect to maintaining protection of alleged trade secrets contained in or discoverable through the software code. In the first case dealing expressly with this issue, a federal district court held that the right to decompile the software was a protected act. *Vault Corp. v. Quaid Software Ltd.*[178.1] involved Prolock software that is sold on blank disks to software producers. The intended effect of Prolock is to prevent copying of the disk. The alleged infringer was the developer of CopyWrite, a program designed to permit users to break the software barrier and reproduce programs that are otherwise copy protected. As regards Prolock, the defendant obtained the ability to program a method of breaking the copy barrier by reverse compiling the Prolock program from disks that were properly purchased.

The court rejected a claim that there was an infringement when the Prolock program was loaded into a computer by the employees of the defendant. Loading into memory is an "essential step" in the utilization of the Prolock program and is protected under Section 117. This same section permitted the court to find that the CopyWrite program was not a contributory infringement since it had a noninfringing use in permitting others to make archival copies as allowed under Section 117. Furthermore, "decompiling, disassembly, and reverse engineering are all proper means of discovering any trade secret which may be contained in Prolock."

[178.1] 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

[3] Fair Use

Page 1-68:

Add at end of note 184.

See also Harper & Row Publishers, Inc. v. Nation Enters., 471 US 539 (1985) (publication of numerous quotes from presidential memoirs does not constitute fair use within meaning of Copyright Act).

tion for . . . its service of assessing vehicle values for governmental jurisdictions. Accordingly, it would appear that BDV's use of such information must be considered presumptively unfair. [However, the effect on the market factor] is the single most important element in determining whether there is fair use. A use which does not materially impair the marketability of the copyrighted work will be deemed fair. . . . The . . . defendants successfully established that BDV's use of the information contained in the NADA Guides has not, and will not, impair the market for such Guides. The Commissioners of the Revenue for three local governmental jurisdictions in Virginia which are currently customers of BDV testified that, even if BDV were to cease offering its services of providing assessed values, they would not purchase any more copies of the NADA Guide than they currently do. . . .

[4] Eleventh Amendment Limitations [New]

Page 1-69:

Add the following new subsection.

Federal law may preclude copyright infringement actions against state agencies based on federal concepts of governmental immunity and a failure of Congress to expressly subject state governments to actions arising under the Copyright Act.

Since it is federal legislation, the Copyright Act preempts conflicting state law. The Act, however, is subject to Constitutional restrictions, including those deriving from the Eleventh Amendment. The Eleventh Amendment provides that the judicial power of the United States "shall not be construed to extend to any suit in law or equity . . . against one of the United States by Citizens of another State. . . ."

This exclusion of federal court litigation against state governments is subject to the right of Congress to enact legislation authorizing such lawsuits in federal court under the Fourteenth Amendment.[188.4] The standards for interpreting when this legislative action occurred were uncertain until 1985 when the Supreme Court held that in determining when Congress has exercised its power to abrogate the states' Eleventh Amendment immunity "[the Court has] required an unequivocal expression of congressional intent to overturn the constitutionally guaranteed immunity." [188.5]

188.4 Atascadero State Hosp. v. Scanlon, 473 U.S. 234, (1985).

188.5 Id. at 239–240.

PART C. NOTICE, DEPOSIT, AND REMEDIES

¶ 1.12 COPYRIGHT NOTICE

Page 1-70:

Add at end of note 190.

See also Cooling Sys. & Flexibles, Inc. v. Stuart Radiator, Inc., 777 F2d 485 (9th Cir. 1985) (distribution of more than a small number of catalogues without copyright notice resulted in loss of copyright protection, placing catalogues in public domain).

Add at end of note 192.

Compare Cooling Sys. & Flexibles, Inc. v. Stuart Radiator, Inc., 777 F2d 485 (9th Cir. 1985) (distribution of more than a small number of catalogues without copyright notice resulted in loss of copyright protection, placing catalogues in public domain).

Page 1-71:

Replace note 196 with the following.

[196] See Videotronics, Inc. v. Bend Elecs., 586 F. Supp. 478 (D. Nev. 1984) (hexagonal figure surrounding letter "C" was adequate for video game, but use of random, infrequent display of notice where more constant display was feasible was insufficient to constitute reasonable notice of copyright).

Add at end of subsection.

Issues about the appropriateness of a particular copyright notice must also consider the so-called "unit publication" rule in cases where the distributed software involves several items (e.g., manual and diskette). This concept was applied to validate a notice placed only on the program manual in *Koontz v. Jaffarian.*[197.1]

In *Koontz,* the plaintiff had developed a complex system for estimating electrical work cost through use of a computer program. The program was distributed along with a manual that guided the user through its use. The plaintiff did not place a copyright notice on the program, but only attached relevant notices to the manual.

The district court and the appeals court both held that this was a sufficient notice under the circumstances and applying the "unit publica-

[197.1] 787 F2d 906, 229 USPQ (BNA) 381, 1986 Copyr. L. Dec. ¶ 25,919 (4th Cir. 1986).

placement of a copyright notice on the "boot-up" or sign-on screen, which immediately precedes the status screen [the protected material] and always appears before the user can call up the status screen, sufficiently places anyone seeking to copy the status screen on notice . . . The "boot-up" screen, thus, is similar to the title pages of a book.

¶ 1.13 DEPOSIT AND REGISTRATION

Add note 199.1 at end of fourth sentence in second complete paragraph.

[199.1] See Evans Newton, Inc. v. Chicago Sys. Software, 793 F2d 889 (7th Cir. 1986) (claims regarding infringement of program copyright are dismissed because plaintiff failed to prove it had registered the program); Quincy Cablesystems, Inc. v. Sully's Bar, Inc., 650 F. Supp. 838 (D. Mass. 1986) (because the plaintiff did not allege registration under the Copyright Act, the copyright action for unauthorized reception and display of programming was dismissed, but dismissal was without prejudice).

Page 1-73:

Add after last complete paragraph of subsection.

After review, the Copyright Office adopted final standards for deposit, but limited these standards and their special exceptions to complete deposit to works that contain or may contain trade secrets. The Office, in promulgating its final standards, further commented "that a case has not been made for establishment of a broad deposit exemption covering all material which could conceivably contain trade secrets. . . . On narrower grounds, however, the Copyright Office finds that particular problems of the computer industry merit special attention."

The four alternative deposit procedures adopted are: (1) deposit of the first and last 25 pages or equivalent units of source code with some portions blocked out, so long as the blocked out portion is proportionately less than that remaining; (2) deposit of the first and last ten pages or equivalent units or source code with no items blocked out; (3) deposit of the first and last 25 pages of object code plus any 10 or more pages of source code with no blocked out portions; and (4) for programs of less than 25 pages, at least 50 percent of the program provided that this shows sufficient "copyrightable authorship." [208.1]

[208.1] 37 CFR § 202.20(c)(2)(vii) (1987).

mitted actions under Section 117, and Apple agreed that, if true, there was no violation of the injunction. See also Time-Share Sys., Inc. v. Schmidt, 397 NW2d 438 (Minn. App. Ct. 1986) (where lawsuit about the ownership of software was pending, the party in control of the software was in contempt of court when, with knowledge that an adverse court order was imminent, it began to delete computer files and prevented the other party from accessing the computer while the deletions were being made).

CHAPTER 2

Patent Law: Software and Systems

[2] Disclosure and Secrecy

Page 2-8:

Add at end of note 23.

See also In re Vamco Mach. & Tool, Inc., 752 F2d 1564 (Fed. Cir. 1985) (patent for self-contained, computer-run feed role for power punch presses was obvious where a critical feature of claimed success and innovation of machine was computer program developed to operate press; this program was not disclosed in patent).

PART B. SUBJECT MATTER ISSUES

¶ 2.09 ARTIFICIAL INTELLIGENCE PROGRAMS

Page 2-25:

Add note 89.1 at end of first sentence of last paragraph.

89.1 Recent developments indicate a greater availability of protection for software systems at the Patent Office level. For example, in a recent report, one company (Decision Support Software Inc.) claimed to have received approval of a patent drawn to the algorithm used in its "Expert Choice" expert system. The algorithm relates, apparently, to the development of screen displays in the software system. See "Recent Developments," 5 CLR 878 (1986).

¶ 2.10 APPLICATION PROGRAMS

Page 2-28:

Add at end of section.

Although the validity of this development has yet to be tested in the courts, Patent Office activity indicates an increasing willingness to accept patent claims to software-related inventions. One recent illustration involves a patent issued on an invention entitled a "Data Entry Screen." The claimed invention "generally relates to computer/user interfaces and, more particularly, to a data entry screen which provides a means for identifying to a user those fields where data has been entered and those fields in which data must be entered." [97.1]

97.1 U.S. Patent No. 4,646,250, reprinted in part at 6 Copyright L. Rep. (CCH) at 288 (1987).

¶ 2.15 NONOBVIOUSNESS

Page 2-32:

Add note 114.1 at end of first sentence in first paragraph.

[114.1] See generally In re Etter, 756 F2d 852 (Fed. Cir. 1985) (patent for system assimilating utility meter data on site is obvious); Hughes Aircraft Co. v. United States, 717 F2d 1351 (Fed. Cir. 1983) (system for controlling velocity and orientation of spin-stabilized satellite not obvious); Stewart-Warner Corp. v. City of Pontiac, 767 F2d 1563 (Fed. Cir. 1985) (patent for sports scoreboard involving display system capable of producing moving video image in more than eight shades of gray was valid and not obvious); King Instrument Corp. v. Otari Corp., 767 F2d 853 (Fed. Cir. 1985) (patent for automated swing arm for loading tapes of cassettes was not obvious, but patent claim for shift lock machine was obvious in light of prior art). Compare In re Vamco Mach. & Tool, Inc., 752 F2d 1564 (Fed. Cir. 1985) (patent for self-contained, computer-run feed role for power punch presses was obvious where critical feature of claimed success and innovation of machine was computer program developed to operate press and this program was not disclosed in patent).

Page 2-34:

Add at end of note 124.

See also RCA Corp. v. Applied Digital Data Sys., Inc., 730 F2d 1440 (Fed. Cir. 1984). In RCA, patent claim for the method of converting digital computer symbol codes into video control signals was not obvious. The level of skill applied was that of a graduate engineer "with substantial research and development experience in the display field." Under this standard, it would not have been obvious to combine prior art disclosed in two distinct patents.

[3] Business Data Processing

Page 2-40:

Move note 146 to end of first sentence in last paragraph.

Add at end of note 146.

(fact that innovation may prove to be obvious does not defeat its inclusion under other subject matter tests for patentability).

PART D. INFRINGEMENT

¶ 2.16 INFRINGEMENT

Page 2-41:

Add at end of note 147.

See Lemelson v. United States, 752 F2d 1538 (Fed. Cir. 1985) (in claims action against government where government did not admit to how it used analysis in cases where there are numerous technological changes that, inter alia, perform analogously to the original patent.

In *Texas Instruments Inc. v. United States International Trade Commission,*[162] the court was dealing with what it described as a "pioneer" patent held by Texas Instruments for a miniature, portable, battery-operated electronic calculator. It upheld a decision by the International Trade Commission (ITC) not to preclude importation of competing calculators despite the fact that every function described in the Texas Instruments patent claim was performed by the allegedly infringing calculators and despite the traditional doctrine that pioneer patents should receive protective interpretations.

The court initially concluded that the Administrative Law Judge (ALJ) interpreted the patent claims too narrowly by, in effect, limiting each to the particular embodiment shown in the specification. Each of the means of performing these functions, however, to varying degrees involved new or improved technology. While, according to the court, this should not be dispositive of the infringement claim, the totality of all the changes implemented by the imported calculators represented the basic reason for finding that there was no infringement in this case.

The court acknowledged that the patent at issue in this case was a "pioneer" patent. Nevertheless, the court held that, viewed as a whole and considering the totality of the changes reflected in the new calculators, the imported calculators did not infringe the patent.

> It is not appropriate in this case, where all of the claimed functions are performed in the accused devices by subsequently developed or improved means, to view each such change as if it were the only change from the disclosed embodiments of the invention. It is the entirety of the technology embodied in the accused devices that must be compared with the patent disclosure. . . . [In light of] all of the modifications in the accused devices, we conclude that they reflect more than mere substitution of an embellishment made possible as a result of new technology.

This same technological advance in the entirety of the invention prevented any application of the doctrine of equivalents to find an infringement since that doctrine has an equitable basis and the changes here contradict applying an infringement claim to the new product.

In *Data Line Corp. v. Micro Technologies, Inc.,*[163] the court held that there was an infringement of a patented system that automatically

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[162] 805 F2d 1558 (Fed. Cir. 1986).

[163] 813 F2d 1196 (Fed. Cir. 1987). Compare In re Certain Jacquard Pattern Cutting Systems, ITC Inv. No. 337-TA-166 (July 1984) (patent on

> literally satisfies that limitation. While encompassing equivalents of those disclosed in the specification the provision, nonetheless, acts as a restriction on the literal satisfaction of a claim limitation. . . . [W]here the issue is raised, it is part of the ultimate proof of the patent owner to establish, with respect to a claim limitation in means-plus-function form, that the structure in the accused device which performs that function is the same as or an equivalent of the structure disclosed in the specification.

The alleged infringer, since it used a computer, had no "position indicating means which tracked the location" of items and, thus, no literal infringement.

With regard to the claim that the new device was an infringing equivalent, the court rejected the argument that the only difference in the machines was the use of a computer memory system. The court emphasized that position tracking was an essential element of the patent, distinguishing it from prior art.

If Pennwalt had been correct in contending that the accused devices differed only in substituting a computer for hard-wired circuitry, it might have had a stronger position for arguing that the accused devices infringed on the claims. The claim limitations, however, required the performance of certain specified functions. Theoretically, a microprocessor could be programmed to perform those functions. However, the district court found that the microprocessor in the accused devices was not so programmed.

The district court found that a memory function is not the same, or substantially the same, as the function of "continuously indicating" where an item is physically located in a sorter. On this point the record is indisputable. Before the words "continuously indicating" were added as a substantial limitation, the claim was unpatentable in view of prior art, which, like the accused machines, stored the information with respect to storing criteria in memories, but did not "continuously" track the location.

> [Thus], the facts here do not involve later-developed computer technology which should be deemed within the scope of the claims to avoid the pirating of an invention. On the contrary, the inventors could not obtain a patent with claims in which the functions were described more broadly. Having secured claims only by including very specific functional limitations, Pennwalt now seeks to avoid those very limitations under the doctrine of equivalents. This it cannot do.[164.1]

[164.1] 833 F2d 934 (Fed. Cir. 1987).

CHAPTER 3

Trade Secrets and Confidentiality

(ii) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.[1.2]

The UTSA is becoming increasingly important in trade secrecy litigation both by direct application in those states that have adopted the UTSA and by analogy in states that have not.[1.3]

While the language of UTSA differs from the older Restatement language, the thrust of the coverage is generally similar. One potentially important distinction lies in the treatment of secrets that are not being actively used in the business. Under the Restatement, a requirement of continuous use was incorporated in the definition of a trade secret.[1.4] Although this was not always followed by the cases, it created conceptual problems in relation to secrets whose value did not entail actual use. UTSA corrects this with a broader definition of a secret, encompassing actual or potential value derived from secrecy, with or without use.[1.5]

[1.2] UTSA § 1(3).

[1.3] See, e.g., Aries Information Sys., Inc. v. Pacific Management Sys. Corp., 366 NW2d 366 (Minn. App. 1985) (applying Uniform Act definition to software and related material); Kozuch v. Cramar Video Center, 478 NE2d 110 (Ind. Ct. App. 1985) (applying UTSA definition to computerized customer list).

[1.4] Restatement (First) of Torts § 757 comment b (1939).

[1.5] UTSA § 1(3), comments to § 1.

Add after last complete paragraph.

The reference to trade secrets as "property" recently received constitutional validation in the U.S. Supreme Court decision in *Ruckelshaus v. Monsanto Co.*[2.1] This case illustrates, however, the confusion that occurs when the term "property" is applied in excessively vague terms.

Ruckelshaus concerned a regulatory program involving pesticides. Under the program, pesticide developers were required to submit various data and research results for review under a licensing procedure through the federal Environmental Protection Agency (EPA). The statute further indicated that such secret data would be available to, and usable by, other applicants for license on payment of a fee to the original submitter. Monsanto claimed that this constituted an unconstitutional taking of property.

Citing the Restatement definition, the Court held that the trade secret information was "property" for purposes of the U.S. Constitution to the extent that the holder of the secret has an interest in it under

[2.1] 467 US 986 (1984).

In *Belth v. Bennett*,[2.4] the Montana Supreme Court reaffirmed prior rulings that the state constitution, which creates a public "right to know" subject to individual rights of privacy, can be relied on by corporate entities to protect submitted data. In *Belth*, the data consisted of analyses of financial status compiled by a national insurance association for use by state regulators. The data could have been duplicated as to particular companies from published, annual reports, but the compilation was disseminated with statements indicating that it was confidential.

The court held that the expectations of privacy were reasonable, relying especially on the fact that the compilations admittedly were preliminary summaries and had potential distortions or inaccuracies due to inconsistent compilation and summary standards. Also, the privacy interest outweighed the benefits of disclosure. In part, this was due to the fact that the state agency itself made available similar, nonsubjective analyses of particular companies.

[2.4] 740 P2d 638 (Mont. 1987). Compare Mokhiber v. Davis, 537 A2d 1100 (DC 1987) (there is no public right of access to pretrial depositions, interrogatories, or documents gained through discovery, but there is a presumptive public right of access to motions filed concerning discovery, evidence submitted, and to court's depositions); Plough Inc. v. Nat'l Academy of Sciences, 530 A2d 1152 (DC 1987) (manufacturer is not entitled to disclosure of Science Academy evaluation of study on connection between aspirin and Reye Syndrome).

PART A. SECRECY

¶ 3.03 REASONABLY PROTECTED SECRETS

Page 3-6:

Add after runover paragraph.

The Uniform Trade Secrets Act (UTSA) expressly adopts a concept of relative secrecy. It defines a trade secret to include information that derives its value from not being "generally known" so long as the material is the "subject of efforts that are reasonable under the circumstances to maintain its secrecy." [9.1] This concept of relative, as contrasted with absolute, secrecy, of course, will commonly be enforced by courts applying common-law rules of trade secrecy.

[9.1] See UTSA § 1.

and the remedy sought by the alleged proprietor of the secret, can it reasonably be said that enforcement by the court will fairly apportion the rights of the parties and further the general policies that underlie trade secret law, including the enforcement of reasonable expectations of confidentiality?

The analytical task is to identify what aspects of the claimed proprietary information, if any, are unique and not known, or readily knowable, in the trade. For example, in *SI Handling Systems, Inc. v. Heisley,*[10.1] the court granted protection of various formulas, including a coefficient of friction used in system design work, based in part on the conclusion that the pertinent formulae were not standard in the industry. In contrast, in *J.A. Preston Corp. v. Fabrication Enterprises, Inc.,*[10.2] a manufacturing process was left unprotected when the court concluded, based on expert witness testimony and treatises, that the process was generally known and could be easily reverse-engineered by competitors.

The difficulty in any analysis of this issue entails ensuring that the question of generally available knowledge not be treated solely as a factual assessment of the number or percentage of the persons in the business who know, or could readily discover, the alleged secret. General knowledge of the information has pertinence because, and only because, it bears directly on the reasonable nature of the expectation of secrecy and confidentiality that surrounds the material in the context of the particular relationship involved between the parties. Properly used, novelty issues provide an instrument of analysis, rather than an answer to the question of whether liability should be attached based on unauthorized disclosure.

[10.1] 753 F2d 1244 (3d Cir. 1985). Compare Engineered Mechanical Servs., Inc. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984) (processes, procedures, and information that employer used in dealing with steam turbine repairs and bushing used by engineering firm were not trade secrets, since they did not involve any inventive or innovative application; they merely involved well-known technologies that engineering firm applied to its particular repair activities).

[10.2] 127 AD2d 981, 513 NYS2d 51 (App. Div. 1987).

[1] Combination Secrets

Page 3-8:

Add after last paragraph of subsection.

Combinations of known elements qualify as trade secrets where the combinations themselves may not be generally known. This can oc-

[2] Particularity and Equity

Page 3-9:

Add at end of note 18.

See also Electro-Craft Corp. v. Controlled Motion, Inc., 332 NW2d 890 (Minn. 1983) (trade secrecy claim with reference to brushless motors failed because plaintiff could not adequately specify what aspects of information involved constituted secret material).

[3] Value and Investment

Page 3-10:

Add at end of subsection.

The validity of measuring trade secret status based on the cost of development involves determining exactly why it is that secrecy protection exists. Under the UTSA, investment value should not be part of the analysis. Instead, the UTSA defines trade secrecy status more in terms of the present market value of the information. It holds the information to be secret if the material derives economic value from its not being generally known.[22.1] The value at issue here, then, focuses on the value of the secrecy, rather than on how much cost or effort was devoted to developing the information in the first place.

In practice, the value issue entails a circularity of analysis even at the threshhold of the determination of whether the pertinent material is a protectable secret. The market, or economic, value of the retained secrecy correlates to the ease with which others can discern, or independently develop, the information for competitive purposes. In effect, a readily discoverable secret has lesser economic value based on its retained secrecy, while information that requires substantial cost and effort to develop has enhanced market value attributable to the head start the proprietor holds by retaining that information in secret. Indeed, pushed to the extreme case, readily discernable information may be regarded as a nonsecret, that is, as not susceptible of supporting any protection of an alleged confidence, simply because it can be readily discovered by third parties without any breach of confidence.[22.2]

[22.1] UTSA § 1(4)(i).

[22.2] See J.A. Preston Corp. v. Fabrication Enters., Inc., 513 NYS2d 51, 127 AD2d 981 (NY App. Div. 1987) (evidence that plaintiff's process was not unique and that product could easily be reverse-engineered, supported finding that manufacturing process was generally known in the trade). Compare Sigma Chem. Co. v. Harris, 605 F. Supp. 1253 (ED Mo. 1985) (product data and vendor files are trade secrets where they are unknown outside of employer's business and compiled only through substantial effort).

Page 3-13:

Add at end of subsection.

While postemployment of exit interviews outlining the employer's claims to proprietary information are a useful tool in building a case of protected confidentiality, as well as in creating a factual environment in which unauthorized disclosures are less likely to occur, they should not be construed as essential to the underlying secrecy claim itself. In a setting where the handling of information on a daily basis emphasized its confidential character and where the employee clearly had notice of such claims, the absence of an exit interview reemphasizing the obvious does not, as a matter of law, eliminate any claim to trade secret protection.[31.1]

Furthermore, although postemployment interviews and explicit agreements are an important element of the secrecy program in many firms, they are not without risk. Essentially, from the employer's perspective, the closing interview and agreement must be viewed as a comprehensive discussion of the rights that it claims against subsequent action on the part of the former employee. If the parties undertake a listing of specific secrets that cannot be disclosed, there is a risk that inadvertently unlisted items will thereafter be regarded as freely available to the employee. Similarly, where a postemployment agreement is signed, a failure to carry forward preexisting noncompetition provisions may, under appropriate circumstances, be regarded as a waiver of that prior contract by the employer.[31.2]

[31.1] See In re Innovative Constr. Sys., Inc., 793 F2d 875 (7th Cir. 1986).

[31.2] Comshare, Inc. v. Execucom Sys. Corp., 593 F. Supp. 981 (ED Mich. 1984) (where termination agreement between parties at end of employment specifically retained prohibition against disclosing trade secrets but did not reserve rights under noncompetition clause, even though it was known that employee was working for competitor, noncompetition clause is unenforceable).

[2] External Security Procedures

Page 3-14:

Add note 31.2 at end of first complete paragraph.

[31.2] See Continental Data Sys., Inc. v. Exxon Corp., 638 F. Supp. 432 (ED Pa. 1986) (software based on research into attorney methods of handling no fault claims was trade secret where disclosures to potential purchasers involved explicit restrictions on the purchasers' subsequent disclosure).

may be very large and may be greater than the number of buyers of even popular software who are able to, and do in fact, reverse engineer the product. Many mass-market software contracts are characterized by the software manufacturer as licenses and attempt to place confidentiality restrictions on purchasers. The enforceability of these restrictions must be regarded as uncertain under basic contract law principles. In Louisiana and Illinois, however, specific legislation has been recently enacted expressly validating aspects of the so-called "shrink-wrap" licenses as to particular provisions, including restrictions on disclosure.[42.5] Arguably, these statutes enable retention of secrecy and create an enforceable bar to reverse engineering activity by the buyer of the product if such a bar is expressed in the "license" agreement.

Even if the statutes are not invalidated by copyright law preemption rules, it is not apparent that they automatically resolve the loss-of-secrecy issue. Pro forma confidentiality restraints, even if technically enforceable under law, may be inadequate to preserve secrecy in readily discoverable aspects of a program. UTSA and the Restatement require reasonable effort to actually preserve secrecy.[42.6] Unless there are actual enforcement efforts and other steps to ensure that purchasers do not reveal secrets discovered from the product, a pro forma contract must be viewed as inadequate. Such a contract is similar to a standardized nondisclosure clause in an employment contract that is enforceable, but ignored by employer and employee. Such clauses, in themselves, do not preserve secrecy and do not establish truly confidential relationships.

The first case to review the validity of shrink-wrap license legislation held that the Louisiana statute was invalid under applicable federal copyright law. Notwithstanding statutory language in the shrink-wrap statute that purported to create a contract relationship, the force and effect of the statute covered material that was preempted by copyright rules.

In *Vault Corp. v. Quaid Software Ltd.*,[42.7] the court held that decompilation of a copyrighted software product is not an infringement and that the Louisiana shrink-wrap license law is preempted by the Copyright Act to the extent that it permits the creation of a perpetual bar against copying of the software for any purpose. The case involved Prolock software. Prolock is sold on blank disks to software producers. It prevents copying the disk and is marketed as a copy protection device. The infringer was the developer of CopyWrite. As regards Pro-

[42.5] See ¶ 5.16[4], this Supplement.

[42.6] See UTSA § 1(4)(ii); Restatement (First) of Torts § 757 comment b (1939).

[42.7] 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

manufacturer, after signing disclosure agreement that disclaimed "any relationship" between parties and restricted defendant's obligations to written contract; in absence of express denial of confidential relationship between inventors and manufacturer in contract, however, issues of whether this waived confidential relationship that would otherwise exist and whether there was a contract claim for misappropriation were properly left for jury to decide).

¶ 3.07 END USERS: REVERSE ENGINEERING

[1] Purchasers

Page 3-19:

Add at end of note 47.

Because of this and other characteristics of mass marketing, two states have adopted legislation validating documents attached in mass-market sales as lawful contracts capable of establishing, in addition to other facets of the purchase, an enforceable obligation not to disclose information. See ¶¶ 5.16[1]–5.16[3][e], main volume. See also ¶ 5.16[4], this Supplement.

Add at end of first full paragraph.

While reverse engineering is protected under general common law concepts, the UTSA makes the protection explicit. The UTSA describes "reverse engineering" as a "proper" means of acquiring the secret. Under the structure of this Act, acquisition by proper means is not actionable because the secret holder's rights are restricted to taking action for misappropriation.

The UTSA describes reverse engineering in the following terms:

> Discovery by "reverse engineering," that is, by starting with the known product and working backward to find the method by which it was developed [is a proper means]. The acquisition of the known product must, of course, also be by a fair and honest means, such as purchase of the item on the open market for reverse engineering to be lawful.[47.1]

In addition to being limited to cases of lawful acquisition, reverse engineering does not excuse other proprietary rights violations.[47.2]

[47.1] UTSA § 1, Commissioner's Comment.

[47.2] See Lasercomb Am., Inc. v. Holiday Steel Rule Die Corp., 656 F. Supp. 612 (MDNC 1987) (copyright violated where code obtained by examining licensed software); EF Johnson Co. v. Uniden Corp. of Am., 623

Louisiana and Illinois have adopted legislation that purports to enable distributors of mass market software to establish enforceable contractual restraints against disclosure by purchasers through the use of shrink-wrap license forms attached to diskette packages sold in the mass market.[49.2] The first court to review these laws held that the statute was preempted by federal copyright law to the extent that it purports to create a perpetual barrier against copying or other use of programs.[49.3]

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developed product also violated copyright of first program); EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1485 (D. Minn. 1985) (reverse compilation of communications program for radio receiving system may have been valid, but subsequently developed program was an infringement of copyright). See Lasercomb Am., Inc. v. Holiday Steel Rule Die Corp., 656 F. Supp. 612 (MDNC 1987) (copyright violated where code obtained by examining licensed software).

49.2 See supra ¶ 3.05[2][b], this Supplement. See also ¶ 5.16, main volume and this Supplement.

49.3 Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

¶ 3.08 CONTRACTORS: MARKETING AND MANUFACTURING

Page 3-24:

Add at end of note 60.

See Shanco Int'l Ltd. v. Digital Controls Inc., 169 Ga. App. 184, 312 SE2d 150 (1983) (restrictive agreement between manufacturer and distributor of video game was invalid restraint on trade under state law, since it did not contain temporal limitations on manufacturer's obligation not to sell to other purchasers). The court in *Shanco* stated:

> [The] restrictions imposed upon Pace . . . are unreasonable and constitute an invalid restraint of trade. . . . Not only do these agreements fail to restrict the territorial limitations placed upon Pace, they also do not place any time limitation upon his obligations not to sell the Little Casino game to any purchasers except Shanco and to give Shanco the right of first refusal of all video machines which Pace, or any other company in which he has an interest, might develop in the future.

Id.

¶ 3.09 PRETRANSACTION DISCLOSURES

Page 3-24:

Add at end of first paragraph of section.

The purpose behind judicial recognition of the confidentiality of pretransaction disclosures when properly conducted is apparent. As one new feeder sold in competition with plaintiff, motion for summary judgment was denied because material fact issue existed as to whether employee's use of plaintiff's design manual led to creation of new, unique, or superior product that was not violation of secrecy).

Page 3-30:

Add at end of note 79.

See SI Handling Sys., Inc. v. Heisley, 753 F2d 1244 (3d Cir. 1985). In *S.I. Handling Systems,* trade secret protection was granted to a former employer for the coefficient of friction used, as well as for formulas used in systems design where both were not standard in the industry. However, although the former employee had access to various trade secrets of the employer against which protection should have been granted, the employee could not be barred from using other information, such as knowledge about alternative suppliers, knowledge of a customer's needs and decision-making preferences, and knowhow.

[2] Nondisclosure Agreements

Page 3-32

Add at end of note 89.

Compare Engineered Mechanical Servs., Inc. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984) (in an action seeking restraint against use of procedures and software developed for particular job, court noted that clearly identified trade secrets will be protected against disclosure by former employee where confidential relationship existed, even though contract between parties did not include covenant prohibiting disclosure of secrets).

Add at end of note 90.

See Sigma Chem. Co. v. Harris, 586 F. Supp. 704 (ED Mo. 1984) (nondisclosure clause is not invalid because of failure to include time limitation, since underlying obligation not to reveal former employer's trade secrets is not temporally limited).

[3] Noncompetition Clauses

Page 3-33:

Add at end of first paragraph.

For the employer, the availability of injunctive relief for a violation of an enforceable no competition clause provides the strongest rationale for including such provisions in employment contracts with important technical employees in the computer industry. The no competition agreement obviates many of the complex proof issues involved in an ordinary trade secrecy case. Also, in many states proof of a breach of an enforceable covenant carries with it a presumption that the threat of e.g., business activities that do not involve unique skills or contacts.[99.3]

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highly skilled, it was undisputed that the only trade he knew, and by which he could support himself and his family, was copier maintenance and repair from which the agreement precluded him).

[99.3] See also Hill v. Mobile Auto Trim, Inc., 725 SW2d 168 (Tex. 1987).

Add at end of note 100.

See Hekimian Laboratories, Inc. v. Domain Sys., Inc., 664 F. Supp. 493 (SD Fla. 1987) (one year no-competition clause enforced where former employee receives one-half his salary during the time period and where employee was given access to expensive secret system. Clause was limited to not soliciting customers or signing on with competition, but had no clear geographical limitation); Shebar v. Sanyo Business Sys., Inc., 218 NJ Super. 111, 526 A2d 1144 (Super. Ct. 1987) (fraud claim against employer could be sustained based on evidence that after employee tendered resignation he was persuaded to retain his employment but was fired as soon as employer found a replacement).

Add at end of note 103.

See Comshare, Inc. v. Execucom Sys. Corp., 593 F. Supp. 981 (ED Mich. 1984) (under Texas law, noncompetition clause will be enforced if reasonable); Innovative Digital Equip., Inc. v. Quantum Technology, Inc., 597 F. Supp. 983 (ND Ohio 1984) (claiming under a covenant not to compete, plaintiff alleged sufficient basis to avoid dismissal); Business Intelligence Servs., Inc. v. Hudson, 580 F. Supp. 1068 (SDNY 1984) (court enforced noncompetition clause against former senior consultant where clause was geographically and temporally limited and where it was established that consultant had extensive knowledge of employer's computer programs and client information); Logic Assocs. v. Time Share Corp., 474 A2d 1006 (NH 1984) (contract license provision barring competition with employer involved in computer time-share operations was not ambiguous and was enforceable); In re Talmage, 758 F2d 162 (6th Cir. 1985) (agreement prohibiting competition by licensee over one-year period was enforceable under Illinois law); Power Distribution, Inc. v. Emergency Power Eng'g, Inc., 569 F. Supp. 54 (ED Va. 1983) (covenant not to compete was unreasonable and unenforceable because it was not limited in terms of type or scope of activity prohibited). See also Micro Plus, Inc. v. Forte Data Sys., 484 So. 2d 1340 (Fla. 1986) (court affirms a six month temporary injunction based on a six month noncompetition clause where the industry and the companies involved compete at a national level involving technology that often takes substantial time to develop and market).

Page 3-36:

Add after last full paragraph.

The narrowness required to achieve an enforceable covenant to not compete involving an employee varies depending both on the jurisdic-

For example, in *Polly v. Ray D. Hilderman & Co.,*[109.3] a case where the employee sought to recover bonuses allegedly owed to him, the court held that a covenant not to compete was too broad as applied to a former data processing manager employee of a certified public accounting firm. The company had a legitimate interest in protecting goodwill and contacts with customers, some of whom had personal contact with the former employee. However, a three-year bar against competition in a 35-mile area of any of the employer's offices reached too broadly. According to this court, a covenant to not compete based on customer contact issues and preventing unfair appropriation of goodwill may be valid "only if it restricts the former employee from working for or soliciting the former employer's clients or accounts with whom the former employee actually did business and has personal contact."

Questions about the degree of the required specific relationship to a proven and protected interest are especially troublesome in the computer industry in dealing with issues of the permitted geographic scope of the covenant. Clearly, many aspects of the industry are nationwide in character and even worldwide in scope. While this supports the argument that some broadly cast geographic restraints are valid, many courts are resistant to placing prohibitions on national competition. While it is probable that in some states and for some courts no national covenant will be enforced, the better, and probably the majority, view is that a broad geographic restraint can be acceptable if connected to proven and legitimate interests of the employer. For example, in *Marshall v. Gore,*[109.4] the court concluded that a national scope for the covenant to not compete was permissible because the employer engaged in a nationwide business, documented both by its national advertising program and by the fact that it could document sales of software to dairies located in seven states geographically distant from Florida. Similarly, the court in *Sigma Chemical Co. v. Harris,*[109.5] permitted enforcement of a covenant that lacked any geographic restriction where the facts established that the employer's business and its competition were worldwide. In contrast, in *Power Distribution, Inc. v. Emergency Power Engineering, Inc.,*[109.6] a geographically broad covenant was unreasonable in the context of restraining a computer equipment sales representative where, although the industry was nationwide, the particular employer was a new entrant with a limited market.

[109.3] 225 Neb. 662, 407 NW2d 751 (Neb. 1987).

[109.4] 506 So. 2d 91 (Fla. Dist. Ct. App. 1987).

[109.5] 586 F. Supp. 704 (ED Mo. 1984).

[109.6] 569 F. Supp. 54 (ED Va. 1983).

bility for a civil conspiracy. Rather, the cause of action requires proof of a civil harm to the original employer, such as in the wrongful appropriation of trade secrects through an induced mass departure or through wrongful interference with the business relationships of the employer.[120.1]

[120.1] Dozier & Gay Paint Co., Inc. v. Dilley, 518 So. 2d 946 (Fla. Dist. Ct. App. 1988) (investor in employee start-up company may be held liable for civil conspiracy).

[2] Splinter Companies and Conflicting Interests

Page 3-40:

Add at end of note 121.

See also FMC Corp. v. Spurlin, 596 F. Supp. 609 (WD Pa. 1984) (in an action against a former employee who left company and built new vibrating feeder sold in competition with plaintiff, motion for summary judgment was denied because material issue existed concerning whether employee's use of design manual led to new, unique, or superior product that was not violation of secrecy).

Page 3-42:

Add after first full paragraph.

The theme discussed earlier regarding unfair competition by prematurely arranging a new business and continuing to work for the former employer was repeated in *Rehabilitation Specialists, Inc. v. Koering.*[132.1] In that case, in addition to arguably appropriating trade secret information, the employee allegedly breached a duty of loyalty to the employer by discussing the new business with a customer before resigning. The Court of Appeals held that securing tentative contracts with that customer while still employed and thereby breaching a duty of loyalty can constitute unfair competition.

[132.1] 404 NW2d 301 (Minn. Ct. App. 1987). See also Chelsea Indus. v. Gaffney, 389 Mass. 1, 449 NE2d 320 (1983).

Page 3-43:

Add after runover paragraph.

This does not indicate that there is an overriding or general duty to avoid inducing or permitting a mass departure of employees. For other employee utilized this service to begin a company in data entry activities. When the business failed, Nguyen sued, arguing that CDC had been negligent in providing advice and had breached a contract to provide financing and business referrals. Although the court held in favor of CDC, it did so on a factual basis that apparently recognizes that these causes of action may, in appropriate cases, lie against the employer. In this case, however, the court concluded that the evidence established that the business failure was due to the inexpertise and mismanagement of the employee, rather than to the actions or inaction of CDC.

¶ 3.12 PREEMPTION

[1] Patent Preemption

Page 3-44:

Add at end of subsection.

In the absence of any true confidentiality restrictions, the enforcement of which justify state law action, federal patent laws preempt the application of any state rules that seek to provide direct protection and exclusivity of rights for useful processes, designs, and the like. This principle was applied by the court in *Vault Corp. v. Quaid Software Ltd.*[140.1] to invalidate a state statute purporting to establish contractual restrictions on disclosure and reverse engineering of the code of a mass-marketed software product. Similarly, in *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*,[140.2] the Florida Supreme Court invalidated, on preemption grounds, a state statute that restricted duplication of vessel hulls or component parts by means of any "direct molding process." The effect of the statute, if valid, would have been to grant a de facto exclusivity to the hull designs without, and in contravention of, patent law rules.

140.1 655 F. Supp. 750 (ED La. 1987).

140.2 515 So. 2d 220 (Fla. 1987).

[2] Copyright Preemption

Page 3-47:

Add after runover paragraph.

The clarity of the distinction between a trade secrecy claim and a copyright claim often blurs in practice and may well depend on the type scope as to types of work product that are distributed to the public but are left unprotected by copyright law. In *Financial Information, Inc. v. Moody's Investors Service, Inc.*,[147.3] the court held that data about bonds was not copyrightable and that any claims of misappropriation were preempted by the Copyright Act.

The data was unprotected by copyright because the material and its organization lacked sufficient originality. As to the misappropriation claims, the court noted that

> nor do we believe that a possible exception to the general rule of preemption in the misappropriation area—for claims involving 'any form of commercial immorality,' should be applied here. We believe that no such exception exists and reject its use here. Whether or not reproduction of another's work is 'immoral' depends on whether such use of the work is wrongful. If, for example, the work is in the public domain, then its use would not be wrongful. Likewise, if, as here, the work is unprotected by federal law because of lack of originality, then its use is neither unfair nor unjustified.

The plaintiff also attempted to avoid preemption by arguing that it was seeking recovery for misappropriation of

> 'hot' news . . . a branch of the unfair competition doctrine not preempted by the Copyright Act according to the House Report [but it] proved neither the quantity of copying nor the immediacy of distribution necessary to sustain a 'hot' news claim. [To] the extent that Moody's did copy from FII, the information it published would have been at least ten days old. The 'hot' news doctrine is concerned with the copying and publication of information gathered by another before he has been able to utilize his competitive edge. We hold that FII failed to prove such a claim here.

Where the related claims derive from actual contractual relationships, no federal preemption should occur because the contract cause of action requires proof of elements different than mere copying and protects significantly different types of rights. This result was confirmed by the court in *Brignoli v. Balch Hardy & Scheiman, Inc.*[147.4] Brignoli was the developer of a program that used various market formulas to be used in managing an options account. He entered into an oral contract in which Balch Hardy allegedly agreed to pay him a percent of revenues from use of his program in their management operations. When Balch stopped payments but continued use of the program, Brignoli sued for breach of contract. The court noted that "to assert a state law

[147.3] 808 F2d 204, 1 USPQ2d (BNA) 1279 (2d Cir. 1986).

[147.4] 645 F. Supp. 1201 (SDNY 1986).

submitted these for bids to various potential suppliers, including the defendant, Sierracin. After a limited period of performance under a resulting supply contract with Sierracin, the contract was terminated, but Sierracin continued to market its own windows.

The argument of the defendant was that the alleged design secrets were discoverable from inspection and that they had been publicly displayed, thereby placing them in the public domain. Thus, any secret was lost and the action to prevent use of the design was preempted by copyright law. The Court disagreed, noting: "State law extends protection beyond copyright. Copyright does not protect an idea itself. . . . By contrast, trade secrets law protects the author's very ideas if they possess some novelty and are undisclosed or disclosed only on the basis of confidentiality . . . It is not just drawings which Boeing seeks to protect, but the information contained thereon, without which it is impossible to manufacture the windows. Until Sierracin is able to reverse engineer the windows, that information possesses some novelty as yet disclosed only on the basis of confidentiality." Under this interpretation of the trade secret claim, there was no federal preemption.

The exemption of contract-based claims from the scope of federal preemption assumes that an actual contract was entered into between the parties. Where, instead, a state law imposes a purported contract relationship in the absence of agreement, the state rules will be preempted to the extent that they cover matter that is within or equivalent to the rights covered by copyright law. This principle has led one court to invalidate the Louisiana "shrink-wrap" license law that attempted to permit a distributor to impose "contract" terms on the buyer of mass-marketed software in a context in which, the court holds, no contract would have existed in the absence of the special legislation.[147.9]

The court held that the Software License Enforcement Act was preempted because it inappropriately gives the seller a perpetual right to prevent copying for any purpose. This exceeds the protection under the Copyright Act that has an exemption in Section 117 for some copying and permits control of the right to make copies for a statutorily limited period of time. Similarly, the Act "prohibits" decompiling and preparation of derivative works. This right is regulated by the Copyright Act and state law cannot create "equivalent rights." The Act

> has invaded the exclusive province of the federal Copyright Act, and has gone beyond trade secrets law by outlawing reverse engineering. . . . Since the [Act] has touched upon the area of federal

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[147.8] 108 Wash2d 38, 738 P2d 665 (1987).

[147.9] Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

competition with plaintiff, motion for summary judgment was denied because issue of material fact existed concerning whether use of plaintiff's design manual led to creation of new, unique, or superior product that was not violation of secrecy).

Add at end of subsection.

In many cases, proof of misappropriation involves a combination of all of the factors discussed in the main volume. This occurred, for example, in *Dickerman Associates v. Tiverton Bottled Gas Co.*[174.1] In that case, a program designer received protection against and damages from misappropriation of alleged trade secrets in its "Jobber Management System." The evidence established similarities between this program and the defendant's competing program title "FuelPak," the similarities of which were neither random nor dictated by the functional similarity of the two programs. In addition, the defendant had had access to copies of the plaintiff's program and, after this access, had developed the complex competing system in an extraordinarily short time given the complex nature of the programs.[174.2]

[174.1] 594 F. Supp. 30 (1984).

[174.2] See also Boeing Co. v. Sierracin Corp., 108 Wash2d 38, 738 P2d 665 (Wash. 1987).

¶ 3.16 THIRD PARTIES AND NOTICE

Page 3-54:

Add note 175.1 at end of first sentence in second paragraph.

[175.1] See McIntyre's Mini Computer Sales Group, Inc. v. Creative Synergy Corp., 644 F. Supp. 590 (ED Mich. 1986). (In an action for theft of trade secrets involving a civil Racketeer Influenced and Corrupt Organizations Act (RICO) suit against the buyer of a customer list, the court held that Rule 11 sanctions are not appropriate because the distributor might have reasonably inferred that buyer was in possession of trade secrets and might have known that these were stolen. Had this been true, a RICO claim may have been valid).

Page 3-55:

Add at end of note 178.

See FMC Corp. v. Spurlin, 596 F. Supp. 609 (WD Pa. 1984) (issue of material fact existed about bona fide purchaser defense).

actions are presented under federal racketeering statutes.[185.2] Racketeering actions convey the potential of treble damage awards in the event that the federal action is sustained. In most cases, the action under federal law requires allegations and proof of mail or wire fraud as part of a scheme to defraud the proprietor of the secret. There is substantial dispute and conflicting authority regarding the elements that must be proven to maintain an action under racketeering law for trade secrecy violations. One major point ot controversy concerns whether it is necessary to establish acts of fraud other than those related to a single scheme in order to sustain proof of a racketeering "pattern" as required by federal law.[185.3] The apparent majority view requires more than one scheme to defraud in order to prove such a pattern.

[185.2] See infra ¶ 7.02[3], this Supplement.

[185.3] See generally Fleet Management Sys., Inc. v. Archer-Daniels-Midland Co., 627 F. Supp. 550 (CD Ill. 1986) (licensor of a computer program sued its licensee alleging violation of the RICO Act when licensee participated in a scheme to fraudulently misappropriate the program it licensed; the court held that under RICO the various letters and telephonic acts involved in this scheme could not constitute a pattern for purposes of the civil violation, but rather amounted to only one criminal episode); McIntyre's Mini Computer Sales Group, Inc. v. Creative Synergy Corp., 644 F. Supp. 590 (ED Mich. 1986) (in an action for theft of trade secrets involving a civil RICO suit against the buyer of a customer list, court held that Rule 11 sanctions are not appropriate).

¶ 3.18 INJUNCTION

Page 3-57

Add at end of note 188.

See AB Chance Co. v. Schmidt. 719 SW2d 854 (Mo. App. 1986) (an injunction against former employee's disclosure of trade secrets was proper even though there was no showing that the employee had in fact disclosed the information or threatened to do so).

Add at end of first full paragraph.

A combination of a substantial factual dispute concerning the details or validity of the trade secrecy claim and a failure to follow ordinary procedures for preliminary injunctive relief will invalidate the injuncton. For example, in *Digital Equipment Corp. v. Emulex Corp.*,[189.1] the court

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[189.1] 805 F2d 380, 231 USPQ 779 (Fed. Cir. 1986).

In an extreme example of extending the term of a trade-secrecy based injunction in a noncomputer case, the Ohio Supreme Court in *Valco Cincinnati, Inc. v. N&D Machining Service, Inc.*,[204] upheld a permanent injunction against a former employee for use of trade secret material regarding processes that apply glue to applicators for cardboard boxes. The permanent injunction was appropriate even though the injunctive remedy was ordinarily limited to the "lead time" gained from the misappropriation because "the circumstances were so egregious and violative of the relationship of the parties."

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injunction under Uniform Trade Secrets Act was inappropriate absent findings as to appropriate circumstances to justify permanent injunction).

[204] 492 NE2d 814 (Ohio 1986).

Add the following new sections at the end of the Chapter.

PART E. BANKRUPTCY AND CONFIDENTIALITY [NEW]

¶ 3.19 CONFIDENTIALITY: PROTECTIVE ORDERS

Bankruptcy proceedings are judicial in nature. As with most federal court processes, the starting assumption is that matters of record in the case file are public and available for access by third parties. In addition to ordinary pleadings, bankruptcy law requires the filing of schedules and lists of creditors as well as a narrative history of recent transactions affecting the debtor. During the case, there are obligations on the business debtor to make periodic reports of business activities to the court. The extensive public record thus created poses potential risks of disclosure of valuable information. The initial issue thus faced in many cases focuses on the extent to which this data can be protected in bankruptcy.

While the Bankruptcy Code presumes that all court records are public, both the Code and the Rules provide for issuance of protective orders. Bankruptcy Rule 9018 provides:

> On motion or on its own initiative, with or without notice, the court may make any order which justice requires (1) to protect the estate or any entity in respect of a trade secret or other confidential research, development, or commercial information, (2) to protect any entity against scandalous or defamatory matter . . . , or (3) to protect governmental matters that are made confidential by

As a consequence of these characteristics, protective orders as to particular types of material may be more difficult to obtain in bankruptcy than in other contexts. This should not apply to technical trade secret material, since disclosure of such matter contradicts a goal of obtaining optimal payout for affected creditors. It is the case, however, for confidential lists of creditors and employees as well as for descriptions of business operations. For example, in *In re Itel Corp.*,[209] a bankruptcy appellate panel held that there is no authority under the Code to order impoundment of a creditor's list, regardless of the presence of good cause. The court indicated that the Code affords investors and other creditors a right of access to that list as an inherent part of the bankruptcy process. In contrast, but only in part in conflict, a bankruptcy judge in *In re Nunn*[210] indicated that for the court to enter a protective order covering trade secret or other confidential research, development, or commercial information contained in filed bankruptcy schedules, limitation of access must not only be an appropriate and responsive remedy, but must be the least drastic alternative available. Congress intended the sealing of pleadings to be the exception, rather than the rule.

[209] 17 BR 942 (Bankr. 9th Cir. 1982).

[210] 49 BR 963 (Bankr. Va. 1985).

¶ 3.20 CONFIDENTIALITY AND EMPLOYEES

In addition to public disclosure, confidentiality issues also arise with respect to the enforcement of existing rights in trade secret and other confidential material. The question can come up in either of two ways. In one situation, the debtor in bankruptcy is the alleged owner of the secret information and desires to enforce its rights against other, nonbankrupt parties. In the second context, the trade secret or other breach of confidence claim is asserted against a third party who has entered a bankruptcy proceeding.

The starting point lies in the fact that trade secrets and other intellectual property rights are the property of the estate under the current Code.[211] "The commencement of a [bankruptcy case] creates an estate . . . comprised of all . . . legal or equitable interests of the debtor in property as of the commencement of the case." [212]

[211] See In re Bettinger Corp., 197 F. Supp. 273 (D. Mass. 1961); In re Van Dyk Research Corp. (Van Dyk Research Corp. v. SCM Corp.), 13 BR 487 (Bankr. D. NJ 1981) (court has jurisdiction over proprietary rights and interests claimed by the debtor in its plans, drawings, specifications, patterns, and tooling claimed to be trade secrets not generally known in the industry).

[212] 11 USC § 541(1).

an employee of the debtor constituted a violation of a court order prohibiting commencement of any action against the debtor.

Relief from or modification of the stay can be obtained for "cause." [217] While there is no appellate authority applying this concept to enforcement actions relating to use or disclosure of trade secret information, the general, equitable character of the concept of cause should cover relief for purposes of protecting potentially valuable rights in confidential material. Note, however, that an underlying theme in bankruptcy is to benefit the debtor's estate and there may be a greater willingness for a bankruptcy court to permit continued use of allegedly confidential material by the debtor in cases of doubt; the court would, in such case, presumably be willing to impose restrictions on disclosure to other parties.

[217] 11 USC § 362(d)(1).

¶ 3.21 EMPLOYEE BANKRUPTCY AND ENFORCEMENT RIGHTS

A more basic issue arises with reference to defining the ability to permanently enforce confidentiality or competition restrictions otherwise validly placed on individuals. This issue has various ramifications, but a two-tiered analysis reveals the character of the problem. Assume that there is a valid nondisclosure or noncompetition clause imposed on an employee who subsequently files bankruptcy under Chapter 7 of the Code. The former employer's ability to enforce these contractual restraints against the employee depends on two questions. First, can the contractual restriction and executory contract be rejected by the debtor and, thus, converted into a monetary claim against the estate? Second, are the rights of the employer under the contract a claim against the debtor that is discharged under bankruptcy law?

The question of executory contract status is discussed more fully later, but involves the fact that a debtor in bankruptcy can reject any contract in which substantial performance remains pending on both sides at the time of bankruptcy.[218] In the case posed here, however, a properly drafted disclosure and competition restraint will ordinarily not impose continuing obligations on the former employer. The obligations affect only the employee and, thus, the contract cannot be rejected.[219] Where the agreement does place continuing obligations (e.g., post ter-

[218] 11 USC § 365.

[219] See In re Cooper, 47 BR 842 (Bankr. WD Mo. 1985).

Similarly, in *In re Talmage,*[224] the court focused analysis on the question of state law enforceability of a noncompetition clause in a license agreement against an individual in Chapter 7 without considering whether the clause created a debt that was discharged.

This permits the equity remedy to survive bankruptcy, giving relatively full protection for the future for the former employer. Importantly, however, the result does not occur when a contract is executory and rejected by the bankrupt debtor since rejection converts the contract into a claim against the estate.

The claim for monetary damages for breach of a nondisclosure or noncompetition clause may survive a Chapter 7 discharge. In *In re Lindsay,*[225] the court held that in an individual bankruptcy proceeding a judgment against the former employee (debtor) for breach of a covenant not to compete was a nondischargeable debt. It fell within the category of debts created as a result of willful and malicious actions by the debtor. Personal hatred or spite is not required, merely intentional conduct without just cause or excuse. It is important, however, to note that this result will not occur in Chapter 13 cases since the exception from discharge used by the court here does not carry over to a completed Chapter 13 plan.

[224] 758 F2d 162 (6th Cir. 1985).

[225] 55 BR 569 (Bankr. WD Okla. 1985).

¶ 3.22 NONCOMPETITION AGREEMENTS IN BANKRUPTCY

The status of noncompetition agreements with a bankrupt is uncertain under current law. The primary issue relating to such clauses in commercial contracts or licenses involves whether the clause is an executory agreement that can be rejected.

In the ordinary case of a previously terminated employee, a noncompetition clause is not executory.[226] After termination, there will most often be no further performance required by the employer. In contrast, there is an increasing body of case law supporting the view that noncompetition agreements (and perhaps nondisclosure clauses) that are part of an overall executory agreement can be rejected along with the remainder of the contract. The earliest case supporting this result was *In re Rovine Corp.*[227] In that case, the noncompetition clause was part

[226] See In re Cooper, 47 BR 842 (Bankr. WD Mo. 1985).

[227] 6 BR 661 (Bankr. WD Tenn. 1980).

CHAPTER 4

Research, Development, and Ownership

[1] Works for Hire and Particularity

Page 4-4:

Add at end of note 5.

In copyright contexts, issues of conveyance of ownership tend to be encountered most often when the relationship between the author and the "employer" is not a clear employment relationship but has connotations of a contractor relationship. See discussion at ¶ 4.05, main volume and this Supplement. Many of the early cases dealing with works for hire under the current Copyright Act have not involved computer technology, but relatively obvious analogies can be drawn to software development. See generally Peregrine v. Lauren Corp., 601 F. Supp. 828 (D. Colo. 1985) (where advertising agency commissioned photographs by professional photographer, photographs were works for hire within intention of Copyright Act, and agency was considered to be author); Arthur Retlaw & Assocs. v. Travenol Laboratories, Inc., 582 F. Supp. 1010 (ND Ill. 1984) (letter did not rebut presumption that manufacturer who prepared newsletter remained author of work unless it agreed expressly to contrary with publisher of industry newsletter); Childers v. High Society Magazine, Inc., 561 F. Supp. 1374 (SDNY 1983) (photographer was entitled to summary judgment that magazine's unauthorized publication of his photographs infringed copyright, since under Copyright Act photographs were clearly not works for hire); Meltzer v. Zoller, 520 F. Supp. 847 (DNJ 1981) (homeowner was not author of architectural plans developed for its home).

Add at end of note 8.

See also Aetna-Standard Eng'g Co. v. Rowland, 493 A2d 1375 (Pa. Super. Ct. 1985) (employee owns invention even if employer resources used).

Page 4-5:

Add note 11.6 at end of seventh sentence in second paragraph.

11.6 See Baltimore Orioles, Inc. v. Major League Baseball Players Ass'n, 805 F2d 663 (7th Cir. 1986). (Court rejects claims of baseball players to ownership of the copyright in the broadcast of the games in which they played since the broadcast performances were within the scope of the players' employment and there was a statutory presumption that the rights vested in the owner-employers. Nothing in the circumstances or the underlying contractual agreements rebutted this presumption. Furthermore, the players' rights of publicity in their performances and names, insofar as not covered by the copyright work for hire, were contracted away in the agreements with the owners.)

Add at end of second paragraph.

A pattern of performance under which the employer encourages the work and exercises a right of supervision prior to any publication tends to establish a work for hire even though the copyright work is not within the scope of employment or as a result of work specifically assigned to the employee.

> [We] do not think the Labor Code provisions were intended to award an invention to an employee who presents an invention to an employer, represents the invention is for the employer's benefit, actively seeks and obtains company funding to refine his invention, uses company time [to develop it] while secretly intending to take out a patent on the invention for himself."

Add at end of note 12.

See also Aetna-Standard Eng'g Co. v. Rowland, 493 A2d 1375 (Pa. Super. Ct. 1985) (employee owns invention where developed in scope of business and where employer made no claim to it before employee terminated).

Page 4-6:

Add at end of note 15.

See also SI Handling Sys., Inc. v. Heisley, 753 F2d 1244 (3d Cir. 1985) (trade secret protection granted for nonstandard formulas, but employee could not be barred from using knowledge about alternative suppliers, knowledge of customer's needs and preferences, and knowhow).

[2] Joint Use and Shop Rights

Page 4-8:

Add at end of note 24.

Compare Aetna-Standard Eng'g Co. v. Rowland, 493 A2d 1375 (Pa. Super. Ct. 1985) (employee was owner where invention was developed in scope of employee's work as general engineer, but employee received no extra compensation and employer made no claim until after employee was discharged; employer does obtain nonexclusive and royalty-free right to use invention because it was developed at its location through use of its resources).

Add at end of note 27.

See SI Handling Sys., Inc. v. Heisley, 753 F2d 1244 (3d Cir. 1985) (protection granted for nonstandard formulas used in systems design, but employee could not be barred from using other information, such as knowledge about alternative suppliers, knowledge of a customer's needs and decision-maker preferences, and knowhow); FMC Corp. v. Spurlin, 596 F. Supp. 609 (WD Pa. 1984) (in action against former employee who built new vibrating feeder, summary judgment denied due to issue of material fact concerning whether or not use of plaintiff's design manual leading to creation of new product was violation of secrecy).

¶ 4.03A BANKRUPTCY EFFECTS ON INVENTION CONTRACTS [NEW]

Page 4-12:

Add the following new section.

The enforceability of contractual modifications also requires consideration of the potential effects of bankruptcy proceedings filed by either party to the agreement. Where the former employer files bankruptcy, the contractual and other rights established under the agreement are the property of the bankruptcy estate and may be enforced by the debtor company.[44.2] "The commencement of a [bankruptcy case] creates an estate . . . comprised of all . . . legal or equitable interests of the debtor in property as of the commencement of the case."[44.3] The debtor in bankruptcy has full power to pursue enforcement of these rights by action against third parties. The substantive law applied here essentially adopts the law that would have applied in the absence of the bankruptcy filing.[44.4] The second context involving enforcement occurs when the former employee files bankruptcy. "The filing of a bankruptcy petition places a stay against the commencement or continuation . . . of a judicial, administrative or other action or proceeding against the debtor that was or could have been commenced before" filing of bankruptcy.[44.5] The immediate effect is to channel anticipated or pending actions into bankruptcy court.

The stay applies only to actions against the debtor in bankruptcy and does not affect actions against affiliates or other related parties. In limited circumstances, however, a court may extend the protection in this stay to preclude actions against entities or persons essential to the bankruptcy case. This occurs under general equitable powers granted to the court. For example, in *In re Polytop Corp.*,[44.6] the court held that continuation of a lawsuit against an employee of the debtor constituted a violation of court order prohibiting commencement of any action against the debtor.

[44.2] See In re Bettinger Corp., 197 F. Supp. 273 (D. Mass. 1961); In re Van Dyk Research Corp. (Van Dyk Research Corp. v. SCM Corp.), 13 BR 487 (Bankr. DNJ 1981) (court has jurisdiction over proprietary rights and interests claimed by the debtor). See also discussion of bankruptcy and trade secrecy issues, supra ¶¶ 3.19 through 3.22, this Supplement.

[44.3] 11 USC § 541(1).

[44.4] See generally In re Bettinger Corp., 197 F. Supp. 273 (D. Mass. 1961); In re Telesport, Inc. (Telesport, Inc. v. Vestal), 22 BR 527 (Bankr. ED Ark. 1982).

[44.5] 11 USC § 362(a)(1).

[44.6] 31 BR 225 (Bankr. DRI 1983).

of all debts that arose before the commencement of the case.[44.10] The discharge imposes a permanent injunction against the commencement or continuation of any action or act to collect, recover, or offset the debt as a personal liability of the debtor.[44.11]

The question is whether the obligation on the nondisclosure or noncompetition contract against the individual is a "debt" arising before filing and if so, whether discharge prevents subsequent actions for injunctive relief or merely any later claim for damages. The case law and statute provide limited guidance. A debt in bankruptcy is liability on a claim. A "claim" is a "right to payment, whether or not reduced to judgment. . . . . ; or [a] right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is reduced to judgment, fixed, contingent, matured, unmatured, disputed. . . . "[44.12] This language encompasses any claim for breach of the restrictive contract arising before bankruptcy filing in any case where the contractual claim gives or might give rise to a claim for monetary damages.

One court dealing with the effect of discharge on such a claim indicates that, even if a money award were a potential outcome of contract violation, the equitable remedy not reduceable to money damages might not be discharged. In *In re Cooper,*[44.13] the court dealt with a noncompetition clause and commented:

> Here equitable relief would be a requirement that debtor not do something, i.e., not work for a competitor and [not] call upon Carstens' customers for a limited period of time. . . . What follows is that from this there may be, if the state court were to conclude that the non-competition agreement was enforceable, an equitable remedy not reduceable to damages and therefore, not a claim.

This permits the equity remedy to survive bankruptcy, giving relatively full protection for the future for the former employer. Importantly, however, the result does not occur when a contract is executory and rejected by the bankrupt debtor since rejection converts the contract into a claim against the estate. Whether or not the agreement is executory

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[44.10] 11 USC § 727(b).

[44.11] 11 USC § 524(a)(2).

[44.12] 11 USC § 101(4).

[44.13] 47 BR 842 (Bankr. WD Mo. 1985). See In re Talmage, 758 F2d 162 (6th Cir. 1985) (court focused on the question of state law enforceability of a noncompetition clause in a license agreement against an individual in Chapter 7 without considering whether the clause created a debt that was discharged).

prepared detailed sketches of desired features and participated in development; fact that homeowner hired architect did not create work for hire). The issue turns in part on the degree and character of control exercised by the contractor. See Aldon Accessories Ltd. v. Speigel, Inc., 738 F2d 548 (2d Cir. 1984) (statuettes developed by contractors working under supervision and direction of wholesale seller were works made for hire).

Page 4-15:

Add after first complete paragraph.

Authorization for the preparation of a derivative work may be expressed in a written contract if it may be found in the subsequent conduct of the parties. For example, in *Dynamic Solutions, Inc. v. Planning & Control, Inc.,*[54.1] two parties had developed initial software products with one of the parties retaining ownership. Subsequent development of derivative works by the other party was found to be implicitly authorized by the fact that the copyright owner accepted the plan for development and use of micro programs. "[PC] clearly ratified DSI's conduct by [PC's] own acceptance and profitable use of the products."

[54.1] 646 F. Supp. 1329 (SDNY 1986).

Add at end of note 54.

See generally Quinto v. Legal Times of Wash., Inc., 506 F. Supp. 554 (DDC 1981) (article for law school newspaper was contribution to collective work, not work for hire; article author retained copyright in article, and republication by newspaper without his permission violated that copyright).

Page 4-16:

Add at end of note 57.

Predictably, the development of software as a valuable product leads to litigation on the question of ownership. The standards applied are parallel to those for other forms of copyrighted work. For example, the client who contracts for the development of a particular program does not become an author even if it participated in design work. See, e.g., Whelan Assocs. v. Jaslo Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985) (owner of dental lab who participated in creating software package being developed for its use did not make contributions of a type or quantity to make it a coauthor of software and did not obtain rights to market software through this method or through purchase of program for use in its computer); Engineered Mechanical Servs. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984). In *Engineered Mechanical Services,* the defendant hired as consultant did not intend to transfer the ownership of software he developed with reference to the repair of a particular engine problem. An employee developed the analysis program with 75 percent public domain software and he developed the remainder especially for this application. Invoices submitted by the designer pendent contractor relatonship but not where the work was a work for hire prepared by an employee. Recent cases, however, have focused on factors that go beyond the traditional or expected definition of contractor relationships to find an employee relationship although other inidicia of contractor status exist. This occurs not only in connection with individual workers, but also in cases involving joint undertakings between two or more companies. For example, in *Evans Newton Inc. v. Chicago Systems Software,*[62.1] a company that was hired to modify a management program, designed for calculators, to be able to run on a Commodore computer was held to be an employee, rather than an independent contractor for purposes of copyright work for hire doctrines.

Chicago Systems (CS) was hired by Evans Newton (EN) to modify an EN management program and prepare an operations manual for the program. EN defined the specifications for the new program and the tasks or reports it was to perform. When CS brought out a program in competition with EN, EN sued for infringement. CS argued that it was a coauthor and not an infringer.

The court noted that

> because ENI produced no written instrument [conveying ownership to it], CSS correctly asserts that the computer manual must fall within the employee [rather than the independent contractor category] if it is indeed a 'work for hire.'. . . Whether CSS was an employee of ENI for purposes of 17 USC 101 turns on whether Congress intended the term employee to encompass only regular employees as CSS contends, or whether Congress intended the 1976 Act to retain the somewhat more flexible definition of employee [used] under the 1909 Copyright Act.

The court held that the more flexible standard was intended. In the view of the court, the issue was whether the defendant contractor was "independent or . . . so controlled and supervised in the creation of the particular work by the employing party that an employer-employee relationship" existed. Here, the evidence supported that CS merely used its skill to produce a result according to the specifications of EN and under the supervision of EN. EN was the sole owner.[62.2]

The issue of the circumstances and type of conveyance required to transfer copyright to the contracting party under the Copyright Act is unsettled. The decision in *Evans Newton* was expressly rejected by the Fifth Circuit in a decision not involving computer software, but fully applicable in this field. In *Easter Seal Society for Crippled Chil-*

[62.1] 793 F2d 889 (7th Cir. 1986).

[62.2] Aldon Assocs. v. Spiegel, Inc., 736 F2d 548 (2d Cir. 1984).

The court held that the agreement did not extend to cover ownership of the new programs. Furthermore, although based on the original programs owned by PC, the new programs were not unauthorized, derivative works. "[Authorization] was implicit in [PC's] acceptance of the plan [for development and use of micro programs.] [PC] clearly ratified DSI's conduct by [PC's] own acceptance and profitable use of the products." As this indicates, courts distinguished between control of the intended work and control over potential modifications or adaptations. They are willing to protect the subsequent developer even if another party owns the original work.

[c] Preexisting Works

Page 4-24:

Add note 81.1 at end of runover sentence.

[81.1] See Dynamic Solutions, Inc. v. Planning & Control, Inc., 646 F. Supp. 1329 (SDNY 1986) ("[Authorization] was implicit in [PC's] acceptance of the plan [for development and use of micro programs.] [PC] clearly ratified DSI's conduct by [PC's] own acceptance and profitable use of the products.")

Add note 81.2 at end of runover paragraph.

[81.2] See also Koontz v. Jaffarian, 787 F2d 906, 229 USPQ (BNA) 381 (4th Cir. 1986). (The plaintiff developed a system for estimating electrical work cost and, working in conjunction with Hewlett-Packard, converted the manual system into a computer program format. The Court of Appeals upheld the trial court finding that the contract executed between the parties did transfer ownership of the data compilation to Hewlett-Packard.)

Add at end of subsection.

In dealing with rights in the work product of a joint undertaking, it is often essential that the joint work product be distinguished from other work that one or both parties have previously undertaken or that they undertake during the joint program. A failure to adequately differentiate among the joint work and the other activities of the parties may create problems in allocating ownership between the participants or in resolving their rights, as against conflicting claims of third parties.

An illustration of this latter problem arose in *In re Bedford Computer Corp.*[82.1] In that case, a limited partnership was formed to fund software research and development at Bedford. By contract, the partner-

[82.1] 62 BR 555 (Bankr. DNH 1986).

court enforced a noncompetition clause against a former senior consultant who had developed substantial knowledge about the employer's computer programs and had also obtained potentially valuable client information during the period he was engaged in consultation. The clause was both geographically and temporally limited in a manner that reasonably corresponded to the protectable interests of the former employer.

Since these clauses are often involved in relationships between two business entities, however, enforcement of a no competition agreement may entail risks of liability or, at least, invalidation under state or federal competition laws. In *Shanco International Ltd. v. Digital Controls Inc.*,[84.2] a restrictive agreement reached between a manufacturer and a distributor of a video game was held to be an invalid restraint of trade under state law primarily because it contained no time limitations on the manufacturer's obligation to not sell the product to other purchasers. The court stated:

> [The] restrictions . . . are unreasonable. . . . Not only do these agreements fail to restrict the territorial limitations placed upon [the manufacturer] they also do not place any time limitations upon his obligations not to sell the Little Casino game to any purchasers except Shanco and to give Shanco the right of first refusal of all video machines which [the manufacturer], or any other company in which he has an interest, might develop in the future.[84.3]

[84.2] 169 Ga. App. 184, 312 SE2d 150 (Ct. App. 1983).

[84.3] Id.

Add after second complete paragraph.

Many of the difficult issues regarding an employer-contractor relationship that affect control of the work product can, and should, be resolved by explicit contract provision. The contract for the development of computer software can allocate ownership of various attributes involved in the end product in any manner that the parties deem to be appropriate. The most common framework, however, reserves for the developer its ability to continue to use ideas, concepts, and modular code in future software development work, while giving the buyer of the program ownership of the copies received.

In *Shauers v. Board of County Commissioners*,[85.1] the court interpreted a contract for the development of software to split ownership

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[85.1] 746 P2d 444 (Wyo. 1987).

ownership. See Peregrine v. Lauren Corp., 601 F. Supp. 828 (D. Colo. 1985) (where advertising agency commissioned photographs by professional photographer, photographs were works for hire within intention of Copyright Act and agency was considered to be author); Aldon Accessories Ltd. v. Speigel, Inc., 738 F2d 548 (2d Cir. 1984) (statuettes developed by contractors working under supervision and direction of wholesale seller were works made for hire, even though formal employee relationship may not have existed).

Add note 90.1 at end of second complete paragraph.

90.1 See Engineered Mechanical Servs. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984). In *Engineered Mechanical Services,* the defendant, hired as a consultant, did not intend to transfer ownership of software he developed with reference to the repair of a particular engine problem. As consultant, he developed the analysis program using 75 percent public domain software, and the remainder was developed especially for this application. Invoices submitted by the designer indicated that charges were for use of the program; they were not a fixed sale price. Furthermore, the consultant did not design any user's manual, which would have occurred had there been an intended transfer of property rights. He never provided contractor with copy of program.

Add note 90.2 at end of runover paragraph.

90.2 See, e.g., Aldon Accessories Ltd. v. Speigel, Inc., 738 F2d 548 (2d Cir. 1984) (statuettes developed by contractors working under supervision and direction of wholesale seller were works made for hire, even though formal employee relationship may not have existed). Compare In re Royce Computer Servs., Inc., 132 AD2d 827, 517 NYS2d 833 (App. Div. 1987) (for purposes of unemployment insurance, computer company exercised control over results of work of professor, students, and translator, so as to support finding that professor, students, and translator were employees, and not independent contractors).

Add at end of note 91.

See also Meltzer v. Zoller, 520 F. Supp. 847 (DNJ 1981) (homeowner was not author of architectural plans for its home, even though homeowner prepared detailed sketches of desired features, participated in development work, and hired architect); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985) (owner of dental lab who participated in creating software package developed for its use did not make contributions of type or quantity to make it coauthor of software and did not obtain rights to market software through purchase for use in its computer).

Add after first complete paragraph.

The most common form of contractor relationship in software development entails a client-consultant (or contractor) situation. The client's role in suggesting necessary elements of an effective program and case in this regard is *Aldon Associates, Ltd v. Spiegel, Inc.*,[92.1] in which the court held that "a contractor who works under the supervision and direction of the hiring party is considered to be an employee whose actions are within the scope of employment."

Under this line of cases, the key focus is on whether the employer or the employee had direct control over the construction of the creative (or, if applied to noncopyright cases, the secret) portions of the program. The analysis entails issues of intent, supervision, and control that are inherently difficult to resolve before the fact. Thus, this line of cases indicates an overriding need to deal explicitly with the ownership issue in a contractor agreement, regardless of in which direction ownership is to be vested.

The *Aldon* analysis of "employment" and thus work for hire status in a transaction has been applied where the contractor is an individual and where the contracting party is another company. For example, in *Evans Newton Inc. v. Chicago Systems Software*,[92.2] Chicago Systems (CS) was hired by Evans Newton (EN) to modify an EN management program, which ran on programmable calculators, so that the program could run on Commodore computers and perform additional tasks. In addition, CS prepared an operations manual for the new program. For purposes of copyright law, CS was held to be an employee of EN in this transaction, at least to the extent that the resulting manual was treated as a work for hire.

EN defined the specifications for the new program and the tasks or reports it was to perform. After completing work, CS signed an agreement that acknowledged that all of the programming done by CS was the property of EN, but this agreement did not apply to the particular dispute. When CS brought out a program in competition with EN, EN sued for infringement. The claims regarding the software were dismissed because EN failed to establish that it had registered the program. There had been a registration for the operating manual. Perhaps significantly, in this case, the registration of the manual was as a work for hire. The court found an infringment of the manual.

CS argued that it was a coauthor and not an infringer. The court noted that "because ENI produced no written instrument [conveying

92.1 736 F2d 548 (2d Cir. 1984).

92.2 793 F2d 889 (7th Cir. 1986). See also Iris Arc v. SS Sarna, 621 F. Supp. 916 (EDNY 1985) (held that the works were works for hire, despite independent contractor relationship, because the employer worked closely with developer at all stages of the creative process and because the design was required to meet the employer's approval before it went into production).

protective of the employer's rights in the original work product than in subsequent developments independently made by the contractor, although based on the original program. This is especially true where a course of conduct between the parties indicates acquiescence by the employer in the new developments for its own use by the contractor. One illustration of such a differential occurred in *Dynamic Solutions, Inc. v. Planning & Control, Inc.*[92.4] Dynamic Systems (DS) had previously sold rights in several programs to the defendant, Planning & Control (PC). DS had developed the original programs for PC. The programs used game simulation techniques for purposes of business training. These programs run on mainframe computers on a time-share basis. A subsequent contract established that PC owned the programs sold to it.

Subsequently, DS developed new programs for use in micro computers. It permitted PC to use these programs in seminars, distributing limited run copies to it on disk. When DS withdrew from this arrangement, it sued PC to prevent continued use of the new programs. The court held that the agreement did not cover ownership of the new programs. Furthermore, although based on the original programs owned by PC, the new programs were not unauthorized derivative works. "[Authorization] was implicit in [PC's] acceptance of the plan [for development and use of micro programs;] [PC] clearly ratified DSI's conduct by [PC's] own acceptance and profitable use of the products." The analysis used here bears a direct correspondence to analyses of employee ownership and shop rights questions. In cases of ambiguity, one measure of rights involves a focus on what the parties appeared to believe their rights were, as manifested by the course of conduct associated with performance of the contract and use of the intellectual property involved.

Obviously, where a written contract exists between the contractor and the employer, care should be exercised to fully define what aspects of the intellectual property ownership have been transferred and what aspects have been retained regarding both the prior work product and any right to deal with modifications or derivations of the software in the future.

The issue of establishing a clarity of ownership has significance not only with respect to resolving disputes between the contracting parties, but also with respect to potential disputes between one of those parties and a third party infringer. When a third party is involved, the claim is frequently made that, in effect, the plaintiff is the wrong party to bring an infringment action against because ownership rests in the other party

[92.4] 646 F. Supp. 1329 (SDNY 1986).

In the absence of segregation of assets prior to bankruptcy, the partnership's claims fail.

> In my judgment, a sale of computer software of the nature here involved, left in the possession of the seller without any separate identification or segregation is in no material aspect different from a trust of any other type of intangible property. Accordingly, the legal result when reclamation from a bankrupty estate is demanded should be the same.

The claim was denied.

¶ 4.06 END USER MODIFICATIONS

Page 4-28:

Add at end of note 93.

Reverse engineering to discover the structure, content, or design of a product for subsequent, competitive use is described as discovery by "proper means" in the Uniform Trade Secrets Act (UTSA). UTSA § 1, Commissioners' Comments. The freedom to use a discovered secret is present only to the extent that the program or design is not protected by other forms of intellectual property law. See EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1485 (D. Minn. 1985) (although reverse compilation of program portion of radio receiving system may have been valid, creation of new program was an infringement of copyright where that new program followed in detail organization of first program and numerous design choices made in second program unnecessarily duplicated choices made in original, even though new program used different processor that was not subject to same restrictions).

Page 4-31:

Add note 102.1 at end of second sentence in first complete paragraph.

102.1 See generally Uniden Corp. of Am., 623 F. Supp. 1485 (D. Minn. 1985) (although reverse compilation of computer program of radio system may have been valid, creation and marketing of new program infringed copyright); Apple Computer Inc. v. Formula Int'l, Inc., 594 F. Supp. 617 (CD Cal. 1984) (preparation and distribution of multiple copies of operating software from lawfully owned disk not protected under Section 117); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985) (owner of detal lab who participated in creating software package being developed for its use did not obtain rights to market software through this purchase of program for use in its computer). See discussion at ¶ 1.09A[1], 1.09A[2], this Supplement.

Add note 102.2 at end of next to last sentence in first complete paragraph.

102.2 See discussion at ¶ 1.09A, this Supplement. See generally Q-Co. Indus. v. Hoffman, 625 F. Supp. 608 (SDNY 1985).

no firm would dare to attempt a graceful exit from a market in which it was a major seller."

¶ 4.08 SINGLE PRODUCT INNOVATION

Page 4-34:

Add at end of first complete paragraph.

Predatory pricing issues regarding the computer industry have been relatively common in light of the price fluctuations of the technology. A central issue faced in such cases concerns the standard against which pricing activity will be measured.

In *Marsann Co. v. Brammall, Inc.*,[116.1] the court noted that the average variable cost of a product was the standard against which a price was compared to establish the predation alleged in a predatory pricing claim. It indicated that this must be determined from costs uniquely incurred to produce the items sold at the challenge price, rather than costs associated with the production of the total output of the product.

In contrast to an economically defined standard of predatory pricing, the court, in *Instructional Systems Development Corp. v. Aetna Casualty & Surety Co.*,[116.2] denied a summary judgment for the defendant, noting that although standards to determine whether predatory pricing occurred are controversial, summary judgment was improper because of the fact that there was evidence of short-term price cutting designed to obtain long-term benefits from monopoly.

The court observed that "in this circuit, although the relationship between price and marginal cost or average variable cost is a valuable indicator of predatory pricing, sales above average variable cost do not preclude a finding of predatory pricing if other factors are present indicating unreasonably anti-competitive behavior." The summary judgment was not appropriate given evidence of price fluctuations, testimony that the fluctuations were predatory in nature, and evidence indicating that there was a concerted effort to undercut the other company's prices regardless of profitability. This creates a fact issue on whether the defendant "engaged in short-term price cutting to secure long-term monopoly profits." [116.3]

[116.1] 788 F2d 611 (9th Cir. 1986).

[116.2] 817 F2d 639 (10th Cir. 1987).

[116.3] See also CE Servs. v. Control Data Corp., 759 F2d 1241 (5th Cir. 1985) (plaintiff presented adequate facts to preclude summary judgment with reference to relevant market for computer maintenance services and predatory conduct on part of defendant in pricing strategy).

equipment is not relevant market for purposes of monopolization or attempted monopolization).

Page 4-42:

Add at end of note 142.

See Innovation Data Processing, Inc. v. IBM Corp., 603 F. Supp. 646 (DNJ 1984) (held, plaintiff could not prove that defendant's practices of marketing new software product were per se violations of antitrust laws). The court in *Innovation Data Processing, Inc.* stated that inclusion of a program in an integrated installation program did not constitute a per se antitrust violation in light of the fact that the customers were not required to take the software and systems program jointly but could elect to take the programs separately and, although the systems program involved several subroutines, it was a lawful package of technologically interrelated elements. A fact issue remained, however, about whether a violation of antitrust occurred under the rule of reason standards.

¶ 4.10 JOINT VENTURE RESEARCH AND DEVELOPMENT

[2] Detrebling of Damages

Page 4-47:

Add note 160.1 at end of first paragraph.

[160.1] In its first year of effect, the notification procedures established under the Cooperative Research Act have been extensively used. Fifty-one joint ventures were placed on the public record, 16 of which involved the automotive manufacturer's association. The remaining ventures document an extensive use of the statute by computer and communications research programs. The ventures include Microelectronics and Computer Technology Corp. (50 Fed. Reg. 2633-01) (advanced computer architecture, artificial intelligence, and computer-assisted design); Software Productivity Consortium (50 Fed. Reg. 2633-02) (research and design engineering pertaining to productivity tools and techniques in development of complex computer software); Bell Communications, Inc. (50 Fed. Reg. 50857-01) (optical transmission of telecommunications); Intel Corp./Xicor Corp. (50 Fed. Reg. 50864-01) (joint development of EEPROM technology); Opto Electronics Group Project (50 Fed. Reg. 49141) (optoelectronics, micro robotics in assembly technology); Smart House Project (50 Fed. Reg. 41428-03) (controllers and software to make logical decisions in home environment); Applied Information Technologies Corp. (50 Fed. Reg. 41232-02) (artificial intelligence, software and system engineering, telecommunications); Bell Communications, Inc. and ADC Telecommunications (50 Fed. Reg. 36162) (integrated circuit switching); Bell Communications Research, Inc. and Racal Data Communications (50 Fed. Reg. 31785-01) (image conferencing); Bell Communications and United States Army (50 Fed. Reg. 26850-01) (subminiaturization of semiconductor devices); Bell Communications and venting nonmembers from using the data in its listing service; use of copyrighted real estate multiple listing materials by competitors was not a "fair use" where the competitors substantially duplicated the materials and made the same commercial use of the materials as complying members of the multiple listing association); Microbyte Corp. v. New Jersey State Golf Ass'n, 1986-2 Trade Cas. (CCH) ¶ 67,228 (DNJ 1986). (An alleged tying arrangement in which the NJSGA allegedly tied full access by country clubs and members in the state golf tournaments to use by the club of a USGA computerized handicapping system (GHIN). The court granted summary judgment on issues relating to the existence of the tie and that the tie affected a substantial amount of commerce. Failure of a club to use the USGA system put a cap on the number of teams that could be entered into any tournament and this demonstrated the tie-in to "full" access rights.)

¶ 4.10A JOINT DATA SERVICES AND ANTITRUST [NEW]

Page 4-60:

Add the following new section.

With the increasing importance of data processing and recordkeeping systems, antitrust issues are raised concerning whether the parties or organization maintaining the data system must provide access to the system by competitors. The issue arises from cases concerning so-called critical, or bottleneck, materials or services essential to competition in a particular field. The cases indicate that some access provided on reasonable terms may be necessary where a bottleneck facility is involved, but this analysis should not often be applied to data compilations that can be replicated, even if the replications would require substantial effort by the prospective competitor.[194.1]

In *Supermarket of Homes, Inc. v. San Fernando Valley Board of Realtors,*[194.2] a real estate multiple listing service was held not to have violated antitrust monopolization rules by adopting various exclusionary rules preventing non-members from using the data in its listing service. In addition, the court held that procompetitive policies did not indicate that unauthorized use of the copyrighted real estate multiple listing materials by competitors was a "fair use." Claims of fair use were inappropriate where the competitors substantially duplicated the materials and made the same commercial use of the materials as complying mem-

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194.1 See cases cited in note 189, main volume.

194.2 786 F2d 1400 (9th Cir. 1986).

PART D. TAXATION AND INNOVATION

¶ 4.11 RESEARCH AND RESOURCE EXPENDITURES

[1] Depreciation and Investment Property

Page 4-61:

Add at end of note 196.

The investment tax credit was repealed in tax code revisions in 1986. See generally R. Westin, "Middle Income Tax Planning and Shelters" (1986).

Page 4-62:

Add at end of subsection.

The investment tax credit was repealed in the 1986 revisions to the federal tax code and substantial changes were made in depreciation schedules.[202.1]

Prior to repeal, the IRS had ruled that a taxpayer who was employed by a company extensively engaged in research work could not claim investment credits or depreciation for a computer he purchased for use at home in connection with such work.[202.2] Although the employer provided a statement that the computer was required as a condition of employment, the IRS denied the deduction, concluding that the employee could perform his duties without the computer. The mere statement by the employer without supporting facts was insufficient.

202.1 See generally R. Westin, "Middle Income Tax Planning and Shelters" (1986).

202.2 Rev. Rul. 86-129.

[2] Research and Experimentation Expenses

Add note 202.3 at end of first paragraph.

202.3 The tax benefits accorded to research and development costs were affected by an IRS ruling issued in November 1985. In Revenue Ruling 85-186, the IRS ruled that the "tax benefit rule" does not require that previously deducted research and experimentation expenses be treated as having been recaptured when the unpatented technology or knowhow is sold. Rev. Rul. 85-186, 1985-46 IRB 6. In reaching this result, the IRS concluded that the legislative purpose of providing special treatment under IRC Section 174 to research expenses is accomplished in the year that the expenses are incurred and is not vitiated by subsequent sale of the technology. This analysis arose from the Supreme Court ruling in *Hillsboro National Bank v. Commissioner,* a case concerning the scope of the so-called tax benefit rule. 460

ship to the partnership was read as no more than a contract to sell and thus the technology remained the property of the debtor.

> In my judgment, a sale of computer software of the nature here involved, left in the possession of the seller without any separate identification or segregation is in no material aspect different from a trust of any other type of intangible property. Accordingly, the legal result when reclamation from a bankruptcy estate is demanded should be the same.

The effect of denying the ownership claim was ultimately to convert the partnershhip claims against Bedford into unsecured claims for purposes of bankruptcy distribution and permit the bankrupt company to deal freely with the software.

PART II Transactions and Third-Party Liability

CHAPTER 5

Technology Licensing

PART A. GENERAL ISSUES

PART B. INTEGRATED AND LEVERAGED SYSTEMS

PART C. LICENSE DURATION AND ROYALTIES

Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984) (no monopolization claim was sustainable based on evidence that manufacturer had share of market for 32-bit systems that did not exceed 25 percent; market for add-on and upgrade equipment is not relevant market for purposes of monopolization or attempted monopolization); CE Servs. v. Control Data Corp., 759 F2d 1241 (5th Cir. 1985) (adequate facts preclude summary judgment with reference to relevant market for computer maintenance services and predatory conduct on part of defendant in pricing strategy involving temporary prices of 20 to 25 percent below variable cost to lure back five customers who had defected to plaintiff; for purposes of denying summary judgment, third-party service providers present reasonable possibility as to definition of relevant market). Compare the *C.E. Services* case with allegations of combination or conspiracy violations of antitrust law in *Computer Identics Corp. v. Southern Pac. Co.* 756 F2d 200 (1st Cir. 1985) (evidence was not adequate to support claim that there was conspiracy by railroad and its subsidiary and others to damage plaintiff's market position in market for software used in identifying and monitoring railroad cars).

PART B. INTEGRATED AND LEVERAGED SYSTEMS

¶ 5.04 TYING ARRANGEMENTS

Page 5-15:

Add 466 US 2 *to citation to Jefferson Parish in notes 30 and 31.*

Add at end of note 31.

The extent, even the existence, of this presumption raises controversial questions under antitrust law. See generally Will v. Comprehensive Accounting Corp., 776 F2d 665, 673 n.4 (7th Cir. 1985) (court indicated disagreement with presumption approach, focusing instead on whether there were any barriers to creating a "similar" product); 3 PM, Inc. v. Basic Four Corp., 591 F. Supp. 1350 (ED Mich. 1984) (copyrighted software creates no presumption of power).

Page 5-16:

Add at end of runover paragraph.

Where a tying arrangement is discarded under antitrust pressure or otherwise, legal issues may arise in the manner in which the violator disengages from the illegal arrangement. Properly understood, courts should permit flexibility in disengagement in order to permit the actor to minimize market disruption from its actions. This premise led the court, in *Olympa Equipment Leasing Co. v. Western Union Telegraph*

Add at end of note 44.

In this case, however, the integration of previously separate software elements into an integrated product did not offend antitrust norms where the proprietor of the software also maintained the availability of the separate item and where the elements were technologically interrelated.

Add 466 US 2 *to citation to Jefferson Parish in note 45.*

[a] Intellectual Property

Page 5-27:

Insert after runover paragraph.

The restrictive character of an analysis based simply on copyright protection or other, simple uniqueness has been recognized and rejected in a number of decisions. For example, in *Will v. Comprehensive Accounting Corp.,*[60.1] the Seventh Circuit held that no tying arrangement existed where a vendor required that its franchisees accept data processing services from the franchisor. The mere fact that the franchise name and services may have been unique did not establish a sufficient position to constitute illicit forcing. Judge Easterbrook directly rejected the *Digidyne* decision to the extent that it held that it is sufficient for a tying arrangement that rivals cannot precisely duplicate *exactly* the same product.

> [This view conflicts with other cases and turns an ordinary] attribute of the competitive struggle into a source of illegality. No one may copy Comprehensive's trademark or its copyrighted materials precisely, but rivals may create similar items for similar costs. Only when there is a barrier to entry — when rivals' cost of creating similar items is higher than the full costs of the original creator — may differences in the design of the package be treated as proof of market power. [Other cases accept this approach]; we follow them rather than *Data General.*[60.2]

Clearly, a broader approach to assessing what constitutes illegal tying is more appropriate to antitrust development in this field. It permits range for valid use and exploitation of intellectual property rights, reserving antitrust challenges to those relatively few cases in which actually unique, central products are improperly exploited. This flexible

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60.1 776 F2d 665 (7th Cir. 1985).

60.2 Id. at 673 n.4.

The court expressly rejected arguments that economic power, adequate for tying complaints, could be inferred from the copyrighted or patented character of particular technology.

> [The] evil of tie-ins exists only when the tying product can force consumers to buy an unwanted tied product. This exist only when the tying product confers great market power, evidenced by an exceptional demand for the tying product. However, such presumption is not warranted merely by existence of a copyright or a patent. More often than not, a copyright or patent provides little if any market power.

The court expressly rejected that *United States v. Loew's Corp.*[60.6] required a contrary result.

[60.6] 371 US 38 (1967). See also Institutional Sys. Dev. Corp. v. Aetna Casualty and Surety Co., 817 F2d 639 (10th Cir. 1987) (trademark license not per se invalid where does not extend beyond restrictions reasonably necessary to effectuate license, but cannot improperly divide territory); Will v. Comprehensive Accounting Corp., 776 F2d 665 (7th Cir. 1985).

[b] General Economic Analysis

Page 5-27:

Add note 60.7 at end of first paragraph.

[60.7] See generally AI Root Co. v. Computer Dynamics, 615 F. Supp. 727 (ND Ohio 1985) (three potential sources of sufficient forcing to establish tying are dominant position in market, sufficient uniqueness of product, and proof of substantial occasions of actual forcing); 3 PM, Inc. v. Basic Four Corp., 591 F. Supp. 1350 (ED Mich. 1984).

Page 5-28:

Add note 63.1 at end of fourth sentence in first paragraph.

[63.1] See Advisory Information & Management Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984) (no monopolization claim was sustainable based on evidence that manufacturer had share of market for 32-bit systems that did not exceed 25 percent; market for add-on and upgrade equipment is not a relevant market for purposes of monopolization or attempted monopolization).

Add at end of note 64.

See also AI Root Co. v. Computer Dynamics, 806 F2d 673 (6th Cir. 1987); 3 PM, Inc. v. Basic Four Corp., 591 F. Supp. 1350 (ED Mich. 1984).

affirmed a district court ruling that an illegal tying arrangement existed linking the lease of a local sports arena with the use of a computerized ticketing service. The arena was the largest in Atlanta and the court had received evidence indicating that computerized ticketing was not as economical for smaller facilities. Although the lease of the arena permitted the lessees to use other services if approved by the lessor, this had not occurred and the contracts contained no standards for when approval would occur.

> [We] note that the characteristics of the tied market. . . make the tying arrangement challenged here particularly destructive to competition. Although . . . computerized ticketing may have certain advantages over hard ticketing for an arena as large as the Omni, it is unlikely that any prospective competitor in the ticketing services market would be willing or able to invest the money required to develop a computerized system in light of the virtual impossibility of ever getting any Omni business . . .

¶ 5.05A IMPLIED LICENSES [NEW]

Page 5-30:

Add at end of section.

The motivation for package licensing deals with the frequent need in patent contracting to obtain rights in more than one patent in order to avoid blocking patent problems and enable the licensee to effectively use what is the primary subject matter of the agreement. While questions about the validity of package licenses involve whether the licensor can compel the licensee to take more than one patent right, a converse issue of whether the licensee can effectively obtain sufficient rights to practice the invention generally provides more of a focus in technology contracting.

Obviously, such issues should be dealt with expressly in the contract. Absent express language resolving rights to related technology, courts may use various implied license analyses to find that the license agreement implicitly conveyed sufficient technology to use the main subject matter of the conveyance.

In *In re Certain Dynamic Random Access Memories, Components Thereof, and Products Containing Same,*[70.1] the administrative law judge used two distinct implied license analyses to validate parts of patent license arrangements. Initially, an implied license can be found under

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[70.1] ITC No. 337-TA-242 (June 1987).

bankruptcy can alter a variety of the economic aspects of the transaction, a principal threat in the license agreement pertains to the right of the bankrupt debtor to assume or reject executory contracts.[107.1]

Filing a bankruptcy petition under any of the several bankruptcy chapters creates a bankruptcy estate.[107.2] This estate consists of all legal and equitable rights of the debtor. The petition institutes an automatic stay against any third-party action to collect debts or otherwise take property of the estate.[107.3]

Among the property that passes to the estate are the various pending contract rights held by the debtor at the time of filing. These are included whether the contract has been performed or not. As to the contract rights, however, the Bankruptcy Code gives the trustee in bankruptcy or the debtor in possession the right to assume or reject any contract that is *executory* at the time of filing. The term "executory" ordinarily refers in bankruptcy to the fact that substantial performance remains on both sides of the agreement such that a breach by either would be material and excuse nonperformance by the other party.[107.4]

If a technology license is an executory contract in bankruptcy, the debtor can assume or reject it unless the contract is personal to the licensee. "Assumption" implies an affirmative decision to take on the contractual obligations under the license. While the connotations of an assumed contract often entail performance continuing as prior to bankruptcy, the Bankruptcy Code provides for several potentially important variations imposed by law on the terms of the contract. The two most important variations include a statutory right to cure defaults and a statutory right to assign the contract to a third party.

The right to cure defaults is imposed by the Code in order to permit the debtor to preserve valuable assets for the bankruptcy.[107.5] The bankruptcy cure right does not depend on the terms of the contract or of state law.

If the debtor assumes the contract, it can cure default and con-

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[107.1] 11 USC 365. See generally Countryman, "Executory Contracts in Bankruptcy: Part I," 57 Minn. L. Rev. 439 (1973); Nimmer, "Executory Contracts in Bankruptcy: Protecting the Fundamental Terms of the Bargain," 54 Colo. L. Rev. 507 (1983); 2 L. King, *Collier on Bankruptcy* ¶ 365.02 (15th ed. 1979).

[107.2] 11 USC § 541.

[107.3] 11 USC § 362.

[107.4] See Countryman, "Executory Contracts in Bankruptcy: Part I," 57 Minn. L. Rev. 439, 460 (1973); Nimmer, "Executory Contracts in Bankruptcy: Protecting the Fundamental Terms of the Bargain," 54 Colo. L. Rev. 511 (1983); 2 L. King, *Collier on Bankruptcy* ¶ 365.02 (15th ed. 1979).

[107.5] 11 USC § 365(a)(b).

While this may apply to completed and comprehensive assignments of rights, it does not provide an apt description of an ordinary technology *license.*[107.12]

Although the issue remains in doubt, appellate case law concludes that most technology licenses are executory for purposes of creating the debtor's option to assume or reject. The earliest decision involved an exclusive software license. In *Fenix Cattle Co. v. Silver,*[107.13] the Ninth Circuit held that the exclusive license was executory. The ongoing warranties and exclusive dealing obligations of the license could be rejected by the debtor-licensor. The executory provisions of the license were the licensee's obligation to pay royalties based on net return from use of the software and the licensor's obligation not to sell the software to any other parties. As the court noted, breach of either obligation would be a material default, entitling the other to revoke the agreement. Given this characteristic, the debtor in bankruptcy could revoke the license under executory contract law.

A Fourth Circuit decision in *Lubrizol Systems Associates v. Richmond Metal Finishers, Inc.,*[107.14] applies this same analysis to a nonexclusive technology license. In this case, the licensee owed continuing obligations to make royalty payments and to provide sales reports. The licensor had an ongoing obligation under a most-favored clause to notify the licensee of subsequent agreements and to adjust the contract royalty rate if a more beneficial license had been granted to a third party.

In both *Fenix* and *Lubrizol,* the effect of rejecting the contract was to withdraw important technology from the licensee. Neither court accepted arguments that this withdrawal of rights was inappropriate or could be barred where the effect on the licensee was substantial. Both licensees could treat the rejection as a breach and file a claim against the estate, but neither had a right to obtain specific performance against the estate.

In contrast to the appellate decisions in *Fenix* and *Lubrizol,* a bankruptcy court dealing with a patent license held that a patent license could not be assumed and assigned by the licensee's trustee in bankruptcy. The court in *In re Alltech Plastics, Inc.,*[107.15] relied on common law rules regarding the assignability of patent licenses to reach its result. In its view, nonbankruptcy law establishes that a nonexclu-

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[107.12] See supra ¶ 5.02[1], main volume.

[107.13] 625 F2d 290 (9th Cir. 1980).

[107.14] 756 F2d 1043 (4th Cir. 1985).

[107.15] 71 BR 686 (Bankr. WD Tenn. 1987).

¶ 5.11 NONPRICE VERTICAL RESTRICTIONS

Page 5-42:

Add note 113.1 at end of second sentence in first paragraph.

[113.1] See Will v. Comprehensive Accounting Corp., 776 F2d 665 (7th Cir. 1985) (franchisor did not violate Sherman Act by requiring that data processing services be taken in connection with franchise arrangements where it was not shown that franchisor had market power sufficient to accomplish tying arrangement and where, in fact, franchisor's market share was small and system was dwarfed by large national firms and was in competition with numerous small firms).

Add after note 114.

Illegal territorial restraints may be implemented in the guise of contractual no-competition clauses. For example, in *Three Phoenix Co. v. Pace Industries,*[114.1] a covenant not to compete ancillary to a sale of a company had the unnecessary effect of dividing the market between potential competitors. Thus, while such clauses are enforceable if necessary to provide a fair protection in the contract and if reasonably limited in scope, the per se rule against horizontal dividing markets applied. For purposes of antitrust liability, the last overt act that set the violation was when the violator filed in court to enforce the clause. This lawsuit filing began the running of the statute of limitations.[114.2]

[114.1] 659 P2d 1258 (Ariz. 1983).

[114.2] Three Phoenix Co. v. Pace Ind., 813 F2d 234 (9th Cir. 1987).

Page 5-43:

Add at end of note 118.

Territorial restrictions, of course, may present ordinary contractual interpretation issues. See Cullinet Software, Inc. v. McCormick & Dodge Corp., 400 Mass. 775, 511 NE2d 1101 (Mass. 1987) (evidence does not sustain finding that worldwide license granted to licensee).

¶ 5.12 DISTRIBUTORS

Add note 122.1 at end of first sentence in first paragraph.

[122.1] Other than with reference to antitrust restrictions, numerous contract and state law issues arise in connection with distributorship relations. See generally Computronics, Inc. v. Apple Computer, Inc., 600 F. Supp. 809 (WD Wis. 1985) (computer manufacturer's distribution directly to university did not violate contract between manufacturer and dealer and did not violate Wisconsin dealership laws); Computer Place, Inc. v. Hewlett-Packard Co., in order to avoid the threatened direct competition with Doron in the sale of films, thus protecting its own monopoly in the simulator software market." If this is true, a violation may exist.

Outside of the context of intellectual property licensing, recent decisions appear to be increasingly protective of the manufacturer's right to implement and enforce nonprice restrictions. This was most explictly expressed in the context of a noncomputer distributorship in *Morrison v. Murray Biscuit Co.*[126.2] In *Morrison,* the court of appeals held that a wholesale distributor for a producer of cookies and crackers failed to prove that he was terminated pursuant to conspiracy between producer and food broker to suppress price competition. "The violation of a lawful restriction on distribution, such as a reasonable customer allocation agreement, will manifest itself to the dealer who complies with the restriction as price cutting, for it is only by price cutting or some equivalent concession that a new dealer can take away the established dealer's customers. As long as the supplier's motive is not to keep his established dealers' prices up but only to maintain his system of lawful nonprice restrictions, he can terminate noncomplying dealers without fear of antitrust liability even if he learns about the violation from dealers whose principal or perhaps only concern is with protecting their prices. We thus agree with the Fifth Circuit and the Tenth Circuit that the mere fact that the dealer may be motivated by antipathy to price competition is irrelevant. . . ."

A similar receptivity to enforcing nonprice restrictions was expressed in a computer context in *The Computer Connection v. Apple Computer, Inc.*[126.3] The case involved a termination of a distributorship for the failure of the distributor to conform to contractual obligations regarding the products that it sold. This provided a valid business justification for termination of the distributorship.

The contract permitted the dealer to sell Apple II and Apple III products. The distributor sold the new Apple Lisa system. Apple argued that such sale required specially trained service and sales staff. It terminated the contract when the dealer refused to cease selling the Lisa systems. "[Proof] on motion for summary judgment that there was a valid business reason to terminate a dealer will shift the burden of proof to the plaintiff to produce significant probative evidence that the antitrust violation was the real purpose. . . . " The facts here failed to overcome this burden.

126.2 797 F2d 1430 (7th Cir. 1986).

126.3 621 F. Supp. 569 (ED La. 1986).

actual complaints to Apple about mail order price discounts, followed by several meetings with dealer representatives, a total closure of mail order sales, and termination of dealers engaging in such sales.[130.3]

The issue remains significant, however, and the elements of a conspiracy can be established in some cases. Evidence of price-oriented conspiracy may be established indirectly. For example, in *Business Electronics Corp. v. Sharp Electronics Corp.*,[130.4] although the manufacturer (Sharp) terminated the distributor on the request of a competing distributor because of pricing policy complaints, there was inadequate proof to establish a per se price fixing violation. What was lacking was proof that there was a price maintenance agreement between Sharp and the other distributor. The agreement, however, may be proven inferentially and, as a result, this case was remanded for further trial.[130.5]

[130.3] See Morrison v. Murray Biscuit Co., 797 F2d 1430 (7th Cir. 1986) (court of appeals (Posner) held that a wholesale distributor for a producer of cookies and crackers failed to prove that he was terminated pursuant to conspiracy between producer and food broker to suppress price competition. "We thus agree with the Fifth Circuit and the Tenth Circuit that the mere fact that the dealer may be motivated by antipathy to price competition is irrelevant. . . ."); Nat'l Marine Elec. Distribs., Inc. v. Raytheon Co., 778 F2d 190 (4th Cir. 1985) (evidence regarding complaints by other dealers is insufficient to establish a conspiracy to set prices in the decision to terminate a mail order dealer).

[130.4] 780 F2d 1212 (5th Cir. 1986).

[130.5] See generally Computer Connection v. Apple Computer, Inc., 621 F. Supp. 569 (ED La. 1986). (In a case not involving a mail order termination, the court noted, "[Proof] on motion for summary judgment that there was a valid business reason to terminate a dealer will shift the burden of proof to the plaintiff to produce significant probative evidence that the antitrust violation was the real purpose. . . ." The facts here failed to overcome this burden.)

PART E. SOFTWARE PUBLISHING

¶ 5.13 THIRD-PARTY AUTHORS

Page 5-47:

Add note 130.6 at end of first sentence in first complete paragraph.

[130.6] One central issue pertaining to third-party authors concerns the process of dealing with ideas or products submitted by the third party to the publisher. This requires consideration of ownership issues involving copyright (if the submission is relatively complete), trade secrecy, and an emerging law of ideas when the submission represents a general concept). See *Nimmer* eventual, written contract. In *Kardios Systems Corp. v. Perkin-Elmer Corp.,*[150.1] Kardios purchased computer systems from Perkin-Elmer (PE) and added its own technology, selling the end product to users. It developed a product to translate IBM program language into a language usable on PE computers. After some marketing problems, Kardios entered into a contract for PE to exclusively market this emulator product. Early drafts of this contract contained a best effort clause, but the final version did not. Under New York law, a best effort obligation would not be inferred in the contract, at least under these circumstances.

150.1 645 F. Supp. 506 (D. Md. 1986).

¶ 5.15 END USERS OF CUSTOM SOFTWARE

[4] Adaptations and Derivations

Page 5-58:

Add note 162.1 at end of third sentence in first paragraph.

162.1 See SAS Inst., Inc. v. S&H Computer Servs., 605 F. Supp. 816 (MD Tenn. 1985) (implied duty of good faith and fair dealing exists between copyright proprietor and licensee; this duty was breached when licensee used software and other materials provided in license transaction to create an infringing software product without notifying proprietor of this purpose or obtaining authorization therefor).

¶ 5.16 MASS-MARKET END USERS

[1] Nature of the Transaction

Page 5-59:

In note 165, change the reference to read ¶ 6.17.

Add the following to the end of note 165.

Enforceability questions have been discussed in numerous articles. See, e.g., Stern, "Shrink-Wrap Licenses of Mass Marketed Software: Enforceable Contracts of Whistling in the Dark?," 11 Rutgers Comp. & Tech. LJ 51 (1985); Einhorn, "The Enforceability of 'Tear-Me-Open' Software License Agreements," 67 J. Pat. & Trademark Soc. 509 (1985). The first case to consider the enforceability of the shrink-wrap license format held that the alleged contract was invalid under contract principles as a contract of "adhesion." See Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

5. The person acquiring the software takes the action specified as acceptance.[186]

In the Louisiana statute, the express terms of LEA provide that these actions validate a contract regarding the *entire* terms of the license form. Despite this broad scope, the Louisiana statute also contains a list of specific contract terms that may be included in a license form and are deemed accepted if included. Given the universal validation of contract terms contained in the first portion of the statute, the purpose of the more specific, but allegedly not limiting list of provisions is not clear. This is especially true because the language of most of the "illustrative" clauses is conditional in form. The list includes:

1. Provisions for retention of title to the copy by the licensor;
2. If title is retained, total prohibition or selective limitations on the purposes and number of any copies permitted to be made by the licensee;
3. If title is retained, prohibitions on the right to modify or adapt the copy, including prohibitions on reverse engineering, decompiling, translating or disassembling the software;
4. If title has been retained, provisions prohibiting further transfer, rental, assignment, sale or other disposition of that copy; and
5. Provisions for the automatic termination without notice of the license if any of the terms are breached by the licensee.[187]

Arguably, although the statute indicates only that the license "may include" the listed provisions, this list serves as a limitation on the conclusive assumption of contract "acceptance." Under any other view, the conditioning of the terms for prohibiting sale, reverse engineering, and the like on the fact that the licensor retained title would be meaningless. If all terms are accepted, copying could be prohibited by agreement whether or not title was retained.

The Illinois statute was modeled after the Louisiana law, but a number of amendments changed the substantive scope. It expressly excludes coverage of any transaction in custom-made software or transactions in which a separate agreement has been entered into between the parties. Unlike the Louisiana counterpart, the Illinois LEA provides that the conclusive presumption applies only to license terms that are expressly included in the license form *and* specifically listed in the statute.

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[186] La. Rev. Stat. Ann. § 51.1963 (West 1986); Illinois LEA § 3.

[187] La. Rev. Stat. Ann. § 51.1954 (West 1986).

A court may conclude that this is consistent with federal law. Clearly, subject to possible antitrust issues, an actual contract between licensor and licensee might provide for retention of title and waiver of the owner's rights under Section 117. Arguably, however, there is no such agreement here in fact, and the state law partakes of an effort to reverse enacted federal law and policy by redefining ownership rights. The regulation of copying activity, absent a breach of confidence, for copyrighted works is fully preempted by federal law.

Apparently responding to this risk of preemption, the statutes contain an "enforceability" provision whose meaning is monumentally unclear.

> Nothing in this Act shall be construed to affect or alter any existing individual or business rights granted by the copyright laws of the United States . . . that such individual or business would have were such individual or business a purchaser of a copy of the computer software that is the subject of the license agreement.[191]

One interpretation of this language is that the reservation of title is, in fact, not applicable or enforceable in respect to copyright rights (e.g., Section 117 rights) of the owner of a copy. The retention of title then focuses more on trade secret, antitrust, and other issues, protecting the licensor's right of control. The alternative, perhaps equally correct, view is that the statute merely means to permit the licensor to take all available rights of control not expressly prevented by the Copyright Act.

An article by one of the developers of the legislation suggests the purposes of the enactment from the perspective of the industry. He notes three primary business and legal considerations for seeking enforceability of licenses:

1. To prevent secondary transfers of validly owned copies of the work, thereby creating access to a potentially larger market of initial sales;
2. To control multicomputer networking use; and
3. To attempt to protect trade secret information that might be discovered from reverse engineering procedures.[192]

The first court to review the enforceability of shrink-wrap license legislation held that the statutory provisions of the Louisiana act were preempted by federal copyright law and that the underlying contract was unenforceable.

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[191] Illinois LEA § 7.

[192] Fakes, "The Illinois Software License Enforcement Act," 4 CLR 513, 514–515 (1986).

Since the [Act] has touched upon the area of federal patent and copyright law, the provisions of the Prolock licensing agreement are unenforceable to the extent they are contrary to the policies of the federal Copyright Act. . . . Since the license agreement is unenforceable, it cannot buttress Vault's claim that Quaid has used 'improper means' to discover the alleged trade secret. . . . Deompiling, disassembly, and reverse engineering are all proper means of discovering any trade secret which may be contained in Prolock.

CHAPTER 6

Computer Contracts: Leases and Sales Agreements

PART A. DEFINING THE BARGAIN

PART A. DEFINING THE BARGAIN

¶ 6.02 GOODS, SERVICES, AND INTANGIBLES

[1] Contract Characterization Issues

[a] Services or Goods

Page 6-5:

Add note 2.1 at end of second sentence in first complete paragraph.

[2.1] See RRX Indus. v. Lab-Con, Inc., 772 F2d 543 (9th Cir. 1985) (for purposes of remedies limitations issues, software is a good and UCC is applicable to contract); Austin's of Monroe, Inc. v. Brown, 474 So. 2d 1383 (La. Ct. App. 1985) (software acquisition contract is sale rather than services agreement, even though it involves substantial custom programming and training services).

Add after first full paragraph.

Where the transaction entails delivery of both computer hardware and software, the likelihood is that the transaction will be treated in its entirety as a sale of goods. For example, in *The Drier Co., v. Unitronix Corp.*,[4.1] the court held that UCC Article 2 applied to a transaction involving a sale of computer hardware and specially designed software which was never fully completed. Similarly, in *Neilson Business Equipment Center, Inc. v. Italo Monteleone, M.D.*,[4.2] a combined hardware and software lease purchase transaction was dealt with under Article 2 where the components were combined into a completed unit prior to delivery.

As discussed in the main text at ¶ 6.02[1][a], the proper focus here is on the fact that the essence of the transaction entailed delivery of a completed, performing system, rather than mere performance of services. In both Drier and Neilson, this directed the court to conclude that the terms of Article 2 governed. For example, in *Neilson*, the seller argued that a lease of a computer hardware and software turnkey system was not properly classified as a transaction involving goods. The court noted that "Neilson contracted to supply a turn-key computer system; that is, a system sold as a package which is ready to function immediately. The hardware and software elements are com-

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[4.1] 3 UCC Rep. Serv. (Callaghan) 3d 1728 (NJ Super. App. Div. 1987) (citing this treatise).

[4.2] 524 A2d 1172; 3 UCC Rep. Serv. (Callaghan) 3d 1721 (Del. 1987) ("any consulting services rendered by Neilson were ancillary to the contract . . .")

A determination that a services contract is involved requires a further decision about the standard of performance to be applied to the services. In *Smith,* the court applied a professional standard of liability to the programmer's performance under the contract. It held that liability could exist based on an incorrect representation that Data Processing had the skill and training to complete the contracted task when in fact the trial court found such skill to be lacking. "[Those] who hold themselves out to the world as possessing skill and qualifications in their respective trades or professions impliedly represent they possess the skill and will exhibit the diligence ordinarily possessed by well informed members of the trade or profession." Principles of professional liability are proper in such cases.

[b] Tangible or Intangible Property

Page 6-6:

Add at end of subsection.

Although the analysis did not relate to the eventual decision in the case, the bankruptcy court in *In re Bedford Computer Corp.*[6.1] concluded that, if forced to do so, it would hold that the software allegedly developed with financing from a research partnership was tangible, rather than intangible property "[because the] technology cannot exist independent from the actual hardware components to which it gives operational life."

[6.1] 62 BR 555 (Bankr. DNH 1986).

[2] State Tax Law

Page 6-7:

Add at end of note 9.

See Hasbro Indus. v. Norberg, 487 A2d 124 (RI 1985) (ready-to-use software purchase is subject to use tax); Measurex Sys., Inc. v. State Tax Assessor, 490 A2d 1192 (Me. 1985) (canned software in computer systems leased from foreign corporation was tangible property subject to use tax, but custom software was exempt as a service). Compare Citizens & S. Sys., Inc. v. South Carolina Tax Comm'n, 311 SE2d 717 (SC 1984) (computer software delivered to buyer on tape was "tangible personal property" subject to sales and use taxes); Chittenden Trust Co. v. King, 465 A2d 1100 (Vt. 1983) (computer software tape is tangible personal property for purposes of state use tax law). See also In re Strayer, 239 Kan. 136, 716 P2d 588 (Kan. 1986) (computer operational programs, without which computers

Page 6-8:

Add at end of note 12.

See Sperry Corp. v. Lynch, 332 SE2d 757 (NC Ct. App. 1985) (payments received for maintaining leased computer equipment were taxable as derived from lease or rental of tangible personal property where payments were required by lease); Statistical Tabulating Corp. v. Lindley, 3 Ohio St. 3d 23, 445 NE2d 104 (1983) (written materials supplied incident to data services contract were not an inconsequential part of transaction and were therefore subject to sales tax).

¶ 6.04 REQUESTS FOR PROPOSAL

Page 6-10:

Add note 18.1 at end of second sentence in second paragraph.

[18.1] Specification of terms subsequently used to obtain contracts from third parties requires attention to whether the parties have, in fact, agreed to all material terms. For illustrative results in a different context, see Dataserv Equip., Inc. v. Technology Fin. Leasing Corp., 364 NW2d 838 (Minn. App. 1985) (no contract existed in absence of written contract and in light of fact that plaintiff had accepted two proposed terms but refused a third).

[1] Consultants and Reliance

Page 6-12:

Add after runover paragraph.

Concepts of consultant negligence and the law of fraud merge in the major, developing area of liability for information providers under the label of negligent misrepresentation. Section 552 of the *Restatement (Second) of Torts* defines negligent misrepresentation in the following terms:

> One who, in the course of his business, profession or employment, or in any other transaction in which he has a pecuniary interest, supplies false information for the guidance of others in their business transactions, is subject to liability for pecuniary loss cause [sic] to them by their justifiable reliance upon the information, if he fails to exercise reasonable care or competence in obtaining or communicating the information.[18.2]

Concepts of negligent misrepresentation have been applied to real estate agents, brokers, and real estate title abstractors.[18.3] As discussed in Chapwas introduced that the printer manufactured by the defendant could not be replaced with another because of drive shaft problems and because the software created by the plaintiff would only operate on the original printer. The jury had to determine whether the plaintiff could and should have received mitigated damages.

Page 6-18:

Replace (1st Cir. 1975) *with* (11th Cir. 1976) *in note 40.*

Add after last full paragraph.

If the software and hardware are to be delivered by the same party, in the absence of express contract terms, it is reasonable to infer that the agreement links the software and hardware elements and that faulty performance in one breaches both elements of the agreement in the sense that the software product and hardware product are bundled into a single transaction. As discussed in the main text in ¶ 6.06, however, courts here should look closely at the character of the particular agreement.[40.1] The vendor may desire to sell two independent products and, especially where alternatives for one are readily available, this separation should be sustainable.

The issue of interdependence or bundling can be raised in terms of alleged contract breaches or in allegations of fraud. For example, in *Graphic Sales, Inc. v. Sperry Univac Division*,[40.2] the lessee of a computer system alleged that the supplier had fraudulently represented that the needed applications software for the system was included along with the basic lease price. The court rejected the allegation as factually unproven where discussion and literature referred to the software and hardware systems as capable of being tailored to each purchaser's needs.

Whether a breach of software elements of a contract affects liabilities under a hardware contract involves a determination of the intention of the parties and the extent to which they characterized the transaction as involving either an integrated system or two separable purchases. In

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[40.1] See Bancorp Leasing & Fin. Corp. v. Brunner, 672 P2d 357 (Or. Ct. App. 1983) (lease contract involving third-party financing could not be rescinded where independent software suppliers failed to deliver programs of promised kind and quality; lessor did not breach lease, even though it paid suppliers subject to reimbursement from "lessee," because arrangement implictly allocated risk of supplier failure on lessee); Austin's of Monroe, Inc. v. Brown, 474 So. 2d 1383 (La. Ct. App. 1985) (hardware system manufacturer had no liability where its system was not defective and flaws in delivered inventory and accounting system, if any, were in software or other features of system).

[40.2] 824 F2d 576 (7th Cir. 1987).

that transaction, while the accounting system was treated as the primary goal of the purchase, there were inadequate facts to support the contention that performance of the hardware sale was contingent on the buyer receiving functional software.

Recision of an entire system was permitted in *Aubrey's R.V. Center, Inc. v. Tandy Corp.*[41.2] The contract there involved a system for the point of sale recording, and maintenance of inventory, accounting, and sales data. Tandy, the primary vendor, admittedly lacked the software to perform these functions, but allowed the buyer to review a list and contact a software vendor, expressly indicating that the vendors on the list were not reviewed or screened for quality by Tandy. In the eventual contract, Tandy was to supply hardware and limited software, while Lizcon would supply the retail software system. The software never performed properly.

The court permitted revocation of acceptance. It emphasized that the performance of the point of sale processing was critical to the buyer's desire for the system and that Tandy knew this to be the case. In fact, however, the value of the entire system was substantially impaired because the "system, represented as an integrated whole, did not" perform as represented. During the period of nonperformance, Tandy had, in fact, made some efforts to obtain or adapt software to run on its system for the buyer's intended purpose and this may have enhanced the conclusion that the two were interdependent.

In the event that two parties perform software and hardware elements of a contract and that contract fails to provide an appropriate product for the buyer, questions about the integrated nature of the system commonly focus on whether a software defect permits rejection of a hardware system. Additionally, there may be an issue about which party will be required to answer in damages for the harm caused to the buyer.

In *Color Connection, Inc. v. Juneau,*[41.3] a Louisiana court held that both the hardware and the software provider were liable for the return of the purchase price and that no allocation could be used to permit the hardware manufacturer to escape even part of the liability. In that case, in contracting to provide a system regulating printers involved in video analysis, the project was never successfully completed and it was shown that the hardware supplier had also participated in the software design. The proposal for the system contained labor costs that did not differentiate the hardware and software labor. Under these

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41.2 46 Wash. App. 595, 731 P2d 1124 (Wash. App. 1987).

41.3 505 So. 2d 914 (La. Ct. App. 1987).

ranty occurred. "Although the experts . . . agreed that there is no specific industry concensus on acceptable breakage percentages . . . Solitron's expert testified that concern over excess breakage comes into play when breakage exceeds a half percent, and Veeco's expert indicated that the breakage rate of the wafer processed at Solitron's plant exceeded reasonable limits."

In *Computer Corp. v. Wolsteins Projector House, Inc.*,[53.2] the court rejected a claim of a breach of a warranty that a computer system would be compatible with Apple computers and programs. The defendant, a retailer, claimed that many of its customers returned the systems because they failed to run a number of programs sold by Apple. This did not rise to sufficient evidence that the systems were not compatible with Apple computers, however, since the court concluded that it could not determine the extent of the incompatibility in light of the vast number of Apple programs present on the market. Additionally, there was no evidence supporting judgments about the degree to which incompatibility with any other particular system or purpose would be more significant under the contract than any other incompatibility.

In the computer industry, issues of adequate performance of a system may involve intrinsic performance matters or may relate primarily to the interface between the particular system and other computers or the ability of the system to operate particular types of software. In respect of both measures, if there are express undertakings, they should be relatively explicit. The general claim that a system is "IBM-compatible" or compatible with other types of hardware and software is relatively common and may relate to very important features of the underlying system. It has no clear reference point, however, for a decision in the event that some, but not all, other manufacturers' systems can be operated with the particular computer or software.

In *Cricket Alley Corp. v. Data Terminal Systems, Inc.*,[53.3] the court sustained a judgment of breach of express warranty in an action against the seller of computerized cash registers who was held to have warranted that the cash registers could communicate with a remote computer. The buyer contacted seller, Data Terminal Systems (DTS) as a result of various advertisements claiming the ability of DTS systems to communicate with a remote Wang computer. When delivered, the combined hardware and software systems did not function and, at most, had an intermittant capability to communicate with the computer. The court held that sufficient evidence existed to establish an ex-

[53.2] 57 BR 155 (Bankr. ED Pa. 1986).

[53.3] 240 Kan. 661, 732 P2d 719 (Kan. 1987).

> Provided he understood the possible legal effect of the integration clause . . . a reasonable businessman . . . would have insisted that the prior . . . representations . . . be included in the written agreement. [Plaintiff], however, was relying upon defendant's expertise as to what the purchase of these items would accomplish. [From his standpoint], there could be no agreement at all for the sale of the computer absent the accompanying representations.

Add note 56.1 at end of first sentence in last paragraph.

56.1 This contract barrier often creates an incentive to characterize issues in the form of claims based on allegedly fraudulent representations. In general, fraud in the inducement vitiates contract limitations. See Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) ("Sperry cannot rely on a provision of the contracts to bar [the] claim when the claim alleges the contracts were induced by fraud"). Compare Rio Grande Jewelers Supply, Inc. v. Data General Corp., 689 P2d 1269 (NM 1984) (purchaser's claim for negligent misrepresentation is barred where contract specifies it is "complete and exclusive statement," where there is an "effective" disclaimer, and where alleged misrepresentations were same as breach of warranty).

Add note 56.2 at end of second sentence in last paragraph.

56.2 See Computerized Radiological Serv. v. Syntex Corp., 595 F. Supp. 1495 (EDNY 1984) (parol evidence not barred because contract reference to written specifications outside of agreement established that this was not complete exclusive statement).

Add at end of subsection.

Often, the primary issue regarding the enforcement of unwritten statements as warranties involves distinguishing between warranties that become part of the bargain and mere "puffing" or salesmanship that creates no liability. In *Redmac Inc. v. Computerland of Peoria,*[57.1] the buyer of the computer system was a provider of accounting services. The computer salesman stated that the systems would be delivered free of defects and that repairs would be made if any defects were found within 90 days. Furthermore, the salesman assured the buyer that the system would work without problems for a reasonable period. Given the timing and the character of the buyer's business, these were significant attributes for the system. Although the seller argued that these were mere puffing statements, the court held that, in this context, they constituted express warranties that became part of the basis of the bargain

57.1 140 Ill. App. 3d 741, 489 NE2d 380, 95 Ill. Dec. 159, 42 UCC Rep. 1242 (Ill. App. Ct. 1986).

antilock brake system did not effectively disclaim warranties because contract disclaimers did not mention merchantability and were not conspicuous).

Add at end of subsection.

In one of the few cases applying merchantability warranty theories to a commercial sale involving a computer, the court, in *Neilson Business Equipment Center, Inc. v. Italo v. Montelone, M.D.*,[67.1] held that the warranty was breached. The software and hardware system was intended to provide billing and accounting records for a medical office, but contained numerous flaws and did not meet the character of the Doctor's records system "although [the] sales representatives informed [the buyer] that the system would do so." This more clearly states a breach of an express warranty or warranty for a particular purpose, but the court held that it also breaches merchantability standards, apparently finding that there were no unique characteristics in the doctor's particular needs.

[67.1] 524 A2d 1172 (Del. 1987).

[2] Fitness Warranties and Consulting Sellers

Page 6-30:

Add after last paragraph.

In *Industrial Supply,* a failure to provide a disclaimer permitted the implied warranty to survive in what was an obvious case of reliance. An apparent drafting error permitted an implied warranty of fitness to survive in *Computerized Radiological Service v. Syntex.*[76.1] This case also involved allegations of fraud and a failure of a parol evidence barrier that purported to exclude express warranties. The transaction involved delivery of medical CAT scan equipment, alleged to have capability to be applied to full body scans. On the implied warranty issue, the contract contained language stating that "no other warranty except Title to the Materials furnished shall be implied with respect to this order." The disclaimer language, however, was not highlighted or printed in large or boldface type. The court held that the disclaimer was ineffective, since it was not conspicuous. This permitted the court to enforce

[76.1] 595 F. Supp. 1495 (EDNY 1984). See also Eaton Corp. v. Magnavox Co., 581 F. Supp. 1514 (ED Mich. 1984) (disclaimer of warranty by manufacturer of components for antilock brake system did not effectively disclaim warranties, since contract disclaimers did not mention merchantability and were not conspicuous).

tendency to do so is not universal. In some cases, trial courts reacting to the differing technological expertise of the parties and resulting reliance by the buyer conclude that a particular disclaimer is inadequate to avoid warranty liability.

This tendency was illustrated in *Sierra Diesel Injection Service v. Burroughs Corp.*[81.1] The court there dealt with a buyer who "was not familiar with computer terminology but who was an experienced businessman with some knowledge of warranties." The court held that an integration clause did not bar proof of contemporaneous warranties because, had the buyer been aware this might be the case, he would have insisted that the representations be reduced to writing. Furthermore, the warranty disclaimer did not bar liability for merchantability or implied fitness warranties since the disclaimers were not in bold type, were on the reverse side of the agreement, and were not set apart from the remaining text. This created a material issue of fact about the conspicuousness of the waivers of warranty.

In contrast to this approach, which protects a business person because of limited computer expertise, one can simply place the language of the court in *AMF, Inc. v. Computer Automation, Inc.*,[81.2] enforcing a disclaimer of warranties to the effect that, since the transaction involved "commercially sophisticated businesses," it would strain "credulity to hold that a business like [plaintiff] was not, or should not have been, aware of the language disclaiming implied warranties."

While there are factual distinctions that can separate decisions such as these, at their core they reflect differing views of how far courts should go in removing written contracts as barriers to liability claims in contracts involving businesses. On balance, even though computer naiveté adds to the buyer's risk in some computer contracts, the better view emphasizes the business sophistication of the buyer who can understand at least that it gives away something by executing a written contract incorporating disclaimer language.

[81.1] 656 F. Supp. 426 (D. Nev. 1987) also 651 F. Supp. 1371 (D. Nev. 1987).

[81.2] 573 F. Supp. 924, 930 (SD Ohio 1983). See also Meeting Makers, Inc. v. American Airlines, 513 So. 2d 700 (Fla. Dist. Ct. App. 1987) (conspicuous disclaimers in lease and sales agreement enforced in commercial deal where parties are of equal bargaining power); Citicorp Industrial Credit, Inc. v. Rountree, 185 Ga. App. 417, 364 SE2d 65 (Ga. Ct. App. 1988) (conspicuous disclaimer in equipment lease removes warranties).

Add at end of note 77.

See also Hunter v. Texas Instruments, Inc., 798 F2d 299 (8th Cir. 1986) ("A clear . . . disclaimer or limitation of remedy made in a dealer's contract

In addition, in this case, the computer manufacturer entered into programming and service contracts with the end buyer. The manufacturer of the computer equipment did not breach the service contract in this case, although the buyer presented sufficient facts to establish that the service was not excellent. Similarly, while there was proof of a number of programming errors that occurred frequently in the development of the system, there was no breach of the contract. The court applied what amounts to a substantial performance standard holding that there was no breach since the errors did not constitute an unusually large number in the course of the buyer's business and the buyer lost no clients because the errors were repaired by manufacturer.

Page 6-37:

Add the following new sections.

¶ 6.09A DATA PROCESSING, DATA SERVICES, AND INFORMATION CONTRACTS [NEW]

Data processing services, information provision, and other types of data-related contracts are an increasingly important feature of contemporary computer contracting. These forms of transaction can be divided into two distinct categories. One transaction entails the creation, compilation, or analysis of information by a third party for delivery to the buyer.[96.1] This type of "information contract" entails questions of defining both the product and the relevant assurances of accuracy and timeliness involved in the agreement. The second type of transaction involves third-party processing of data furnished or identified by the buyer. This is called a data processing or data services contract.[96.2] The concerns here focus not on the quality of the information but on the care and the character of the processing.

Data processing agreements are contracts for services rather than goods.[96.3] This is true even where, as is commonly the case, the pro-

[96.1] Aspects of information contracts are discussed in Chapter 11. See, e.g., ¶ 11.10, main volume. See also the discussion of negligent misrepresentation and product liability issues in Chapter 7.

[96.2] See generally Liberty Fin. Management Corp. v. Beneficial Data Processing Corp., 670 SW2d 40 (Mo. Ct. App. 1984); NTA Nat'l, Inc. v. DNC Servs. Corp., 511 F. Supp. 210 (DDC 1981).

[96.3] See Liberty Fin. Management Corp. v. Beneficial Data Processing Corp., 670 SW2d 40 (Mo. Ct. App. 1984) (data processing contract was for is enforceable.[96.7] The analogue of disclaimers of data accuracy in an information contract should be equally enforceable if actually brought to the attention of the party receiving the data. However, liability for negligently inaccurate data arises under doctrines of misrepresentation, rather than contract, and the proper analysis of such disclaimer requires determinations regarding whether the language and placement of the disclaimer sufficiently obviated reasonable reliance by the buyer of the information.

Given the nature of data processing contracts, disputes often arise when the buyer acts to cancel an agreement because many of the agreements involve ongoing services. The issue frequently involves whether the cancellation or other action by the buyer represents a repudiation of the contract or if the buyer merely exercises its rights flowing from breach of contract by the vendor of the services.[96.8] The issues can be

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[96.7] See Liberty Fin. Management Corp. v. Beneficial Data Processing Corp., 670 SW2d 40 (Mo. Ct. App. 1984) (liability limitation in services contract does not violate public policy because it does not apply to willful or grossly negligent acts, and exclusion of liability for ordinary negligence is enforceable where it was a bargaining point between parties; exoneration of supplier from liability for ordinary negligence allocates loss, was not unconscionable and did not fail of essential purpose). Disclaimers in this form, however, may ultimately create a situation in which the service contract represents an illusory agreement, unenforceable under ordinary contract law. See, e.g., Sterling Computer Sys. of Tex., Inc. v. Texas Pipe Bending Co., 507 SW2d 282 (Tex. Civ. App. 1974) (agreement that stated service provider would not be liable for refusal to provide service and that contained no obligation or requirement of a reasonable effort to perform failed for lack of mutuality).

[96.8] See, e.g., Professional Computer Management, Inc. v. Tampa Wholesale Liquor Co., 374 So. 2d 626 (Fla. Ct. App. 1979) (fact question presented as to whether service provider to liquor wholesaler had failed to perform under contract, justifying termination by wholesaler); ADP-Fin. Computer Serv., Inc. v. First Nat'l Bank, 703 F2d 1261 (11th Cir. 1983) (bank's decision to purchase computer and begin "in-house" data processing was not an anticipatory repudiation of data contract where bank continued to use vendor for two of five services under agreement); NTA Nat'l, Inc. v. DNC Servs. Corp., 511 F. Supp. 210 (DDC 1981) (provider of data bank services and of information to political party properly performed its contract; repudiation by recipient of services was wrongful). See Empire Mut. Ins. Co. v. Applied Sys. Dev. Corp., 505 NYS2d 607 (NY App. Div. 1986). ASD had a contract to provide policy rating and insurance services to Empire. It delivered the information on a master file tape for over one year. At that point, it demanded additional payment in return for continuing this form of delivery because, it alleged, proprietary information was being given from the tape to competing software vendors. After a dispute, Empire cancelled the contract because of the demands and obtained the services of another company for data processing. The contract required ASD to furnish policy of any consequential losses reasonably foreseeable as a result of the inadequate contract performance.

In formulating a remedy for breach of a data services contract, courts must consider the true value and actual replaceability of the services involved. This led one court to award specific performance as a remedy for breach of a data service agreement for a credit bureau. In *Trans Union Credit Information Co. v. Associated Credit Services, Inc.*,[96.12] the court granted specific performance to a computer service credit reporting service agreement because of the unique value that could be attributed to the data service. The plaintiff, TUC, supplies a national data processing service and credit reporting service. The defendant, ACI, is a major competitor. Both parties have contracts with various local credit service bureaus and own others. The codefendant, CB, was the major local credit bureau in Cincinnati. TUC entered an agreement with CB in which the parties each granted the other full access to their credit information and, as a result, TUC deferred creation of its own local company in Cincinnati. ACI then purchased CB and, eventually, CB repudiated the contract with TUC.

The court granted specific performance to TUC:

> Given the monopolistic position CB has in the Cincinnati market, it and it alone has not only all of the individual credit reports for the area . . . but also updated credit inquiry data and pertinent historical information unavailable elsewhere. In addition, the synergistic loss . . . of goodwill and exposure that TUC would have otherwise enjoyed . . . certainly does not easily lend itself to a damages computation.

In *Third Party Software, Inc. v. Tesar Meats Inc.*,[96.13] a contract for data processing services was terminated by the intended recipient of the services prior to installation of the equipment because it went out of business due to credit problems. The contract was the first major undertaking by the supplier and was to function remotely, processing accounting and other data off site. There was no dispute about the breach and the court held that a proper measure of damages included "out-of-pocket costs" plus the expected profit from the contract.

[96.12] 805 F2d 188 (6th Cir. 1986).

[96.13] 226 Neb. 628, 414 NW2d 244 (Neb. 1987).

¶ 6.09B MANUFACTURER LIABILITY [NEW]

The ability of the buyer or lessee of a computer or software system to recover against a manufacturer for defects in the system may involve

If the circumstances or local doctrine permit an action in the absence of direct privity (as in direct representations in brochures or the like), the manufacturer's liability may be limited by disclaimer language in its original contract with the retail dealer or similar language in the dealer's agreement with the eventual buyer. This will occur most commonly in cases where the final buyer was aware of the disclaimer and was a commercial entity, rather than a consumer who is not likely to appreciate the importance of disclaimer language.

For example, in *Hunter v. Texas Instruments, Inc.,*[96.15] an action against Texas Instruments (TI) was based on a purchase of a TI system through a third party retail dealer. TI was permitted to defend on the basis of contractual disclaimer language in the dealer's contract with the buyer. The court noted that "a clear . . . disclaimer or limitation of remedy made in a dealer's contract may become part of the basis of the bargain and is not ineffective solely because the manufacturer is not a party to the contract." Furthermore, in this case, the disclaimer and limiting language were not unconscionable as applied to an accountant buyer.

> Where as here, the buyer is aware of the disclaimer, and testifies that he understood it, there is very little basis on which to credibly argue that he was surprised. Nor is the limited remedy clause, [limiting TI to an obligation to replace and repair] unconscionably one-sided under these circumstances. We deal here with a college educated buyer, one with some background in commercial law, who shopped extensively for computer equipment . . .[96.16]

In *Datamatic, Inc. v. IBM Corp.,*[96.17] the restricting language was found in the original sale contract. A buyer of used computer equipment had a cause of action against the original manufacturer for defects in the system, but where the buyer was a commercially sophisticated used equipment buyer who purchased from an equally commercially sophisti-

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warranty, selection of dealer, or improper servicing where purchase was made from dealer and not directly through manufacturer. No claim for breach of implied warranty existed against the manufacturer in the absence of privity of contract between end buyer and manufacturer.)

96.15 798 F2d 299 (8th Cir. 1986).

96.16 Compare Leson Chevrolet Co. v. Oakleaf & Assoc., 796 F2d 76 (5th Cir. 1986). (The court held that, in general, the computer hardware and software sold to the retailer, who then resold it to the end buyer, was not inherently defective. As a result, there was not breach of any implied warranty. The manufacturer did have liability, however, for some inherent defects in some of the hardware it supplied.)

96.17 795 F2d 458 (5th Cir. 1986).

lected or specified for Buyer's purposes . . . be fit for such purposes." Although no express representations were made about breakage and there was no specific industry standard, a breach of warranty occurred. "Although the experts . . . agreed that there is no specific industry concensus on acceptable breakage percentages . . . Solitron's expert testified that concern over excess breakage comes into play when breakage exceeds a half percent, and Veeco's expert indicated that the breakage rate of the wafer processed at Solitron's plant exceeded reasonable limits."

In the computer industry, issues of adequate performance of a system may involve intrinsic performance matters or may relate primarily to the interface between the particular system and other computers or the ability of the system to operate particular types of software. The general claim that a system is "IBM-compatible" or compatible with other types of hardware and software is relatively common and may relate to very important features of the underlying system.

Compatibility claims may create either express warranties or actionable misrepresentations under fraud theory. In either respect, however, even if the representation has been made and relied on, the content of the claim and whether it has been satisfied in a particular system may be open to debate. In *Computer Corp. v. Wolsteins Projector House, Inc.*,[101.2] the court rejected a claim of a breach of warranty from the sale of a computer system based on allegations of compatibility. The CX computer system claimed to be compatible with Apple computers and programs. The defendant retailer claimed that many of its customers returned the systems because they failed to run a number of programs sold by Apple. This evidence, however, was not sufficient to prove that the systems were not compatible with Apple computers. The court concluded that it could not determine the extent of the incompatibility in light of the vast number of Apple programs present on the market. Additionally, there was no evidence supporting judgments about the degree to which incompatibility with any particular other system or purpose would be more significant under the contract than any other incompatibility.

In addition to compatability issues, the increasing importance of the ability of a system to electronically communicate to other hardware provides another measure of performance independent of what might be deemed the intrinsic processing capability of the system. In *Cricket Alley Corp. v. Data Terminal Systems, Inc.*,[101.3] the court held that a seller of computerized cash registers breached its express warranty that the registers could communicate data to a remote computer. There was

[101.2] 57 BR 155 (Bankr. ED Pa. 1986).

[101.3] 240 Kan. 661, 732 P2d 719 (Kan. 1987).

in context of a dispute about offset damages for failure to fully perform computer programming services).

[1] Rejection and Debugging New Systems

Page 6-43:

Add after first full paragraph.

The remedy of cure may require that the buyer of a system provide the seller with at least an opportunity to correct the defects in a delivered product. This requirement, however, does not exist when the defect is material to the performance of the basic bargain and the seller's software system entirely lacks the capability to deliver the required processing element. For example, in *Photo Copy, Inc. v. Software, Inc.,*[114.1] the court applied the Louisiana remedy of redhibition to permit avoidance of a sale contract for the provision of custom program relating to accounts receivable and inventory management. The program actually delivered could perform many of the functions required under the agreement, but lacked the capability to cross-reference by identifying the customer's names when only a sales invoice number was known. The Court, in permitting redhibition, noted that this function was critical to the buyer's intended use of the program. "The principal motive or cause which prompted Photo Copy to purchase the custom software package was the assurance that the custom software package would contain this cross-referencing feature."

[114.1] Photo Copy, Inc. v. Software, Inc., 510 So. 2d 1337 (La. Ct. App. 1987).

Page 6-44:

Add at end of subsection.

Although extended periods of adjustment may be permitted, after some time of even, continuous effort to correct a problem the buyer's options may be cut off. For example, in *Computerized Radiological Services v. Syntex Corp.,*[116.1] a buyer's revocation of acceptance was invalid where it continued to use the system for over 20 months after sending a revocation letter while it sought a replacement in a "desultory" manner. Similarly, in *Sierra Diesel Injection Service v. Burroughs Corp., Inc.,*[116.2] the buyer of a computer system lost part of its claims

[116.1] 786 F2d 72 (2d Cir. 1986).

[116.2] 648 F. Supp. 1148 (D. Nev. 1986).

v. Syntex Corp.,[121.1] Syntex delivered a computerized CAT scanner system that was not capable of "full body" scanning as contemplated in the contract. The buyer accepted the system only after receiving assurances that it would be updated "shortly" to full capability. When this did not occur, the buyer formally revoked acceptance in a letter but continued to use the machine for another 22 months until a replacement was installed.

The court held that the attempted revocation of acceptance was not valid because the buyer failed to act promptly to obtain a replacement. Continued use for a reasonable period of time to allow buyers to seek an alternative or to avoid substantial hardship may be allowed, but the continued use here was far longer than reasonably necessary to acquire another scanner.

> Under the UCC, a buyer who revokes acceptance rather than relying solely upon an action for breach of warranty must begin the search for replacement goods with reasonable dispatch and may not put off purchase until a seller offers ideal financial terms. CRS' desultory search for another scanner simply belies its revocation claim, much as the long delay in the hope of avoiding personal liability implies that CRS continued to use the Syntex scanner because continued use was more advantageous than the existing alternatives. CRS' extended use of the defendant's scanner thus invalidates the purported revocation of acceptance.

When the delay in responding to the defects by returning the system extends over very long periods, not only may there be a denial or waiver of revocation rights, but the underlying cause of an action may become time-barred. Statute of limitations issues were involved in *Sierra Diesel Injection Service v. Burroughs Corp.*[121.2] In this case, the buyer of a computer system alleged fraud and breach of warranty. The transaction began in 1977 and the seller provided both an analysis of the buyer's business and computing needs as well as the final system. Soon after the system was installed, however, the plaintiff began to experience a variety of problems with the machine, including basic equipment failures and, more importantly, the machine's inability to "multi-program." The defendant made a series of efforts to correct the machine's shortcomings, and assured the plaintiff through this period that the computer was the proper equipment for this type of business. In 1980 and 1981, the buyer obtained a new system from the seller as a replacement system. Shortly after the acquisition, it became clear that the new, enhanced model would not solve the underlying problems.

121.1 786 F2d 72 (2d Cir. 1986).

121.2 648 F. Supp. 1148 (D. Nev. 1986).

Fair Dealership Act). Compare Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) (seller cannot rely on contract provisions where claim is that contract itself was fraudulently induced). See also International Talent Group, Inc. v. Copyright Management, Inc., 629 F. Supp. 587 (SDNY 1986) (arbitration clause in software contract by its terms applicable to "any and all proceedings relating to the subject matter" of the software contract was held to apply to disputes under a separate hardware contract and to issues of fraud).

Add at end of subsection.

Despite the restrictions, it generally remains true that commercial parties will be bound by the warranty disclaimers that they agree to in the absence of fraud or over-reaching. The basic analysis supporting this result involves an assumption that businessmen are capable of assessing risk and allocating it by agreement. When they make an allocation, courts often discern little or no reason for upsetting what the parties have agreed to. An assumption of contractual freedom prevails, at least in many cases involving sophisticated business buyers. As one court noted, "Where as here, the buyer is aware of the disclaimer, and testifies that he understood it, there is very little basis on which to credibly argue that he was surprised." [122.2]

[122.2] See Hunter v. Texas Instruments, Inc., 798 F2d 299 (8th Cir. 1986); Datamatic, Inc. v. IBM Corp., 795 F2d 458 (5th Cir. 1986); See also Meeting Makers, Inc. v. American Airlines, 513 So. 2d 700 (Fla. Dist. Ct. App. 1987) (conspicuous disclaimers in lease and sales agreement enforced in commercial deal where parties are of equal bargaining power); Citicorp Indus. Credit, Inc. v. Rountree, 185 Ga. App. 417, 364 SE2d 65 (Ga. Ct. App. 1988) (conspicuous disclaimer in equipment lease removes warranties).

[1] Failure of Purpose in Replacement and Repair Remedies

Page 6-47:

Add note 126.1 at end of second sentence in third paragraph.

[126.1] See Datamatic, Inc. v. IBM, 613 F. Supp. 715 (WD La. 1985) (limited exclusive warranty restricting manufacturer liability to replacement for defects discovered within one year was enforceable against third-party buyer of used computer; parties were sophisticated businesses presumably aware of disclaimers).

Page 6-48:

Add at end of note 130.

See also RRX Indus. v. Lab-Con, Inc., 772 F2d 543 (9th Cir. 1985) (consequential damages limitation is not enforceable where seller's breach was

Page 6-51:

Add at end of note 140.

See also Land & Marine Servs. v. Diablo Data Sys., Inc., 471 So. 2d 792 (La. Ct. App. 1985) (in claim for defective warehousing and inventory program, contract damages against dealer limited to purchase price and reimbursement of expenses).

Add note 140.1 at end of first complete sentence in runover paragraph.

[140.1] See, e.g., Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) (claimed fraud in inducement precludes summary judgment based on contractual disclaimer of any consequential damage liability). Compare Rio Grande Jewelers Supply, Inc. v. Data General Corp., 689 P2d 1269 (NM 1984) (contract disclaimers bar negligent misrepresentation claims).

Add at end of subsection.

A recent judicial ruling regarding the effect of failed remedies on the enforcement of a limitation of consequential damages adopted the better view that, absent special circumstances, replacement and repair warranties that fail of their purpose do not necessarily doom the related consequential damage waiver in a contract. In *Kearney & Trecker Corp. v. Master Engraving Company, Inc.,*[144.1] the New Jersey Supreme Court adopted the view of the Circuit Court in *Chatlos* as discussed in the main volume and held that the consequential damages limitation remained enforceable. "In a commercial setting, the seller's right to exclusion of consequential damages is recognized as a beneficial risk-allocation device that reduces the seller's exposure in the event of breach." The purpose of a combined replacement and repair remedy linked to a limit on consequential damages is to give the seller an opportunity to make the goods conform, while limiting its liability exposure.

"Only when the circumstances of the transaction, including the seller's breach, cause the consequential damage exclusion to be inconsistent with the intent and reasonable commercial expectation of the parties [would] invalidation of the exclusionary clause be appropriate under the Code." In this case, the seller had, in fact, eventually made the computerized tooling system perform adequately in the second year of the contract. Under these facts, the court enforced the risk allocation adopted by the parties in their own contract.

[144.1] 107 NJ 584, 527 A2d 429 (NJ 1987). Compare RRX Indus. v. Lab-Con, Inc., 772 F2d 543 (9th Cir. 1985).

tended as security agreement for sale was not barred by statute of frauds and material issue of fact as to whether lease was intended as security for sale precluded summary judgment).

Add at end of subsection.

There is substantial, continuing litigation concerning the character of purported computer lease agreements that affects a variety of contractual issues as discussed in Chapter 6 of the main volume. The major factor differentiating a true lease and a sale subject to a security agreement focuses on the economic rights of the parties at the end of the lease and to which party the agreement effectively gives the benefit of any residual value left in the property at the expiration of the lease.

An agreement that, by its express terms, does not permit the lessee to acquire ownership of the computer at the expiration of the lease will rarely be treated as a sale and security agreement since the lessor retained title throughout and also retains the benefit of any residual value that continues in the property when the lease term ends.[165.1] This will routinely be the result reached by the courts, with the only exception potentially occurring in cases where the term of the lease obviously, and completely, exhausts all of the value of the leased property.

As discussed more completely in this section of the main volume, where a purchase option is provided for in the lease agreement, a variety of factual considerations are employed by the courts to determine whether, in context and in light of the economic value involved, the transaction more closely resembles a credit sale or a true lease. Lease purchase options requiring payment of market prices or of substantial amounts at the expiration of the lease in order for the lessee to obtain title will routinely lead to the judgment that the transaction involves a true lease, rather than a sale agreement disguised as a lease.[165.2]

The factors considered in contract litigation in defining the char-

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[165.1] See Growth Leasing, Ltd. v. Gulfview Advertiser, Inc., 448 So. 2d 1224 (Fla. Dist. Ct. App. 1984) (contract creates a true lease because express terms require return of computer at end of lease in good repair and contract retained title in lessor at all times); Citicorp Indus. Credit, Inc. v. Rountree, 185 Ga. App. 417, 364 SE2d 65 (Ga. Ct. App. 1988) (lease of computer equipment is not a sale where lease had no provision for purchase option by lessee).

[165.2] See Measurex Sys., Inc. v. State Tax Assessor, 490 A2d 1192 (Me. 1985) (102 month lease with purchase option requiring payment of 25 percent of original price constitutes a true lease); Carlson v. Tandy Computer Leasing, 803 F2d 391 (8th Cir. 1986) (computer lease constitutes a true lease in light of all the circumstances of the transaction).

consideration is nominal if it is less than the lessee's reasonably predictable cost of performing under the lease agreement if the option is not exercised." [165.6]

[165.6] UCC § 1-201(37)(x) (1988 Approved Draft).

[2] Tax Law Standards

Page 6-58:

Add at end of note 166.

See also Comdisco, Inc. v. United States, 756 F2d 569 (7th Cir. 1985) (taxpayer was entitled to investment tax credit as "lessee" and "original user" of computer because taxpayer engaged in transactions in which it functioned economically as lessee-sublessor).

Page 6-60:

Add at end of note 174.

aff'd, Rice's Toyota World, Inc. v. Comm'r, 752 F2d 89 (4th Cir. 1985).

Add at end of subsection.

In *Seligman v. Commissioner of Internal Revenues,*[174.1] payments made by the lessor in a computer lease transaction for administrative services were held not to be ordinary and necessary business expenses where the payments during the first 12 months of the lease effectively covered all service charges for the entire 41-month lease. The management fees were properly characterized as a separate and distinct asset and the payments, therefore, were capital assets and had to be capitalized and amortized over the life of the lease. As a result, the investment tax credit claimed by the lessor was disallowed.

Subsequent to the decision in *Seligman,* as part of a massive revision of federal tax laws, the investment tax credit was repealed. In addition, various changes were enacted in the federal tax code to reduce the benefits of tax shelter leasing for individual investors. Chief among these was the rule that passive deductions (such as are earned from investments in tax shelter partnerships) can be deducted only against passive income. The net effect of these changes is to alter substantially the economics of equipment leasing, but the full impact was not yet apparent at this writing.

[174.1] 796 F2d 116 (5th Cir. 1986).

as would justify termination of the lease by the lessee.[175.3] As discussed in another portion of this Supplement,[175.4] questions about obsolete equipment and upgrading capacity also can arise in connection with allegations of fraud and misrepresentation.

[175.3] See also Taylor Publishing Co. v. Systems Mktg., Inc., 686 SW2d 213 (Tex. Ct. App. 1984) (jury question presented over meaning of lease provision permitting upgrading of the computer "at the end of 24 months without penalty"); Meachum v. Worthen Bank & Trust Co., 13 Ark. App. 229, 682 SW2d 763 (1985) (lease terms not materially altered and performance not excused when lessor failed to deliver two 24k memory expansions to lessee).

[175.4] See ¶ 7.03[2A], this Supplement.

Page 6-61:

Add after note 176 in runover paragraph.

One core feature of the substantive differences between a true lease and a security lease concerns the treatment of ownership rights in the property. In a true lease, the ownership remains in the lessor throughout the agreement. The concept that ownership attributes differ in a true lease as contrasted to a security agreement affects not only the treatment of what the lessor can and cannot do following default in the lease. It also alters the treatment of issues such as risk of loss.

It will ordinarily be the case that a computer lease allocates to the lessee all responsibility for return of the property at the end of the lease. In *Allstar Video, Inc. v. Baeder,*[176.1] the court held that this responsibility remained intact despite an ineffective effort by the lessee to terminate the agreement. As a result, when the computer was lost during shipment back to the lessor, the lessee remained responsible for the consequent damages.

[176.1] 730 P2d 796 (Wyo. 1986).

Add note 178.1 at end of runover paragraph.

[178.1] See Meachum v. Worthen Bank & Trust Co., 682 SW2d 763 (Ark. Ct. App. 1985) (22-month delay between default and sale was commercially unreasonable); 1st Charter Lease Co. v. McAl, Inc., 679 P2d 114 (Colo. Ct. App. 1984) (in deficiency action, lessor's rights are governed by Article 9; computer hardware is not a type of property sold on a "recognized market" for purposes of conducting an acceptable sale); Chemlease Worldwide, Inc. v. Brace, Inc., 338 NW2d 428 (Minn. 1983) (lessor's disposition of leased computer is governed by law pertaining to repossession and sale, requiring notice to debtor (lessee) and guarantors of lease).

cantly affect both the right to recover and the amount of recovery in the bankruptcy proceeding.

A threshold question is whether the security interest, if the lease is treated as such, has been perfected under state law. If it has not, the lessor's interest will be invalidated in bankruptcy and the computer will be retained as property of the bankruptcy estate.[180.1]

If the lease is a security agreement and valid as perfected, the lessor is entitled to adequate protection of its interest during the pendency of the case and, in the event of a reorganization plan eventually being filed, to be treated as any other secured claim would be treated.[180.2] Ultimately, this will entail a right to receive the property or deferred cash payments with a present value equal to the value of its interest in the computer.

If the lease is a true lease, in bankruptcy it is treated as an executory contract.[180.3] The debtor may assume or reject an executory contract at any time prior to the confirmation of a reorganization plan unless the court orders earlier action. Rejection is a breach of the lease. Assumption forces the lessor to be bound by the original lease terms.

In the event that the lease is treated as an executory contract, the degree to which the lessor's contract interests will be protected during the bankruptcy proceeding is not always clear. For example, in *In re OPM Leasing Services,*[180.4] a lessee of the debtor in bankruptcy in a true lease incurred various expenses in defending its right to hold the computer against a third party who claimed title through the lessor. The lessee sought to recover these costs from the bankruptcy estate, but the court denied the claim. The costs involved in defending title were not caused by the lessor's failure to perform under the sale and leaseback purchase agreement and, thus, were not claims against the estate.

In *In re Wheeling-Pittsburg Steel Corp.,*[180.5] a computer lease was interpreted as a true lease that the debtor in bankruptcy may assume or reject. Under 11 USC § 365, this decision can occur at any time prior to confirmation of a reorganization plan. The court rejected the lessor's request that the time to make this decision be shortened because of market changes and technology advances that would render the lessor's ability to find another lessee increasingly difficult as the case progressed. The court emphasized the bankrupt debtor's interest: "First, the enormity and complexity of this bankruptcy proceeding is such that the

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[180.1] 11 USC § 544.

[180.2] 11 USC § 362(d).

[180.3] 11 USC § 365.

[180.4] 61 BR 596 (Bankr. SDNY 1986).

[180.5] 54 BR 385 (Bankr. WD Pa. 1985).

tive waranties. In the case of lease agreements, however, other issues may have equal materiality to determining obligations under the agreement. A lease transaction often entails a continuing obligation on the part of the lessor to upgrade the computer that does not exist in a sales contract.[181.1] Additionally, the lessor may undertake or have imposed by law an obligation to provide ongoing maintenance and repair services.

An alleged failure to provide this latter service will often be at issue in cases also involving claimed breach of qualitative warranties. In an equipment lease, these questions will often be raised in the form of analyses about whether there was a failure of consideration in the lease agreement. The court in *Citicorp Industrial Credit, Inc. v. Rountree,*[181.2] focused on these elements to hold that the lessor in a true lease agreement was not responsible for breach of warranty for nonperformance of the leased equipment. In reaching this judgment, the court held that there had been an express allocation of the responsibility for repairs and maintenance away from the lessor, imposing the cost of that activity on the lessee. Under these conditions, no failure of consideration occurred. Absent an express reallocation of this obligation, however, it will often be true that complete breach of a repair obligation will go to the heart of the bargain in a true lease, rendering the contract broken by a failed consideration.

[181.1] See Meachum v. Worthen Bank & Trust Co., 13 Ark. App. 229, 682 SW2d 763 (1985) (lease terms not materially altered and performance no excuse when lessor failed to deliver two 24K memory expansions to lessee); Taylor Publishing Co. v. Systems Mktg., Inc., 686 SW2d 213 (Tex. Ct. App. 1984). See also the discussion of obsolescence and upgrade responsibility at ¶ 6.15, this Supplement.

[181.2] 185 Ga. App. 417, 364 SE2d 65 (Ga. Ct. App. 1988).

Add at end of first paragraph.

The issue of the extent to which Article 2 provisions, including provisions regarding warranties, apply to true leases recurs in the reported decisions with increasing frequency. Authority may be found to both support and reject the proposition that Article 2 warranties are applicable.[182.1]

[182.1] See, for example, In re OPM Leasing Servs., 61 BR 596 (Bankr. SDNY 1986) (where a lease and master lease agreement were true leases, Article 2 of the UCC did not apply and, thus, claims for breach of express and implied warranties were inapplicable); J.L. Teel Co. v. Houston United Sales, Inc., 491 So. 2d 851 (Miss. 1986). (In a noncomputer case, the court holds that, regardless of whether or not the lease is treated as a true lease

This denial of third party beneficiary status was applied to deny relief to the end user in *Cunningham v. Healthco, Inc.*[191.1] The court held that when the "contract is a written one, then the search for the parties' intent regarding a third party beneficiary is limited to the four corners" of the writing. Under Texas law, no weighing of factual evidence about intent is permitted and the sole issue is whether intention to create third-party beneficiary status "clearly appears" in the writing.

In lease transactions involving leveraged financing, the ordinary intention of the parties is to insulate the creditor from substantive risks in the underlying transaction. This is consistent with the use of lease arrangements as surrogates for ordinary-purchase financing. The creditor's right to collect should be independent of the quality of the goods purchased, unless there is some direct, substantive connection between it and the seller of the product.

The insulation of the creditor was emphasized in *Holcomb v. Commercial Credit Service Corp.,*[191.2] which was a three party lease transaction. When difficulties arose in the performance of the computer, the buyer/lessor of the computer brought action against the seller and the creditor who financed the lease/purchase arrangement. The court held that the action for fraud or breach of warranty against the creditor was inappropriate to the point that damages would be awarded against the buyer for a frivolous appeal from a lower court summary judgment order. The claims of fraud and warranty breach did not relate to the creditor and there was no basis for concluding that there was an agency relationship between the seller of the computer and the creditor financing the transaction.

The insulation of the lender-lessor is ordinarily emphasized and supported by so-called "hell or high water" clauses, effectively binding the lessee to pay the lessor notwithstanding any defect in the underlying computer system. This type of clause was enforced in favor of a lender-assignee of the lease in *Union Mutual Life Insurance Co. v. Chrysler Corp.*[191.3] In this transaction, the lender secured its right to payment on the debt by assignment of the lease rental payments. The equipment

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[191.1] 824 F2d 1448 (5th Cir. 1987). See also Christensen v. Numeric Micro, Inc., 151 Ill. App. 3d 823, 503 NE2d 558, 104 Ill. Dec. 843 (Ill. App. Ct. 1987) (lessee cannot recover from lessor based on third party beneficiary claim allegedly deriving from manufacturer breach of agreement with lessor).

[191.2] 180 Ga. App. 451, 349 SE2d 523 (1986).

[191.3] 793 F2d 1 (1st Cir. 1986). See also Norstar Bank of Upstate NY v. Corrigan, 136 Misc. 2d 920, 519 NYS2d 447 (Sup. Ct. 1987) (assignee of computer lease not subject to lessee's defense of fraud in the inducement where assigned lease contained a defense waiver clause).

determine the rights of the parties. Here, whatever rights the lessee may have had based on allegedly improper delivery were waived when it accepted the system. Its attempts to revoke were untimely, especially in light of the lessor's reliance on the acceptance in its dealing with the seller of the system. Furthermore, no warranties of merchantability or of fitness for a particular purpose were present in this case because of the lessee's involvement in selecting the system.

PART D. MASS-MARKET CONTRACTS

¶ 6.17 SALE CONTRACTS AND LICENSES

[1] Sale and License

Page 6-65:

Add note 191.7 at end of first paragraph.

191.7 For a variety of reasons associated primarily with perceived objectives regarding intellectual property rights in software, portions of the software industry have engaged in substantial lobbying to obtain legislative correction of the legal character of the mass-market sale. Illinois and Louisiana have enacted legislation establishing that the software license can withhold title and that, if the package license does so withhold title, various "license" terms are enforceable. See ¶ 5.16[4], this Supplement.

The first reported decision to deal with the state legislation attempting to validate "shrink wrap" license provisions in mass market contracts held that the statutory provisions were preempted by the federal copyright and patent laws and that, absent the special statute, the underlying contract between the buyer and distributor as to the conditions of the license was invalid as a contract of adhesion. See Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987). See discussion at ¶¶ 3.12[2] and 5.16[1][4], this Supplement.

[2] License Agreements

Page 6-67:

Add note 192.1 at end of second paragraph.

191.7 For a variety of reasons associated primarily with perceived obtives regarding intellectual property rights in software, portions of the software industry have engaged in substantial lobbying to obtain legislative correction of the legal character of the mass-market sale. Illinois and Louisiana have enacted legislation establishing that the software license can withhold title and that, if the package license does so withhold title, various "license" terms are enforceable. See ¶ 5.16[4], this Supplement.

This legislation apparently overrides the standard contract analyses considered in this section as applied to software package licenses. In both Illiexcused from performance by commercial or technological difficulties of performance that it should have known of and accounted for in the bargain, or ones that it created itself.

This latter principle was used by the court in rejecting an impracticability claim in *Tandy Corp. v. Eisenberg.*[232.1] Tandy contracted in writing to deliver a DMP 2000 computer to the buyer (Eisenberg), but did not deliver. Tandy did not deliver because the contracted-for system had been discontinued. This did not constitute commercial impracticability excusing their performance. Instead, the court held that Tandy had deceived the buyer by contracting for the system knowing that it had already been discontinued and was not available. This deception created a cause of action that was not barred by disclaimer language in the written contract.

The failure of the seller to communicate facts that define known risks of noncompletion of a development contract may constitute fraud (see ¶ 7.03[2], main volume). In *Tandy,* for example, the deception inherent in not disclosing the obsolescence of the system was treated as a basis of liability that could not be barred by contractual disclaimer provisions. In a similar fashion, although recognizing that a good faith belief in even over-enthusiastic projections barred a claim of fraud, the court in *Computerized Radiological Service v. Syntex Corp.*[232.2] held that a claim of fraud was properly alleged by the fact that a vendor had falsely claimed that a new system had been tested with particular capabilities pertinent to the buyer's needs when, in fact, no such tests had yet occurred. The status of testing of the system was clearly material to the buyer's willingness to purchase before completion of the developing system.

[232.1] 488 So. 2d 927 (Fla. Dist. Ct. App. 1986).

[232.2] 786 F2d 72 (2d Cir. 1986).

¶ 6.20 SHARED DESIGN RESPONSIBILITY

[1] Contingent Responsibilities

Page 6-82:

Add at end of subsection.

The shared design contract places obligations on both parties to the agreement. These include at least a duty to undertake the joint design project in good faith and to provide the other party with adequate,

CHAPTER 7

Computer-Related Torts

practice issues, the plaintiff obtains potential access to punitive damage claims that are not available under pure contract law and creates the possibility of breaking past express contract damage and liability limitations.[3.1]

In this connection, in addition to common-law fraud claims and claims based on federal racketeering statutes, commercial litigation in the computer field also involves an increasingly common use of state deceptive trade practice statutes as adjunct bases for liability arising from a contract relationship. Since the deceptive practice acts were ordinarily derived from consumer protection theories, the availability of liability under such allegations in commercial litigation depends on the scope of coverage created in the statute. Many deceptive trade acts are expressly or by court interpretation applicable to purely commercial litigation.[3.2]

[3.1] See generally Computer Sys. Eng'g, Inc. v. Qantel Corp., 571 F. Supp. 1365 (D. Mass. 1983) (proof of fraud in computer products distributorship contract under Massachusetts law constituted a violation of Deceptive Practices Act, entitling plaintiff to punitive damage award); Ellmer v. Delaware Mini-Computer Sys., Inc., 665 SW2d 158 (Tex Ct. App. 1983) (Deceptive Practices Act does not invalidate disclaimers contained in contract).

[3.2] Compare Aubrey's R.V. Center, Inc. v. Tandy Corp., 46 Wash. App. 595, 731 P2d 1124 (Wash. Ct. App. 1987) (action based on breach of commercial computer system sale contract does not entail level of public interest justifying inclusion under State Consumer Protection Act); Christensen v. Numeric Micro, Inc., 151 Ill. App. 3d 823, 503 NE2d 558 (Ill. App. Ct. 1987) (financing lease agreement does not come within consumer protection act) *with* Schroders, Inc. v. Hogan Systems, Inc., 522 NYS2d 404 (NY Sup. Ct. 1987) (corporate consumer of a computer system (a bank) may proceed for civil action under New York statute regarding deceptive trade practices).

Page 7-5:

Add at end of subsection.

The relationship between fraud and contract claims becomes particularly close in cases where the alleged fraud relates to a fraudulently represented intention as to future action. This type of misrepresentation can provide the basis for an action in fraud,[9.1] but it is important to

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[9.1] See Trak Microcomputer Corp. v. Wearne Bros., 628 F. Supp. 1089 (ND Ill. 1985) (allegations that four companies engaged in apparently good faith negotiations regarding the acquisition of microcomputer technology, while in fact wanting merely to obtain disclosure of valuable, confidential business information from the plaintiff (Trak), stated an action in fraud as misrepresentations as to future actions).

This premise explains in part the analysis of the court in *Rio Grande Jewelers Supply, Inc. v. Data General Corp.*[14.1] In ruling on a certified question submitted by a federal court, the New Mexico Supreme Court held that an action for negligent misrepresentation by the seller of a computer system could not be maintained in the face of contract limitations. The contract specifically provided that it was the "complete and exclusive statement" of the agreement. In addition, the contract contained an "effective" warranty disclaimer concerning any representations not contained in the written contract.

These contract restrictions controlled where the representations used in the fraud argument were the same as those used in a claim of breach of warranty. Significantly, the buyer did not argue that there had been an intentional fraud and claims based on negligent misrepresentations bear a very close relationship to pure contract allegations.[14.2]

[14.1] 101 N.M. 789, 689 P2d 1269 (1984).

[14.2] See also Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM, 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282 (1982) (IBM was not liable for negligent misrepresentation for advice given in reference to purchase because it was not in business of providing information and guidance for use by others in transactions with third parties). Compare United States Welding, Inc. v. Burroughs Corp., 587 F. Supp. 49 (D. Colo. 1984) (under Colorado law, buyer may maintain an action for negligent misrepresentation; such an action is not barred by analogous claims based on warranty or contract breach theory); Accusystems, Inc. v. Honeywell Information Sys., Inc., 580 F. Supp. 474 (SDNY 1984) (under New York law, buyer-seller relationship does not entail degree of trust necessary to support an action for negligent misrepresentation, but fraud exists based on recklessly inaccurate representation of system capability).

Add at end of note 13.

See also Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) (fraud allegations are not barred by contract integration clause where alleged fraud relates to fraud in inducement of contract). Compare Norstar Bank of Upstate NY v. Corrigan, 136 Misc. 2d 920, 519 NYS2d 447 (Sup. Ct. 1987) (defense of fraud in the inducement not available against third party assignee of lease).

Page 7-7:

Add note 19.1 at end of last sentence in subsection.

[19.1] Compare Monical v. NCR Corp., 467 NE2d 644 (Ill. App. Ct. 1984) (alleged fraud in inducement of computer sale contract was subject to arbitration clause in agreement where there was no claim that fraud was directed to arbitration clause itself); Good(e) Business Sys., Inc. v. Raytheon Co., 614 F. Supp. 428 (WD Wis. 1985) (distributor's claims that manufacconnection with ordinary civil litigation has been extremely controversial, and a number of reform proposals modifying the statute have been intermittantly proposed in Congress. Short of legislative reform, courts have dealt extensively with whether they can effectively limit the scope of the civil liability provisions through interpretation of aspects of the elements required for proof of a cause of action under RICO. In many cases, the controversy centers not on whether a fraud was committed, but on whether other elements of the defendant's behavior amount to a violation of the Act.[19.3]

A cause of action under RICO requires proof that the defendant was (1) an enterprise engaged in (2) a pattern of racketeering activity through the commission of multiple predicate acts. The question of what constitutes a "pattern" of racketeering acts has been especially controversial. In general terms, the plaintiff will argue that a pattern can be established through proof of more than one related fraudulent action, even though all of the defendant's actions relate to a single, continuous transaction. Such an interpretation expands the application of RICO allegations to virtually all commercial disputes where some degree of misrepresentation is alleged. The countervailing argument is that the idea of a "pattern" of racketeering requires proof of multiple, unrelated actions constituting separate criminal episodes, rather than one continuous scheme.

The cases split on this issue. Several courts have interpreted the continuity factor as requiring some separation or differentiation among the predicate racketeering acts.[19.4] Other courts have gone further, stating that multiple fraudulent acts committed in pursuit of a single fraudu-

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[19.3] See Continental Data Sys., Inc. v. Exxon Corp., 638 F. Supp. 432 (ED Pa. 1986). (In an action between developer of software system and developer of competing system, court concluded that under RICO, there was no liability through respondeat superior based on actions of managers and sales representatives. "Continental has failed to adduce facts which demonstrate that Exxon, rather than the Geddes team — which comprises the RICO enterprise . . . has engaged actively in performance of racketeering activities. Plaintiff has not shown that Exxon's policy, either formal or informal, required or encouraged performance of the predicate acts. Nor has plaintiff established that Exxon directed this conduct or knowingly adopted it during its course.")

[19.4] See, e.g., Medallion TV Enters., Inc. v. SelecTV of Cal., 627 F. Supp. 1290 (CD Cal. 1986) (pattern of racketeering activity must include racketeering activity sufficiently unconnected in time or substance to be considered as separate criminal episodes); Allington v. Carpenter, 619 F. Supp. 474 (CD Cal. 1985) (same).

to meet the predicate acts requirement through establishing federal mail or wire fraud, the plaintiff needed only to establish that such use of communications was foreseeable in the fraudulent scheme. This court expressly rejected other decisions and held that a RICO pattern of racketeering can involve numerous acts pursuant to a single, fraudulent scheme. In this case, the RICO enterprise was clearly distinct from the particular individual since four corporations were allegedly involved in the scheme. Four corporations can constitute a RICO enterprise.

There is less controversy concerning the requirement that the defendant be involved in a racketering enterprise. Virtually all of the courts of appeals that have considered the issue have held that a defendant may not simultaneously be the "enterprise" and the "person" who conducts the affairs of the enterprise through a pattern of racketeering activity.[19.10]

Assuming that an enterprise and a pattern of racketeering are established, to proceed under RICO provisions the plaintiff must establish the commission of multiple "predicate" acts. These commonly involve the use of the telephone or the mails to commit a misrepresentation amounting to fraud. The standards for concluding that fraud has been sufficiently alleged under RICO do not indicate any greater degree of restriction than does litigation under common-law fraud. In general, the plaintiff must prove a misrepresentation of present fact or intention, rather than merely an unperformed promise. For example, in *NW Cole & Co. v. Sage Systems, Inc.,*[19.11] the court dismissed both a RICO and a fraud claim against a supplier of computer software in a case involving a commercial transaction for the lease of telephone switching equipment

[19.10] See, e.g., Bennett v. United States Trust Co., 770 F2d 308, 315 (2d Cir. 1985), cert. denied, 106 S. Ct. 800, 88 L.Ed.2d 776 (1986); B.F. Hirsch v. Enright Refining Co., 751 F2d 628, 634 (3d Cir. 1984); Haroco, Inc. v. American Nat'l Bank & Trust Co., 747 F2d 384, 400 (7th Cir. 1984), aff'd on other grounds, 473 US 606, 105 S. Ct. 3291, 87 L.Ed.2d 437 (1985); Rae v. Union Bank, 725 F2d 478, 481 (9th Cir. 1984); United States v. Computer Sciences Corp., 689 F2d 1181, 1190 (4th Cir. 1982), cert. denied, 459 US 1105, 103 S. Ct. 729, 74 L.Ed.2d 953 (1983); Bennett v. Berg, 685 F2d 1053, 1061 (8th Cir. 1982), aff'd in pertinent part en banc, 710 F2d 1361, cert. denied, 464 US 1008, 104 S. Ct. 527, 78 L.Ed.2d 710 (1983). But see United States v. Hartley, 678 F2d 961, 987–990 (11th Cir. 1982), cert. denied, 459 US 1170 (1983). See also Town & Country Fine Furniture, Inc. v. IMA, Inc., No. 85-4779 (ED Pa. 1985) (WESTLAW DCT Database) ("[Under] RICO, it is an agreement to assist the enterprise's involvement in corrupt endeavors that is prohibited, not an agreement to commit a pattern of racketeering alone . . . [Plaintiff] has failed to allege that the defendants conspired to do anything but commit the predicate offenses").

[19.11] No. 85 Civ. 1028 (D. Md. Dec. 22, 1986) (WESTLAW DCT Database).

ware and application software. Citing the promotion materials for the lessor which indicated that software would be tailored to fit the buyer's needs, the court upheld a trial ruling that no fraud had been proven.

In addition to putative restrictions on the nature and particularity of the required allegations for a fraud action, some states also require an enhanced burden of proof in a jury resolution of the fraud complaints. In an action for fraud against the seller of a computer system, in *Riley Hill General Contractor, Inc. v. Tandy Corp.*,[19.15] the Oregon Supreme Court held that the elements of the fraud must be proven by "clear and convincing evidence," but that punitive damages flowing from the fraud can be established by a mere preponderance of the evidence. The case involved a delivered system involving multi-user capacity for performing accounting data analysis.

The system encountered numerous performance problems, eventually leading the seller (Tandy) to offer a replacement system, which the buyer refused. The buyer alleged that, prior to the sale, Tandy had been informed by a party who tested their system that a lock-in for data should be added to the software to avoid contamination of existing data by new data being entered. The fraud claim was based on the allegation that Tandy did not fix or disclose this problem in marketing. Instead, Tandy emphasized the reliability and performance of the system as it existed.

"The type of interest protected by the law of deceit is an interest in formulating business judgments without being mislead by others — in short, in not being cheated."

The Court emphasized that the "clear and convincing" evidence standard is an intermediate level of proof between preponderance of the evidence and reasonable doubt. It is appropriate in "quasi-criminal proceedings or where the proceedings threaten the individual involved with a significant deprivation of liberty or with a stigma." "In a common law deceit action, the trial judge, when referring to the basic elements of the claim, should tell the jury that proof by clear and convincing evidence is required, which means that the truth of the facts is highly probable."

[19.15] 303 Ore. 390, 737 P2d 595 (Ore. 1987).

[1] Existing System Capabilities

Page 7-8:

Add note 20.1 in fourth sentence of first paragraph after material.

[20.1] See Leson Chevrolet Co. v. Oakleaf & Assoc., 796 F2d 76 (5th Cir. 1986). (In action by the final purchaser of a computer system and software against the "retail" seller and the manufacturer, the retailer was not responrepresentations about future capability regarding the claim that the developed system would be an expandable and upgradable system where there was a good faith belief that it could develop such features. The vendor was liable, however, for breach of implied warranty of fitness. There was also potential fraud in the false representation that a working model of the system had been tested.

Add at end of note 26.

See also Brignoli v. Balch Hardy & Scheiman, 645 F. Supp. 1201 (SDNY 1986). (Although a promise made with the present intention to breach or not perform can constitute fraud, the intention to not perform must be established by more than the mere fact of subsequent nonperformance. Here, the developer of a system claimed, but could not prove, that the company to which its use was contracted never intended to perform its contractual royalty obligation. However, allegations that corporation led its clients falsely to believe that programs used belonged to inventor stated claim for relief based upon unfair competition.)

Add at end of subsection.

In *Adams v. Tri-Continental Leasing Corp.*,[26.1] in a computer lease transaction, the lessee was held to have raised material issues of fact concerning its allegation that the lessor fraudulently misrepresented that the computer system would be user-ready when delivered. Although the facts were disputed, the lessee had submitted an affidavit stating that lessor's representative represented that the lessee would be provided with a user-ready computer that would be capable of performing numerous functions and that the computer system that was delivered was not user-ready. The lessee stated that he had been told that "I would be provided with a user-ready computer from Motive Computer Systems which would be capable of performing numerous functions for the office which include, but are not limited to, the following: (1) processing insurance claims; (2) processing statement and accounts receivable; (3) maintaining a patient register; and (4) word processing."

It was allegedly represented that the computer was to be ready to perform these functions upon delivery of the equipment and necessary software. In fact, however, the computer system delivered was not user-ready and there was allegedly no cure after several calls to remedy the situation. The court held that this evidence sufficiently raised a factual issue concerning fraud even though the opinion indicates no proof concerning when the representing party knew or could have known the lack of truth in its promise.

[26.1] 713 SW2d 152 (Tex. Ct. App. 1986).

arguments go behind the performance obligation, focusing on defining the nature and degree of disclosure and honesty of evaluation required by the party whose performance depends on the perfection or completion of a developing system.

Misrepresentation claims are often grounded in allegations about the adequacy of disclosure by the vendor regarding the degree of uncertainty involved in the undertaking. Such cases indicate that a vendor must communicate tangible facts within its knowledge that define the level of risk involved in the contract. In *Accusystems, Inc. v. Honeywell Information Systems,*[29.1] the transaction involved a new multi-terminal computer. The seller represented the computer operating system as having been extensively tested when, in fact, there had been no field testing of the system until after the sale. This misrepresented fact obviously made a difference in the degree of risk that the buyer was undertaking and constituted actual fraud. Importantly, the court held that the misrepresentation was actionable, even though the buyer was experienced with computers.

> There is no doubt that the TL-6 operating system represented a departure from other systems with which [buyer] may have been familiar. Moreover, this court finds that since this is a dynamically growing industry, [buyer's] reliance on Honeywell's representations with respect to the TL-6 operating system was reasonable.[29.2]

The obligation to disclose the element of risk involved does not indicate that the vendor can be held liable for merely underestimating the difficulty of the task. In many new system cases, the alleged misrepresentation is that, at the time of the contract, the vendor knew that performance was not possible. This allegation supports a case in fraud, but decisions must focus on the element of knowledge and preclude liability based simply on eventual delay or nonperformance.[29.3] A good faith belief that the programming or other development work can be completed is adequate to defeat a claim of misrepresentation. In essence, given that the seller does not mislead the buyer as to the fact that the system must be developed and that some element of uncertainty is inherent, the transaction entails no justifiable reliance or guarantees be-

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[29.1] 580 F. Supp. 474 (SDNY 1984).

[29.2] Id.

[29.3] See also Computer Sys. Eng'g, Inc. v. Qantel Corp., 740 F2d 59, 68 (1st Cir. 1984) (misrepresentations were recklessly made, purporting SOLUTIONS software package to be essentially fully developed and tested and that it was a turnkey system when, in fact, system actually delivered was not sophisticated and was without substantial modifications; software in this case was integral and essential to effective resale of underlying systems).

> measure. He stated that the unit had been working as a whole-body scanner but that, because of minor technical problems, the body scanner part had been removed.... [These] statements were untrue. . . .[29.6]

Syntex delivered a system capable of only head scanning, rather than full body scanning. The district court had rejected fraud allegations because it found that Syntex had a good faith belief that it could develop the system that it promised. While agreeing with this premise that an honest error is inconsistent with fraud, the appeals court found reason for further fact finding on the fraud claims. The court noted that there were claims of misrepresentation of existing fact based on statements by Syntex representatives that the system unit seen by CRS in January, 1976 had "been 'working' as a 'whole body scanner.' Because Syntex did not in fact operate the machine as a whole-body scanner until March, 1976 at the earliest, this proof might support a fraud claim. We remand this portion of CRS' fraud claim. . . ."

Even though it referred to the trial court for further analysis, the circuit court noted that fraud must be proved by clear and convincing evidence and the jury might well find that CRS' initial acceptance of the waterbag scanner, extended reliance upon promises of cure, and use for over 20 months was inconsistent with fraudulent inducement in January, 1976.

The result in *Syntex* depends, of course, on the fact that no testing had been done at the time of the claim. Such an allegation establishes a fraud claim because of the importance that can be attached to the status of testing in assessing the degree of risk that the buyer takes in whether the system will ever be completed. In contrast to *Syntex,* the court in *Shapiro, Budrow & Assoc. v. Microdata Corp.*[29.7] rejected a fraud claim based on alleged misrepresentations about the degree of testing completed. Shapiro had purchased software and hardware from Microdata (MC) that proved to be unsatisfactory. The court rejected the fraud claims. It concluded that although the seller had represented a more comprehensive system including modules that were not yet available, there was no material misrepresentation because the program as delivered had the basic capabilities represented by the seller. Furthermore, Shapiro could not have relied entirely on the representations about

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[29.6] Computerized Radiological Servs. v. Syntex Corp., 786 F2d 72 (2d Cir. 1986).

[29.7] No. 84 Civ. 3589 (SDNY Feb. 24, 1986) (WESTLAW DCT Database).

[3] Suitability for Intended Use

Page 7-13:

Add after last paragraph in subsection.

Misrepresentation theories relating to suitability are not necessarily barred by the terms of the written sales contract. In *Invacare Corp v. Sperry Corp.*,[37.1] the court held that a cause of action for fraud was properly stated in allegations that Sperry represented that its recommended system would adequately process the buyer's accounting and manufacturing systems. This representation encompassed a representation about the current capability of the computer system. A fraud claim based on the inaccurate statement was not barred by a contractual merger clause to the effect that the written agreement contained the "entire agreement" of the parties and superseded all previous communications. The court simply noted that, as to the effect of the terms of the contract, "if the contracts were in fact induced by fraud, Sperry cannot rely on the provisions of the contract" to preclude the fraud claim.

In *Sierra Diesel Injection Service v. Burroughs Corp.*,[37.2] the court denied a motion for summary judgment against a claim of fraudulent representation that a computer system would fit the buyer's needs. "Whereas defendant claims that all the statements it . . . made were mere puffing [in the proper] circumstances, all of these statements could be reasonably understood as statement of fact, rather than of opinion." The seller represented that the system would create control over inventory and receivables. "This statement, when coupled with the fact that the plaintiff represents itself to be a neophyte in the field of office computers" led the court to conclude that an issue of material fact existed on the question of fraud.

37.1 612 F. Supp. 448 (ND Ohio 1984).

37.2 651 F. Supp. 1371 (D. Nev. 1987).

Page 7-14:

[4] Time and Cost Savings

Add at end of note 41.

See also Shapiro, Budrow & Assocs. v. Microdata Corp., No. 84 Civ. 3589 (SDNY Feb. 24, 1986) (WESTLAW DCT Database) (as to fraud claims, court concluded that although the seller had represented a more comprehensive system including modules that were not yet available, there was no material misrepresentation because the program as delivered had the basic capabilities represented by the seller).

[and this] constituted willful and intentional fraud and unfair and deceptive business acts and practices by Olivetti against Ames.

The fraud entitled the dealer to recover for lost profits.

Add the following new section.

¶ 7.03A MISREPRESENTATION: STANDARDS OF CARE [NEW]

Under a fraud analysis, even assuming provable reliance and assuming that the representation is a type that justifies reliance, liability requires that representation be made under circumstances of culpability sufficient in the particular jurisdiction. The range of culpability (or mental state) standards extends from requirements of intentional and knowing misrepresentation to a concept of absolute liability for any inaccurate representation that induces reliance by the buyer.[41.2]

As the required culpability moves further from intentional fraud, the relationship between misrepresentation and contract claims against consulting sellers becomes increasingly close. In practice, this occurs in either of two ways. The most common involves a tacit process in which changes in law consist of changes over time whereby the proof becomes treated as sufficient to establish knowledge or intent. Arguments supporting inferred knowledge of falsity can be built around assumptions of what facts were discoverable by investigation during consulting and advisory functions. This is especially true when the defendant is the vendor, presumably familiar with its own recommended products.[41.3]

[41.2] See, e.g., Clements Auto Co. v. Service Bureau Corp., 444 F2d 169 (8th Cir. 1971). Compare Eaton Corp. v. Magnavox Co., 581 F. Supp. 1514 (ED Mich. 1984). *Eaton Corp.* involved a contract for the manufacture of a "controller" component for "anti-lock" brake systems. The court held that it was improper for the component manufacturer to substitute a non-specified operational amplifier in manufacturing the controllers. Allegations of fraud failed in reference to the manufacturer of a component for an anti-lock brake system because representations were not proven to be intentional. Innocent misrepresentation was not present. Innocent misrepresentation under Michigan law involves six factors:

1. There must be a material representation;
2. The representation must be false;
3. The representation must be made in connection with contract negotiations;
4. The representation must be relied on by the other party;
5. The representation must result in injury; and
6. The representation must inure to the benefit of defendant.

[41.3] See generally Strand v. Librascope, Inc., 197 F. Supp. 743 (ED

Because negligent misrepresentation liability is controversial, it is not accepted in all states in a context of buyer-seller relations.[41.6] Debate about negligence as an information tort focuses on transactions involving consulting sellers; many of the cases on sales of goods involve computer sales. The Restatement of Torts provides for liability in negligent misrepresentation if the defendant "in the course of his business, profession, or employment, or in any other transaction in which he has a pecuniary interest, supplies false information for the guidance of others in their business transactions." [41.7] This form of liability is seldom sought when the misinformation arises merely in a traditional, passive buyer-seller relationship. Rather, information tort liability for negligence ordinarily occurs only if the party providing the information expressly or implicitly undertakes a business responsibility to provide the data whose inaccuracy is questioned.[41.8]

The computer cases on negligent misrepresentation reflect the national split on this issue. Negligence liability for a consulting seller has been established or accepted in several cases either on a direct application of misrepresentation theory or on a related theme of negligent performance of consulting services.

In *United States Welding, Inc. v. Burroughs Corp.*,[41.9] a federal district court applying Colorado law rejected the argument that negligent misrepresentation was a product liability claim barred under the law of that state when the claim focuses on economic loss rather than

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[41.6] See Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM, 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282 (1982) (IBM was not liable for negligent misrepresentation for advice given in reference to a purchase because it was not in business of providing information and guidance for use by others in transactions with third parties); Accusystems, Inc. v. Honeywell Information Sys., Inc., 580 F. Supp. 474 (SDNY 1984) (under New York law, the buyer-seller relationship does not entail the degree of trust necessary to support an action for negligent misrepresentation).

[41.7] Restatement (Second) Torts § 552(1) (1966).

[41.8] See Safeco Title Ins. Co. v. Attorneys' Title Servs., 460 So. 2d 518 (Fla. Ct. App. 1984) (title insurer is entitled to remedy of indemnification for damages awarded against it for error in computer-furnished abstracts of title provided by abstractor and on which it relied in issuing title insurance policy); Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM, 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282 (1982).

[41.9] 587 F. Supp. 49 (D. Colo. 1984). See also Schroders, Inc. v. Hogan Sys., Inc., 522 NYS2d 404 (NY Sup. Ct. 1987) (cause of action for negligent misrepresentation sustainable even absent a special relationship); Guernsey Petroleum Corp. v. Data Gen. Corp., 183 Ga. App. 790, 359 SE2d 920 (Ga. Ct. App. 1987) (cause of action available, but no justified reliance proven).

In *Rio Grande Jewelers Supply Co. v. Data General Corp.,*[41.12] the New Mexico Supreme Court rejected a contract-based claim for negligent misrepresentation. The case involved a certified question from the Tenth Circuit Court of Appeals concerning whether the negligent misrepresentation claim could be based on representation about capability to perform specific functions despite the presence of an *effective* merger clause and an *effective* disclaimer of warranties. The court held that where there "is no indication or claim that the transaction was not undertaken at arm's length or freely entered into by two commercial" parties, the Uniform Commercial Code precludes the negligent misrepresentation claim.[41.13]

The result in *Data General* precludes a negligence information tort claim for sales of goods, but most reported cases adopt a less complete exclusion. Negligent misrepresentation theories derive from the Restatement of Torts, which provides liability for a failure to exercise care where the information is provided in a relationship involving pecuniary gain. In some states, while the tort of negligent misrepresentation is accepted as a general proposition, it is limited to circumstances involving either relationships of special trust or situations in which the information provider is a consultant but has no other connection to the contract. The assumption in such analyses is that the information element must be the express aspect of the transaction in which the alleged tortfeasor engaged. This result was suggested by the Illinois Court of Appeals when it held that IBM as a "consulting seller" was not in the business of supplying information, but of selling merchandise.[41.14] The purported distinction between a pure consultant and a consulting seller is tenuous but has been applied by other cases.[41.15] In both the consultant and the consulting seller cases, the focus should be on the type of information that the parties undertake to provide and the care that is anticipated because of the affirmative undertaking.

Questions about the appropriate standard to be applied in determining the degree of protected reliance in a commercial contract also arise in connection when with determining what types of misstatements or failures to disclose constitute actionable conduct. In *Guernsey Petrolium Corp. v. Data General Corp.,*[41.16] the court rejected the argument that

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[41.12] 689 P2d 1269 (NM 1984).

[41.13] Id. at 1271.

[41.14] Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM, 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282, 284 (1982).

[41.15] See Accusystems, Inc. v. Honeywell Information Sys., Inc., 580 F. Supp. 474 (SDNY 1984).

[41.16] 183 Ga. App. 790, 359 SE2d 920 (Ga. Ct. App. 1987).

In a similar fashion, the Court in *Guernsy Petrolium Corp. v. Data General Corp.*,[44.2] rejected the argument that Data General had fraudulently induced Guernsey into contracting for a hardware system from it and software supplied by ICS Corp. The alleged fraud included, among other things, representations that ICS was experienced and capable of performing even though Data General was aware of ICS's faulty reputation. The court noted: "[Plaintiff] was a seasoned businessman with equal knowledge and opportunity to ascertain the facts equal to that of Data General. The parties were acting at arms length to complete a business transaction."

[44.2] Ga. App. 790, 359 SE2d 920 (Ga. Ct. App. 1987). See also Management Assistance, Inc. v. Computer Dimensions, Inc., 546 F. Supp. 66 (ND Ga. 1982) (purchaser of computer system could not succeed in claiming fraud against the vendor where the buyer had the opportunity and ability to read the contract before entering the agreement and where no trick or artifice was used in obtaining the signature).

Page 7-16:

Add at end of section.

Reliance questions in terms of justifiability can arise concerning both the content of the representation and the forum in which it is made. For example, in *Metro Mobile CTS, Inc. v. Newvector Communications, Inc.*,[50.1] although there were substantial difficulties about compatibility and access, advertising claims by the cellular telephone company that its system would permit users to link their portable computers to a computer system for data transmission and that other features were simple functions of its service were not false and, although slightly misleading as indicating that competitor did not offer those features, did not have a tendency to deceive customers.

[50.1] 643 F. Supp. 1289 (D. Ariz. 1986).

Page 7-16:

Add the following new section.

¶ 7.04A SECURITIES FRAUD [NEW]

As fraud allegations based on technology transactions become increasingly common, they also expand in the character of the fraud altem, and that Sperry's compensation would come from the sale of the corporation's stock. The fraudulent information supplied by Sperry regarding its computer system was thus "reasonably calculated to influence the investing public." The court found that plaintiffs had stated a Section 10(b) claim. A scheme to defraud the stock purchasers existed. Sperry had misrepresented its ability to produce computer equipment so as to induce investors to purchase stock and provide Sperry with a profit.

Sustainable fraud allegations are also potentially present where the preliminary marketing of a company is accompanied by the exaggerated product development claims that often characterize computer system developers. Such claims were at issue in *In re Storage Technology Corp. Securities Litigation,*[50.4] where the court sustained an action brought under federal securities law against directors, accountants, and outside directors of a company that manufactures, sells, and services computer peripheral subsystems, such as disk drive and tape drive systems, for use with computers manufactured by other companies. The cause of action was based on the claim that the Storage Technology Corp. (STC) officers and directors recklessly concealed and misrepresented STC's financial status and the development of its products through statements of unfounded optimism and a failure to reveal their competitors' advantages in the market. "This court accepts the fraud on the market theory in the open market context and applies it in this case. The complaint sets forth allegations of a continuing fraud that deceived the investing public and artificially inflated the price of STC securities on the open market."

[50.4] 630 F. Supp. 1072 (D. Colo. 1986).

PART B. NEGLIGENCE ISSUES IN MANUFACTURING AND MARKETING

¶ 7.05 NEGLIGENCE, MALPRACTICE, AND CONTRACT CLAIMS

Page 7-16:

Add note 50.5 at end of last sentence in first paragraph.

[50.5] Tort concepts are also applied in some states in commercial agreements based on theories of an obligation to perform in good faith. Failure to exercise good faith behavior in a contract setting may be viewed either as a contract breach or as a separate tort. At this writing, the tort concept is not uniformly or widely accepted independent of contract breach. See malpractice do not focus on whether there is a standard of reasonable care imposed on the software or other developer, but with what standard of care is appropriate. Often, however, the dispute about professional, as contrasted to reasonable, standards of care involves little substantive difference.

To the extent that a difference emerges, the case of *Data Processing Services, Inc. v. LH Smith Oil Corp.*[65.1] supports the imposition of a standard of care related to general, professional standards in the industry. In *Smith,* the court initially held that the Uniform Commercial Code does not apply to a software development contract involving the creation of custom software for the defendant's computer. According to the court, this transaction did not involve a contract for delivery of goods in the form of the custom software. Data Processing was retained to "design, develop and implement an electronic data processing system. . . ." The key element of the contract was Data Processing's skill and effort.

The court then applied what appears to be a professional standard of liability to the programmer's performance under the contract. It held that liability could exist based on an incorrect representation that Data Processing had the skill and training to complete the contracted task when, in fact, the trial court found such skill to be lacking. Also, it was clear to all parties that Smith was relying on Data Processing's skill and abilities.

"[Those] who hold themselves out to the world as possessing skill and qualifications in their respective trades or professions impliedly represent they possess the skill and will exhibit the diligence ordinarily possessed by well informed members of the trade or profession." Principles of professional liability are proper in such cases.

[65.1] 492 NE2d 1329, 1 UCC Rep. 2d 29 (Ind. Ct. App. 1986).

¶ 7.06 THIRD-PARTY PRODUCT LIABILITY

Page 7-21:

Add note 65.2 at end of first sentence in first paragraph.

[65.2] See also Page County Appliance Center, Inc. v. Honeywell, Inc., 347 NW2d 171 (Iowa 1984) (computer installed in travel agency could constitute a nuisance because of interference with reception of display televisions at appliance store).

claim from general product liability issues. The damages alleged were solely confined to out-of-pocket expenses to run the business absent the computer assistance and the lost profits and opportunities thereby entailed. The court held that personal injury or property damage is a required element of the negligence claim.

Even if the concept of product liability for pure economic loss is recognized, however, the injured party may be barred from recovery by other factors. For example, in *Datamatic, Inc. v. IBM Corp.*,[69.3] a buyer of used computer equipment was found to have a cause of action against the original manufacturer for defects in the system, but where the buyer was a commercially sophisticated used equipment buyer who purchased from an equally commercially sophisticated first buyer, the used equipment buyer was bound by the manufacturer warranty limitations that were effective against the original buyer and could recover against the manufacturer only what its predecessors could have recovered.

[69.3] 795 F2d 458 (5th Cir. 1986).

Add note 70.1 at end of second paragraph.

[70.1] See Farmers Rural Elec. Coop. Corp. v. Cooper, 715 SW2d 478 (Ky. Ct. App. 1986) (court reversed workman's compensation award as lacking sufficient support in the evidence where employee had claimed that allergic reactions were caused by use of computer terminal, but could not identify the chemical that caused the reactions).

[1] Computer-Assisted Machines

Page 7-24:

Add at end of note 71.

Brooks v. Medtronic Inc., 750 F2d 1227 (4th Cir. 1984). In *Brooks*, a patient who received a cardiac pacemaker sued the manufacturer because the pacemaker failed shortly after implant and had to be replaced. Patient alleged that computer links monitoring the system internally were defective. The manufacturer was held not to be responsible because South Carolina law dealing with unavoidably unsafe products was applicable. The law holds that there is no defect if the distributor notifies users of the risks.

[2] Software and Product Liability

[a] Programming and Products

Page 7-26:

Add at end of subsection.

The IRS has held that a programmer who developed software for computing tax returns is to be treated as a tax preparer of any return tiff "dealt at arm's length with [defendant and] it was obvious under the contract that [defendant] was not an insurer." Furthermore, the disclaimer violated no public policy.

PART C. COMPUTER USERS AND LIABILITY RISKS

¶ 7.07 USER LIABILITY RISKS

Page 7-29:

Add note 84.1 at end of fourth sentence in second paragraph.

[84.1] See generally Freitas v. Geddes Sav. & Loan Ass'n, 471 NE2d 437, 63 NY2d 254 (1984) (incomplete itemized disclosure in loan and computer error in disclosure and computation constitute bona fide error that does not establish usurious intent under state law); Zerman v. Jacobs, 510 F. Supp. 132, 134 (SDNY), aff'd, 672 F2d 901 (2d Cir. 1981) (district court stated that "plaintiff, seizing upon a mere computer error, is attempting to convert it into a claim of fraud under the federal securities laws"; Zerman "failed to state a proper claim under any provision of the federal securities laws"); Midway Bank & Trust v. Moses, 375 NW2d 292 (Iowa Ct. App. 1985) (data-entry error incorrectly indicating that payment date on a note had been extended did not create an authorized extension and did not operate to discharge co-obligor; standard was intention or agreement); Bhattal v. Grand Hyatt-NY, 563 F. Supp. 277 (SDNY 1983) (hotel was liable for conversion where computer error led to commingling guests' luggage with luggage of previous occupants).

Page 7-30:

Add at end of section.

Assessment of the proper standard of care and its satisfaction becomes especially controversial where the interests affected by alleged computer errors involve constitutionally protected individual rights and criminal prosecution issues. The issues in this field typically involve the legality of an arrest, search, or detention of a defendant, or the expiration of the time required for action under applicable speedy trial standards. In *People v. Joseph,*[84.2] the court invalidated a seizure of a con-

[84.2] 470 NE2d 1303 (Ill. App. Ct. 1984). See also Scott v. District of Columbia, 493 A2d 319 (DC App. 1985) (where police system computer on its face reflects valid warrant, police officer has good faith reasonable basis for arrest of person who corresponds to information on computer); Albo v. State, 477 So. 2d 1071 (Fla. Ct. App. 1985) (conviction for concealed weapons the bank system and whether the bank has adequately informed the customer of the need for accuracy on these particular elements.

Processing of stop order payments in bank collections routinely relies on computerized matching between the content of the order and the content of the check. In this system, errors in describing the check are significant and prevent implementing the order only if they affect the terms used for comparison of the order and the received checks. On the other hand, once an error in these terms occurs, even completely accurate data on other elements of the check does not recapture the ability to locate and stop payment on the check.

The standard for adequacy of stop orders issued by a customer is that the order reasonably identify the check. While a bank can reasonably rely on automation here, however, reasonableness requires at least notification to the customer of what is required to achieve a stop order and may involve the assumption of some cost of error by the bank. Typically, the critical information for an automated system is the exact amount of the check and the account number.

In *Hughes v. Marine Midland Bank, N.A.*,[84.4] for example, all items of description were accurate except for the check number and the order was held adequate because the bank's computer could identify and stop payment on the check based on the account number and check amount. More generally, a number of courts have held that small errors in the amount of the check are not sufficient to render the order ineffective.[84.5] This result requires either that the bank establish a flexible system of identifying the checks or that it make explicit, contemporaneous statements to the customer emphasizing the need for exact amount information. In the absence of notice to the customer that the bank computer system searches for stopped checks by check amount alone, "[the bank] assumed the risk that it would not be able to stop payment of a check despite the customer's accurate description of the account number, the payee's name, the number and date of the check, and a de minimis error in the check amount." [84.6]

Similar judgments about the degree of flexibility expected or required as a matter of law to protect against errors are present in court decisions administering public notice systems (e.g., UCC filing records, real estate records), most of which are computerized. Absent the relatively strong impetus to protect customers against inaction by banks

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[84.4] 127 Misc. 2d 209, 484 NYS2d 1000 (Civ. Ct. 1985).

[84.5] See Annotation, Sufficiency of description of check in stop-payment order, 35 ALR 4th 985. (Supp. 1986).

[84.6] Staff Serv. Assocs., Inc. v. Midlantic Nat'l Bank, 207 NJ Super. 327, 504 A2d 148 (Law Div. Super. Ct. 1985) (60 percent error acceptable).

puter systems and whether compliance with, and use of, an existing system constitutes notice to the third party. There are two distinct issues here. The first concerns whether the user of the computerized notice system can establish that it gave notice to another party by showing use of its own computer notice system. Given the frequent use of computer systems to communicate with customers and other parties, courts quite obviously are ordinarily forced to conclude that proof showing routine use of a system of computerized notice is, when coupled with some evidence to establish its general effectiveness, adequate to establish at least a prima facie showing that notice was sent to the third party.[86.1]

In order to substantiate this, however, there must be some indication that the system used was adequate to the task and effectively administered. For example, in *In re City of Fort Wayne's Petition*,[86.2] a notice of public action was held inadequate where the city relied solely on the computer records of the county auditor and it was proven that these records contained an inadequate list of names and addresses for the purposes to be served.

The second set of issues regarding the adequacy of computerized notices relates to the conclusiveness of the proof and how the claim

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[86.1] See Hilliar v. State Farm Mut. Auto. Ins. Co., 451 So. 2d 287 (Ala. 1984) (evidence that insurer followed normal procedures for mailing cancellation notices established cancellation despite insured's claim it never received notice, where evidence also established that insured was aware that policy premium had not been paid); Lane v. Allstate Ins. Co., 746 F2d 1444 (11th Cir. 1984) (where state law required notice of available coverage to insureds, affidavit of supervisor of mailing operation proved compliance, notwithstanding affidavits of insured that no notice was received); Shave v. notwithstanding affidavits of insured that no notice was received). See also Montgomery Ward, Inc. v. Davis, 398 NW2d 869 (Iowa 1987). (Evidence was adequate to establish that notice of cure right in a consumer credit contract was sent to and received by debtor where the evidence consisted of establishing that computerized mailing system was used and operated effectively as described in court. In this case, consumer had previously received other computerized mailings and evidence established that computerized system was operated in such a manner as would lead to the notice being sent to the same location as before). See also Gerrard v. United States Office of Educ., 656 F. Supp. 570 (ND Cal. 1987) (computer records are evidence that notice of seizure of tax refund given). Hemperly v. Aetna Casualty & Surety Co., 516 So. 2d 1202 (La. Ct. App. 1987) (in action affecting cancellation of automobile insurance coverage, proof about the routine billing and payment receipt operations based on computer records was adequate to establish presumption that notice was mailed and this presumption was not rebutted by mere denial of receipt by the insured).

[86.2] 484 NE2d 584 (Ind. Ct. App. 1985).

Page 7-33:

Add after first complete paragraph.

The desire to require human actors to be involved in important decisions that affect individuals is particularly significant in context of governmental and quasi-govermental activities (see ¶ 7.08, main volume). An illustration occurred in reference to a medicare eligibility system in *Tripp v. Coler.*[91.1] In that case, the state of Illinois had automated decisions regarding continued eligibility for Medicaid. A computer program periodically reviewed records of benefits paid and determined over-use and continued eligibility by applying analysis of averages and standard deviations, rendering ineligible those persons who exceeded a maximum usage rate determined for the period. The court held that this procedure, and the attendant cancellation with minimal notice, violated statutory standards for administration of the program. As to required notice and opportunity to appeal the adverse decision of the computer, the court noted that there was a violation of due process. "The risk of erroneous deprivation is substantial because the system gives the recipient so little time to appeal and so little information on which to base the appeal. The . . . government's interest in maintaining the status quo, seems almost trivial in comparison because the steps necessary to remedy the problems require minimal effort and cost. . . . Assuming the department will continue to computerize all relevant information regarding each recipient, due process can be satisfied by simply photocopying the computer printout and enclosing these papers with the notice forms already used." The court required a more substantial notice procedure along the foregoing lines.

[91.1] 640 F. Supp. 848 (ND Ill. 1986).

Page 7-34:

Add at end of section.

In *Johnson v. Johnson,*[95.1] the former trustee of charitable foundations alleged that the investment manager was negligent in the design and implementation of the equity investment program. The court held that there was inadequate evidence to establish negligence where the investment manager was shown to have developed and relied on a computer system for managing investment decisions and targeting companies for possible investment.

[95.1] 212 NJ Super. 368, 515 A2d 255 (NJ Super. Ct. Ch. Div. 1986).

Tipton Kentucky, Inc.,[95.2] in holding that a consignment seller of a horse was negligent in publishing information about the horse derived from a computer source it knew to be untrustworthy. In this case, however, where the horse proved to be infertile, the seller was not liable because of the wrongdoing of the buyer who was aware of the problem with the horse.

The consignment seller had a duty to ensure that the information in its sale brochures was accurate.

> Recognizing the existence of this duty, Fasig-Tipton became dependent on two sources of data: the Jockey Club of America computer system, and its own veterinary certificates of health. . . . [The] information provided by the computer system was insufficient because of the Jockey Club's reputation for delinquent entry of data into the computer network. In this instant situation this delinquency put Fasig-Tipton on notice that its sales catalogue was incomplete and it was under a duty to report such ensuing inadequacies to [the purchasers.[95.3]

The failure to maintain an adequate computer system was also the basis for a sanction in *Holt Hauling & Warehousing System, Inc.*[95.4] In *Holt*, the bonded warehouse status of the defendant was suspended for one year in part due to an inadequate computer monitoring system for the release of bonded merchandise. The court noted that:

> in two situations, the source of the input data, the delivery orders from customs brokers, omitted the in-bond notation. In the other seven situations, the computer operator failed to enter the bonded status into the computer. These omissions were carried forward to the control cards and thus [plaintiff's] personnel did not know that the merchandise in question was in-bond.

[95.2] 703 SW2d 885 (Ky. App. Ct. 1986).

[95.3] See also Taylor v. Checkrite, Ltd., 627 F. Supp. 415 (SD Ohio 1986) (under Fair Credit reporting statute, credit bureau system not permitting entry of fact that debtor disputed particular debts in insufficient data system created liability in the parent company that controlled franchisee's use of the inadequate system).

[95.4] 650 F. Supp. 1013 (Ct. Int'l Trade 1986).

¶ 7.09 NEGLIGENT NONUSE OF A COMPUTER

Page 7-35:

Add at end of note 96.

See New York v. Barnes, 499 NYS2d 343 (NY Sup. Ct. 1986). (Court observes that failure of attorneys and authorities to be aware of case dealing ployee's actions. . . . Therefore, in these circumstances the employee's decision to use the inferior procedure is an operational one to which the discretionary function exception does not apply.

In a related decision dealing with discretionary function exceptions to immunity waivers, the court in *Brown v. United States*[97.2] held that the government was not liable for failure to predict a storm that led to the death of fishermen, despite the argument that the failure to accurately predict the storm was due to a decision not to use a particular source of weather information and not to disclose the fact that such a decision had been made. In effect, both the prediction and the method by which it was obtained were not subject to review.

The court emphasized that the issue was broader than merely whether this particular tangible method of information gathering (weather buoy) was necessary to effectively carry off the weather monitoring functions.

[While] we are dealing here with a tangible object, a particular supplier of information that goes into the mix . . . the principle involved is not limited to finding unreasonable the failure to maintain a particular supplier, but is universal, and would apply to anything judicially found unreasonably to impair the quality of the prediction. An expert might testify . . . that to prepare a fully adequate weather report would call for still additional buoys, or for more advanced computers . . . Or it might find malfeasance in the processing. All of these are matters which Congress reserved . . . by the discretionary exception . . . The short answer to this claim is that the government has a policy not to report the underlying structure or basis of its weather computing system, or of changes therein. Such a policy is a classic discretionary matter not subject to judicial review.

Although nonuse of a computer should ordinarily be considered within existing frameworks regarding the obligation of care that exists even without the presence of a computer, it is increasingly obvious that courts will, in selected cases at least, base an expanded duty of care on the mere existence and availability of computerized systems that the affected party fails to adequately use.

The clearest example of this result occurred in *First National Bank of Cicero v. United States*.[97.3] In this case, a bank took various stolen securities as collateral for a debt under circumstances in which it would take free of prior claims if it qualified as a bona fide purchaser. For at least some of the securities, it was established that the bank could have

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97.2 790 F2d 199 (1st Cir. 1986).

97.3 653 F. Supp. 1312 (ND Ill. 1987).

Page 7-37:

Add at end of note 102.

See Haywood v. United States, 648 F. Supp. 188 (D. Kan. 1986) (where the levy had been released and computer correction made, the taxpayer suffered no damages from an improper IRS levy against her property for monies believed to be due from her deceased husband's estate because of computer errors); Rodriguez v. United States, 629 F. Supp. 333 (ND Ill. 1986) (where computer error created an excessive refund, there was no liability for agent who issued the levy for nonpayment of taxes, but levy was invalid); United States v. Bruce, 642 F. Supp. 120 (SD Tex. 1986) (due to computer error involving the misplacement of a comma, IRS issued a tax refund check that was over ten times the amount actually due, but government action to recover payment was barred by the two-year statute of limitations, which began to run from the time that the taxpayer received the refund check, rather than when it was negotiated).

¶ 7.11 WAIVER AND ESTOPPEL BY COMPUTER

Page 7-39:

Add note 105.1 at end of first sentence in runover paragraph.

[105.1] See Daleview Nursing Home v. Axelrod, 62 NY2d 30, 464 NE2d 130 (1984) (overpayment of medicaid reimbursement to health facility due to computer error in rate of reimbursement can be recovered, even though facility was not aware of error until seven months after state officials became aware of it); Brown v. Minnesota Dep't of Pub. Welfare, 368 NW2d 906 (Minn. 1985) (where physician repeatedly submitted unreimbursable claims under state medical assistance program, the welfare department was not estopped from recovering previous payments made before it discovered that claims were not reimbursable). A different circumstance exists where specific deadlines or time periods are specified in law and the pertinent issue is whether there was adequate and timely processing of the data to a decision. See generally South Sound Nat'l Bank v. Citizens Nat'l Bank, 672 P2d 1198 (Or. Ct. App. 1983) (time for final payment ran from time when check was received by bank's data processing center); South Sound Nat'l Bank v. First Interstate Bank, 65 Or. App. 553, 672 P2d 1194 (1983).

Add note 106.1 at end of runover paragraph.

[106.1] See Roberts v. Mass. Indem. and Life Ins. Co., 713 SW2d 159 (Tex. Ct. App. 1986) (an erroneously issued, computer-generated letter that was not signed by any representative of the insurer was ineffective as a waiver or modification of payment requirements of the insurance contract); Bolz v. Security Mut. Life Ins. Co., 721 P2d 1216 (Colo. Ct. App. 1986) (where a check received after the due date on an insurance policy was credited to the account and, under the computer program then being used, this preempted the issuance of a notice of lapse, this series of events did not (1)

In *Gulf Insurance Co. v. Folsom,*[114] an insurance company permitted a policy owner to draw against the cash value of his policy. Subsequently, a second draw was permitted even though the entire value had already been drawn against. The second draw was allowed due to an error in the computer records.. When the insurance company sought to recoup its money, the court held that a balancing of equities analysis would apply. The court held that the issue required a general equity balancing of the interests of the parties and presented that a jury issue existed as to whether the company was negligent in relying solely on its computer records, which negligence might preclude early recovery of the second advance.

> An action for money had and received . . . although legal in form . . . is founded on the equitable principle that no one ought to unjustly enrich himself at the expense of another, and is a substitute for a suit in equity. . . . Only in the rare case where there is an admission of liability or an indisputable fact situation that clearly establishes liability, should summary judgment be granted.

A jury issue existed as to whether the plaintiff was negligent in relying solely on its computer, considering the facts of the current widespread use of computers for the purpose of keeping business records. The computer here — though negligently programmed by the plaintiff's subsidiary — may not have been known to be inaccurate. The court parenthetically noted that there may be an analogy to the fact that "a person is held not to have knowledge of facts which are 'stored' in his memory, but which have been forgotten."

Under a general equity standard, of course, a second factual issue involved whether the policy holder was in good faith in seeking and retaining the advance. In an action for money had and received, the plaintiff generally recovers the payment mistakenly made even if the mistake was caused by his lack of diligence or his negligence in ascertaining the true facts if the other party would not be prejudiced by refunding payment, subject to weighing of equities between parties by trier of fact.

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under facts); State v. Langford, 467 So. 2d 41 (La. Ct. App. 1985) (conviction of theft was appropriate where defendant, aware that bank would not make a loan to him of several hundred thousand dollars, exploited computer error that assigned him a code allowing unlimited overdraft privileges to withdraw over $800,000 from his account, did not bring matter to bank's attention until money was spent, and was unable to repay when bank discovered error).

[114] 256 Ga. 400, 349 SE2d 368 (Ga. 1986).

the channelward side of the daybeacon. The Coast Guard's negligence was an actual and proximate cause of damages incurred by the vessel.

The government argued that it had not waived immunity from liability for this type of conduct since the activity and choice of method was a "discretionary function" to which immunity waivers did not apply. The court held that the discretionary function exception applies only where the manual or a policy directive requires that the employee commit the allegedly negligent act or states that the procedure used was the preferred procedure for achieving the goal in question. It did not apply here because the procedures manual permits the employee to select among several permissible procedures, merely indicating that the manual one is inferior to the others.

> In this circumstance, the employee's decision to employ the inferior procedure is not required by a policy directive from above. In addition, the employee's decision also is non-discretionary because the government's determination that one procedure is inferior to another establises a standard by which the courts can judge the employee's actions. . . .

As a result, judicial review of the reasonableness of the decision or choice of method was appropriate.

Not all courts are as willing to delve into the manner in which the government collects information and processes it for purposes of establishing tort liability. For example, in *Brown v. United States,*[116] the court refused to permit examination of whether the government's failure to use additional buoys or to notify others of this nonuse led to an actionable failure to accurately predict a storm that resulted in the deaths of several seamen.

The court emphasized that the issue was broader than merely whether this particular tangible method of information gathering (weather buoy) was necessary to effectively carry off the weather monitoring functions.

> [While] we are dealing here with a tangible object, a particular supplier of information that goes into the mix . . . the principle involved is not limited to finding unreasonable the failure to maintain a particular supplier, but is universal, and would apply to anything judicially found unreasonably to impair the quality of the prediction. An expert might testify . . . that to prepare a fully adequate weather report would call for still additional buoys, or for more advanced computers . . . Or it might find malfeasance in the processing. All of these are matters which Congress reserved . . . by the discretionary exception. . . . The short answer to this claim

[116] 790 F2d 199 (1st Cir. 1986).

As seen with the use of computer models, where the underlying claim is not against the actions of a particular official, but rather the reasonableness of the actions of an agency, it is appropriate to consider in court whether the particular, automated procedure adopted by the agency reflects a reasonable accommodation of the interests involved.

In *Tripp v. Coler,*[119] the State Department of Public Health's method of identifying which Medicaid recipients have overused medical services violated the statutory scheme where there was a reliance on computer generated statistics and standard deviations without direct attention to the medical or other needs of the particular parties. The Department identified over-users by computer records that detail all medical services rendered to each Medicaid recipient. "The program analyzes the entire Medicaid population periodically to determine average and standard deviations of medical use per recipient per quarter and identifies recipients with usage in excess of the quarterly established maximum usage limit."

The procedure of suspending rights and notifying the Medicaid recipients who have been targeted as overusers did not satisfy procedural due process.

> The risk of erroneous deprivation is also substantial because the system gives the recipient so little time to appeal and so little information . . . The . . . government's interest in the status quo, seems almost trivial in comparison because the steps necessary to remedy the problems require minimal effort and cost. . . . Assuming the Department will continue to computerize all relevant information regarding each recipient, due process can be satisfied by simply photocopying the computer printout and enclosing these papers with the notice forms already used.

This procedure was required.

The most common context in which the claim or fact of computer error is challenged in court in connection with governmental action occurs with criminal justice activity and, especially, in reviewing the ade-

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of computer errors); Rodriguez v. United States, 629 F. Supp. 333 (ND Ill. 1986) (where computer error created an excessive refund, there was no liability for agent who issued the levy for nonpayment of taxes, but levy was invalid); United States v. Bruce, 642 F. Supp. 120 (SD Tex. 1986) (due to computer error involving the misplacement of a comma, IRS issued a tax refund check that was over ten times the amount actually due, but government action to recover payment was barred by the two-year statute of limitations, which began to run from the time that the taxpayer received the refund check, rather than when it was negotiated).

119 640 F. Supp. 848 (ND Ill. 1986).

In *Heine v. Connelly,*[122] the court dealt with an easier case in which the character of the computer error did not create an underlying lack of support for the probable cause judgment, but merely reflected an administrative or clerical error. In a civil suit based on a claim of unlawful arrest and subsequent sexual assault by a prisoner, the court held that the arrest was valid even though there was a computer error in the information contained in the capias. The arresting officer had probable cause to act based on bench capias despite inaccurate information reflected in a computer printout that incorrectly reported the underlying charges associated with the capias. The capias was generated by the suspect's separate offense against the court and was justified by the failure to appear, rather than the original, underlying charges.

Where the arrest or seizure occurs without judicial intervention through a warrant issuing procedure, it is less clear that good faith arguments based on computer error should be permitted to justify the governmental action. The court, in *People v. Joseph,*[123] concluded that the exception does not cover this context because of the risk of abusive behavior that is involved. In that case, the defendant's arrest was based on information received by the arresting officers from a police mobile computer unit that indicated that the defendant was wanted on a bond forfeiture warrant that had, in fact, been recalled 11 days earlier. The defendant filed a motion to suppress the drugs seized when he was arrested. The court noted that

> We are not convinced that the good-faith exception recognized by the Supreme Court in Leon is applicable to the case at bar. In that case the court dealt with evidence seized by police officers acting on a facially valid search warrant which was issued by a State court judge after an independent determination of probable cause. In the case at bar, no such safeguard or intervening factor is present.

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[123] 128 Ill. App. 3d 668, 470 NE2d 1303, 83 Ill. Dec. 883 (Ill. App. Ct. 1984).

CHAPTER 8

International Trade Considerations

PART A. IMPORT CONSIDERATIONS

PART B. EXPORT CONSIDERATIONS

liminary), USITC Pub. No. 1735 (Aug. 1985) (preliminary ruling supporting a finding of material injury on claimed dumping in relation to 64K chips); EEPROM Antidumping Petition, reprinted at 4 CLR 458 (1985).

Page 8-8:

Add at end of subsection.

During 1986, anti-dumping laws became a focal point of governmental and private action regarding Japanese semiconductor manufacturers and the U.S. industry. The United States and Japan entered into a settlement on July 31, 1986 of allegations concerning Japanese dumping of semiconductor products in the U.S. market.[21.1]

The agreement requires that the Japanese government "impress upon the Japanese manufacturers and users of semiconductors the need to aggressively take advantage of the increased market access opportunities in Japan for foreign-based firms. . . ." Japan will establish an organization to provide sales assistance for semiconductor producers attempting to enter the Japanese market. The organization will also make quality assessments of foreign semiconductor products. The government will also promote creation of long term relationships between Japanese users and foreign producers.

Both countries agreed to discourage inordinate increases in production capacity. Also, Japan will monitor cost and export data for listed products and will "take appropriate actions available under laws and regulations in Japan to prevent exports at prices less than company-specific fair value."

In December 1986, however, the ITC completed an investigation of Erasable Programmable Read Only Memories (EPROM) pricing practices, concluding that a pattern of dumping had occurred.[21.2] The ITC determined that a serious decline in financial performance in the U.S. industry resulted from a "precipitous price decline in the U.S. market which resulted in severe financial losses in the domestic industry." In defining the industry effect, ITC applied the statutory language referring to domestic manufacturers of "like products" to include all EPROMS, including all memory chips manufactured with metal oxide semiconductor process technology, but excluding electronically erasable read only memories because the ease of electronic erasure is a feature establishing

[21.1] 5 CLR 191 (1986).

[21.2] In re Erasable Programmable Read Only/memories From Japan, Inv. No. 731-TA-288, US Int'l Trade Comm'n Pub. No. 1927 (Dec. 1986), reprinted in 5 CLR 542, 618 (1987).

of giving such patents broad scope, the court held that, viewed as a whole and considering the totality of the changes reflected in the new calculators, the imported calculators did not infringe the patent. "It is not appropriate in this case, where all of the claimed functions are performed in the accused devices by subsequently developed or improved means, to view each such change as if it were the only change from the disclosed embodiments of the invention." The court emphasized that it would view the entirety of the technology embodied in the accused devices that must be compared with the patent disclosure. "[In light of] all of the modifications in the accused devices, we conclude that they reflect more than mere substitution of an embellishment made possible" as a result of new technology.

Especially as it relates to semiconductor chip competition and related industries, litigation in the ITC continues to be a focal point for resolving major issues related to intellectual property rights. For example, in *In re Certain Dynamic Random Access Memories, Components Thereof, and Products Containing Same,*[30.3] the administrative law judge (ALJ) reviewed a variety of patent and patent infringement claims relating to DRAM products and technology. In its initial decision, the ALJ concluded that faulty disclosure rendered several of the asserted Texas Instruments U.S. patents invalid and that others were properly used because of implied licenses deriving from an actual license to practice a related patent. Nevertheless, a claim of infringement was tentatively upheld regarding technology imported by one of the Japanese companies.

[30.3] ITC No. 337-TA-242 (June 1987).

Add at end of note 34.

See Certain Coin-Operated Audiovisual Games & Components, Inv. No. 337-TA-105, 1984 Copyright L. Rep. (CCH) ¶ 25,652 (Int'l Trade Comm'n 1984) (exclusion order granted); In re Certain Personal Computers & Components Thereof, Inv. No. 337-TA-140 (Int'l Trade Comm'n Mar. 20, 1984) (exclusion order against completed, infringing personal computers and certain nearly completed assemblies of parts).

[1] "Industry" Defined

Page 8-14:

Add at end of runover paragraph.

In a noncomputer context, the ITC has recently limited the scope of definition of an industry affected by illicit imports in the context of intellectual property rights. In *In re Certain Products with Gremlins Char-*

EAA, but made major changes intended to streamline export activity and enhance the reliability of U.S. companies as international trading partners. The revised statute will be accompanied by substantially revised regulations.

Among the major provisions of the amended act are separate regulations for the export of "low-technology" items exported to members of COCOM.[74.2] The EAA defines these "low-technology" products as "goods or technology . . . at such a level of performance characteristics that the export of the goods or technology to controlled countries requires only notification [not approval] of the participating countries of the Coordinating Committee [COCOM]." [74.3] Regulations have been promulgated establishing a general license (G-COM) for export of these low-technology commodities.[74.4] This licensing exception encompasses most, if not all, personal computers.

Under current regulatory structure, both software and the media on which it is recorded require licenses for export. For most software, a general license (GTDR) will be available. The GTDR does not apply to programs used in encryption or in the design of integrated circuits.[74.5] Most commercially made diskettes can be exported under a general license (G-DEST).[74.6]

The EAA also provides that export controls based on national security purposes cannot be imposed on items simply because they contain an embedded microprocessor, "if such microprocessor cannot be used or altered to perform functions other than those it performs in the good in which it is embedded." [74.7]

The EAA also places restrictions on the extent to which policy action by the government can alter rights to perform existing export contracts. The EAA provides that the impositions of foreign policy controls cannot ordinarily prohibit or curtail the export or reexport of goods, technology, or other information under a contract entered into before the President has reported the intention to act to Congress.[74.8] Existing contracts can be altered only if the President determines and certifies to Congress that a "breach of the peace" poses a serious threat to stra-

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[74.2] See discussion at ¶ 8.06[4], main volume.

[74.3] 50 USC § 2404(b)(2) (Supp. 1986).

[74.4] See generally 50 Fed. Reg. 38511 (1985).

[74.5] See generally 15 CFR § 379; 50 Fed. Reg. 38511 (1985).

[74.6] See 50 Fed. Reg. 37112, 37136 (1985).

[74.7] 50 USC § 2404m (Supp. 1986). See Burroughs Corp. v. United States, 664 F. Supp. 507 (Ct. Int'l Trade 1987) (electronic desk calculators were properly classified as data processing machines where they were preprogrammed to conduct complex business calculations).

[74.8] 50 USC § 2405m (Supp. 1986).

Initially, under the amended EAA, the President may expand or impose export controls for policy reasons only after "consultation" with specified committees of Congress.[83.1] In addition, before imposing the controls, the President must submit a report specifying the purpose of the controls, the consultation conducted with industry prior to imposing the control, the nature of alternative means considered or attempted, and the availability of the embargoed items from other sources.[83.2]

The EAA also provides that the imposed foreign policy controls cannot automatically affect the rights of U.S. companies to continue export or re-export activity under existing contracts.[83.3] The existing export contracts are affected only if the President determines that there is a breach of peace directly threatening the country's strategic interests and that curtailing the contracts will be instrumental in remedying the situation. In such a situation, the controls will last only as long as necessary to this purpose.[83.4]

83.1 50 USC § 2405f(1).

83.2 50 USC § 2405f(2).

83.3 50 USC § 2405m.

83.4 50 USC §§ 2405m(A)–2405m(C).

[4] Multilateral Controls

Page 8-25:

Add note 88.1 at end of last paragraph in subsection.

88.1 The EAA was amended in 1985. Among the pertinent changes in the export control laws were major redefinitions of the extent of prior approval required for export activity to COCOM countries. The thrust was to substantially reduce prior approval requirements for low-technology exports within COCOM. See ¶ 8.06, this Supplement.

Page 8-27:

Add the following new section.

¶ 8.07A INTERNATIONAL CLASSIFICATION OF SOFTWARE [NEW]

Issues of international software protection have been controversial for more than 15 years. They have engendered many core policy decisions regarding whether, and in what form, product or technology protections should develop. These issues are often addressed in terms

Decisions classifying software for legal purposes involve choices among these (and other) features that allocate third-party protections. The various national decisions are often incorporated, at least initially, within the conglomerate of traditional intellectual property law, but ultimately go below that category, establishing controls and protections based on function, effect, and policy purpose.

The subissue that is present here and distinguishes purely national from international considerations involves expressly determining not only what protection is or should be given to programs in Brazil, for instance, but how this protection interlocks with protection in China, Japan, and Germany. The linkage eventually may come from similarity in legal approach within the various national borders. More often, however, it derives from multilateral treaties relating to the subject matter such as are already in existence with respect to copyright and patent law.

[1] International Decisions About Protection

In selecting among trade secrecy, patent, and copyright law, the first question is whether or not the technology and associated products should receive any protection against reproduction or use by unauthorized third parties. The strong weight of authority on this issue supports the conclusion that some form of protection is appropriate for programs, at least in some of their many variations of form and type.

In most countries that have expressly dealt with the question, some protection against third-party intervention and copying has developed. There is an apparently natural progression that is followed in this regard in most large or developed countries. The initial phase involves uncertainty and speculation about whether *any* protections are available for most computer programs. This uncertainty reflects the fact that software does not fit neatly into *any* of the traditional categories of intellectual property law, thus creating the perception that none of the prevailing laws apply.

This period of speculation commonly leads to an early case law phase. While the connections are not necessary or invariant, in most countries the cases extend some protection to software. This occurred, for example, in Germany, France, and Japan and preceded express legislation in those countries.[98.2]

In some countries, however, the case law at first increases uncertainty and may even suggest that no protection is provided. This was the initial effect in Australia before the problem was resolved by legislation.[98.3] Commonly, however, even where the cases are favorable, the

[98.2] See ¶¶ 8.10A[3], 8.10A[4], 8.09, this Supplement.

[98.3] See ¶ 8.10A[1], this Supplement.

The basic choice is between patent and copyright protection. The two involve widely divergent approaches to protecting technology. Patent law imposes relatively high standards of innovation and originality to qualify for protection, requires public disclosure, and establishes a relatively short-term protection.[98.10] It does, however, grant control of any use of the protected technology, including independent development. As a technology-based field of law, patent protects the technology itself. In contrast, copyright law has literary origins and protects "expression," which arguably refers to program code and design. It has relatively low thresholds of required originality and grants extended periods of protection.[98.11] Copyright laws do not require "disclosure" on public record. Copyright prohibits reproduction (copying) but not independent development. In most countries, this includes protection against adaptations that modify but substantially retain the original expression of the work. In European countries, the "author" of a copyrighted work also has various moral rights to prevent changes in the work.[98.12]

Although uncertainty remains characteristic of the field, developments during the past two years reflect a significant degree of emerging international consensus about appropriate protections. The consensus is developing, at least insofar as the issue pertains to the initial source and availability of basic protection of software. The consensus involves use of both copyright and patent protection, with the primary protection for most types of software being under copyright law.

[98.10] See generally Chapter 2, main volume.

[98.11] See generally Chapter 1, main volume.

[98.12] See *Nimmer on Copyright* §§ 17.01–17.11.

[a] Patent

Computer programs are a form of technology, and it would seem most obvious that protection under patent law would become a primary option. As has been true in the United States, however, patent protection for even highly innovative software has been uncertain, and this, coupled with the high thresholds of innovation required for patent protection, reduces the importance of patent law for software technology.

The recurring issue in all countries in which patent protection has been examined focuses on the extent to which the program structure, organization, and approach can be patented as a process divorced of the hardware or other aspects of a system. In the United States, this issue focuses on the developed premise that no patent can issue for a

For example, in *Schlumberger Canada Ltd. v. Commissioner of Patents,*[98.17] a Canadian court denied protection to a system for measuring and analyzing data from oil well bore holes, analogizing this computer system to a *mental* process. In contrast, the Paris Court of Appeals allowed patent protection to a statistics analysis system applied to geological survey data.[98.18]

The interpretation issue has not been squarely addressed in most patent law systems. The probable result when it is will be that a program, standing alone as a method of operation, will often be too abstract for protection and, especially when it implements a mathematical process, will be unpatentable. Claims for protection of inventions using a program are not affected by the exclusion.

[98.17] 546 CPR (2d) 204 (1981).

[98.18] In re Schlumberger, PIBD-1981 N. 285 III-175 (Paris Cour d'appel June 15, 1981).

[b] Copyright Protection

Although copyright law is primarily a field for the protection of literary and artistic rights, it is also the dominant focus of computer software protection internationally. One of the main reasons for this is that the character of the protection under copyright and the ease of access to that protection mesh smoothly with the most visible, perceived threats to the industry in the form of so-called commercial piracy. In most of its commercially useful forms, software technology can be readily reproduced through mechanical means, and the result is an emphasis on a field of law that deals directly with the right to reproduce copies of a product.

As of this writing, copyright protection is expressly available by case or statutory law to at least some computer software in the United States, Great Britain, France, West Germany, Australia, Japan, Italy, Portugal, the Netherlands, and Canada.[98.19] In addition, in many countries where no decision has yet been reached, there is a likelihood that copyright in some form will be applied to software products. This result is at least fairly likely in most European countries, such as Denmark, Sweden, Spain, Finland, and Norway, which have not as yet expressly encompassed software in copyright. The result is less likely in countries outside of this area where the immediate reference to experience in closely related countries is not persuasive.[98.20]

[98.19] See ¶¶ 8.10A[1]–8.10A[9], this Supplement.

[98.20] Copyright Act § 31(1)(a)(i) (Australia).

Because of the difficult match between the technology and the copyright laws, in most of the countries where some protection under copyright is clearly present, it has come about from express legislation. In several of these jurisdictions, the statutory action involves little more than adjusting the list of works covered by copyright to specifically include computer programs, perhaps adding specific provisions relating to the rights of the buyer to make backup copies of a program. This occurred in Japan, West Germany, and Great Britain.[98.22] In this form of inclusionary legislation, the common approach is to define a computer program as a literary work.

The apparent intent of such legislation is to fully apply the broad spectrum of copyright principles to computer programs, perhaps thereby avoiding numerous policy decisions and ongoing uncertainty about the scope of protection. Judging by the experience in the United States, however, and discussions and articles about the status of the law in the other countries adopting this approach, such a result seldom occurs. In the United States, adoption of the general language was followed by continuing uncertainty about what might be described as second- and third-generation protection issues.

The ongoing controversy stems from the clearly unique character of computer programs as a subject of copyright protection. The issues in the United States and elsewhere under this form of legislation can be expected to move to second-generation questions about whether the statute includes program object code, programs with no expressive output for humans (operating system programs), and programs that are "printed" on ROM chips. In the United States, at least, the third-generation issues follow, focusing on implementing concepts of "copying," "adaptation," and the like in the structured, esoteric world of coded programs.[98.23]

The active character of the litigation system in the United States, has led to rapid movement through these issues. Several appellate-level decisions establish clear benchmarks supporting protection under the second-generation focus. In other countries, given a lower rate of litigation, movement through second-generation questions is likely to be far slower. The result may be extended uncertainty over a long period under the general statutes as they apply to particular forms and types of software.

The degree of detail beyond mere general inclusion of programs within copyright varies among countries adopting this approach. In some countries (Australia and France, for example), protective legislation oc-

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[98.22] See ¶¶ 8.10A[4], 8.10A[8], this Supplement.

[98.23] See ¶ 1.09A, this Supplement.

The Copyright Amendment Act also deals with the form of creation or distribution of programs as they relate to copyright. It provides that the transmission of a program over a telephone line constitutes "supply" for purposes of copyright.[98.28] On the other hand, as is true in the U.S. Copyright Act, the amendment clarifies that a work is in "material form" if it is in any "form (whether visible or not) of storage from which the work or adaptation, or a substantial part of [it] can be reproduced." [98.29]

In Australia, special provision is made for reproduction of backup copies of the program by the owner of a copy. The Act expressly authorizes this unless "contrary to an express direction by or on behalf of the owner of the copyright." [98.30] This language parallels provisions of Section 117 of the U.S. Copyright Act, but more specifically it establishes a mechanism for the owner of the copyright to prevent even backup copying. Express provision of a right of a copy owner to make backup copies is also included in the recent Japanese legislation "if and to the extent deemed necessary for the purpose of exploiting that work in a computer by himself. . . ." [98.31]

Japanese legislation dealing with copyright of computer programs also reflects relatively detailed treatment of the scope and character of protection. The most notable provision is that the legislation expressly excludes protection of "any programming language, rule or algorithm" used for making the computer program.[98.32]

[98.28] Copyright Amendment Act of 1984 (Australia) §§ 5, 6; Copyright Act § 1321 (Australia).

[98.29] Copyright Amendment Act of 1984 (Australia), § 4(2).

[98.30] Law for Partial Amendments to the Copyright Law, No. 62 of June 14, 1985, § 8; Copyright Law (Law No. 48, 1970) art. 47bis (1) (1985) (as amended).

[98.31] Id.

[98.32] Law for Partial Amendments to the Copyright Law, No. 62 of June 14, 1985, § 4; Copyright Law (Law No. 48, 1970) art. 10(3) (1985) (as amended).

[3] Nontraditional Protections: The Ongoing Debate

Although it can be adapted to protection of computer software, copyright protection is not extremely well-suited to this role, especially as the topic of protection shifts toward programs of a type that are more clearly oriented to technology and process rather than expression. Patent, on the other hand, is largely removed from the marketplace for most programs because of the high threshold standards to obtain protection, as well as the cost and time involved in qualifying.

Against this background, there has been relatively extensive international reconsideration of the character of protection desired for soft-

The Universal Copyright Convention parallels aspects of the Berne agreement, most notably that related to national treatment. The convention was tailored, however, to fit the United States' requirements for participation. It permits countries to establish formalities for protection, including the use of the traditional copyright symbol, ©, accompanied by the proprietor's name and the date of publication. The minimum term of protection required is the author's life plus 25 years.[98.34]

Although special legislation might be desired to tailor protections to national policies, unless the terms of these general conventions are met, the character of the protection actually conveyed in the international marketplace is severely restricted. The most significant form of new intellectual property protection involves the Semiconductor Chip Protection Act of 1984 in the United States (discussed in ¶ 1.05 of the main volume). This Protection Act provides for reciprocal recognition of foreign products where there are equivalent protections available in the other country. As a result of these provisions, the Protection Act has had an international effect in simulating legislative and administrative action in a number of countries. Pending the creation of equivalent protections, it provides for interim protection orders in the United States.[98.35] At this writing, with the exception of Japan, which was engaged in substantial controversy with the United States regarding the protection and marketing of semiconductors, all major industrial countries had obtained interim protection under the Protection Act and the interim orders were extended pending final legislation in those countries (including the EEC). The success of the Semiconductor Chip Protection Act of 1984 in stimulating action for foreign chip protections is due in large measure to the fact that the United States is the largest market for semiconductor products and, thus, is in a position of substantial leverage regarding approaches to reciprocal protection issues. Although a draft treaty focused on programs has been proposed, active work toward acceptance of the terms of the treaty would require substantial time and effort, which may not be consistent with a lack of clear industry support.

[98.34] See Universal Copyright Convention Articles II–VI, WIPO Texts.

[98.35] See 51 Fed. Reg. 30, 690 (Aug. 28, 1986).

[b] International Proposals

Despite the inertia and uncertainty, there are reasons to argue as a preliminary matter that copyright in its entirety is not the best mode of dealing with computer program protections. There are problems of both overprotection and underprotection.

From the standpoint of overprotections, copyright does not concurred in Japan, centering on proposals made by the Ministry for International Trade and Industry (MITI).

The MITI proposal blended copyright and patent concepts, along with relatively new approaches to software protection. It called for an extension of modified copyright, granting authors rights to prevent unauthorized copying and use but restricting the term of protection to 15 years from the creation of the program.[98.39] However, the proposal also called for a registration and examination procedure that would not require full public disclosure of the program, but would require a public disclosure *outlining* functions of the program. In addition, there were provisions for compulsory licensing with compensation to the author in any case where the government considered this to be in the public interest.

The examination process and outlined disclosure was based, arguably, on a policy similar to that of a patent, in which protection of the technology is afforded with the condition that some access to information about the process is allowed. The compulsory licensing provision reflected a desire to promote multi-party development of the technology while avoiding costly and inefficient duplication of development effort. Compulsory licensing was seen in other countries, however, as threatening the viability of traditional secrecy or confidentiality protections and establishing a scheme through which Japanese nationals could unfairly appropriate the work of others.[98.40] The proposal was withdrawn amid controversy and replaced by a more traditional copyright approach.

The MITI proposal is not the only effort to reconsider the desirability of full copyright protection. In 1984, a white paper issued by the Canadian government proposed a substantially tailored approach to software protection.[98.41] This report advocated copyright protection of programs in source code or other human readable form, but more limited protection for "programs in machine-readable form" (object or machine code). The special form of protection for machine code versions of programs would have been limited to five years from the date of publication. As with the Japanese proposal, this was withdrawn in favor of a more traditional approach under copyright law.[98.42]

[98.39] WIPO, Copyright (Sept. 1983); Karjala, "Lessons from the Computer Software Protection Debate in Japan," 1984 Ariz. St. LJ 53.

[98.40] See Note, "Legislation Introduced to Protect Copyrights Abroad," 12 Computer L. & Tax Rep. 4 (1985).

[98.41] *From Gutenberg to Telidon, A White Paper on Copyright: Proposals for Revision of the Canadian Copyright Act* (Supply & Services Canada, Ottawa 1984).

[98.42] *A Charter of Rights for Creators* (Report of the Subcommittee on the Revision of Copyright, Supply & Services Canada, Ottawa 1985).

Page 8-33:

Add the following new section.

¶ 8.10A SELECTED NATIONAL LAWS [NEW]

[1] Australia

The Australian Copyright Act was amended in 1984 to expressly include computer software. This was a reaction to court decisions. The Australian Federal Court in *Apple Computer Inc. v. Computer Edge Pty. Ltd.,*[121.1] however, applied copyright under the old law to a computer program. The Australian act defines a computer program as "an expression, *in any language, code or notation,* of a set of instructions . . . intended . . . to cause a device having digital information to perform a particular function."[121.2] It defines an adaptation of a computer program as "a version of the work (whether or not in the language, code, or notation in which the work was originally expressed) not being a reproduction of the work."[121.3] It provides that the transmission of a program over a telephone line constitutes "supply" for purposes of copyright.[121.4] On the other hand, as is true in the U.S. Copyright Act of 1976, the amendment clarifies that a work is in "material form" if it is in any "form (whether visible or not) of storage from which the work or adaptation, or a substantial part of [it] can be reproduced."[121.5] Special provision is made for reproduction of backup copies of the program by the owner of a copy. The act expressly authorizes this unless "contrary to an express direction by or on behalf of the owner of the copyright."[121.6] Although resolved by special legislation, the circumstance of software protection in Australia under copyright took one final turn in 1986. The Australian Supreme Court reversed the federal court and held that software operating systems embodied in ROM did not qualify for copyright protection under the preexisting copyright law.[121.7] The majority held

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[121.1] 53 ALR 225 (1984).

[121.2] Copyright Act of 1969 ¶ 31(1)(a)(i).

[121.3] Copyright Amendment Act of 1984, § 3(a).

[121.4] Copyright Amendment Act of 1984, §§ 5, 6; Copyright Act § 132.

[121.5] Copyright Amendment Act of 1984 § 3(g).

[121.6] Copyright Amendment Act of 1984, § 4 (2). See generally Lieberman, "The Protection of Computer Software in Australia," 9 Australian Bus. L. Rev. (Aug. 1981).

[121.7] See Computer Edge Pty. Ltd. v. Apple Computer, Inc., (Australian S. Ct., June 13, 1986), reprinted at 5 CLR 87 (1986) (Australian Supreme Court held that Apple Computer operating systems embodied in ROM do

Patent law apparently applies to inventions in which software is part of a larger system but not to cases where the claim goes solely to the software as such.[121.11]

Trade secret law parallels that in the United States.[121.12]

[121.11] See Schlumberger Canada Ltd. v. Commisioner of Patents, 56 CPR (2d) 204 (1981).

[121.12] See Vaver, "Civil Liability for Taking or Using Trade Secrets in Canada," 5 C. Bus. LJ 253 (1981).

[3] Federal Republic of Germany

In 1985, the Copyright Act was amended to expressly include computer programs as a form of literary work.[121.13] The scope of protection, the types of programs, and the forms protected are not resolved. German law requires individuality and creativity in a copyrightable work, which may affect some program copyrights.[121.14] Several court decisions deal with the allocation of ownership rights in software.[121.15]

The German Patent Act (art. 52(2)(c)) expressly excludes "programs for computers" from the definition of inventions for purposes of patent coverage. The exclusion applies only to programs "as such" and apparently does not bar patents for inventions that use programs as one part of a larger invention.[121.16]

[121.13] Copyright Act UrhG § 2, BGBI, 1965, 1273.

[121.14] OLG Frankfurt, Nov. 6, 1984, 1985 BB 139.

[121.15] OLG Koblenz, August 13, 1981, BB 83, 992; BAG Sept. 13, 1983, statikprogramme, GRUR 84, 429–431.

[121.16] Patent Act, art. 52(3). See BGH, Optische Wellenleiter, 1984 GRUR 211; BGH, "straken," 1977 GRUR 657.

[4] France

French copyright law was amended in 1985 to include computer software, but no express definition of this term was provided.[121.17] The statute alters ownership rules, establishes a 25-year period of protection, excludes certain moral rights to prevent modification of the work, protects against unauthorized "use," and allows making a backup copy for private use.

Patent law parallels the European Economic Community model, expressly excluding computer programs "as such" from patent protec-

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[121.17] See generally supra ¶ 8.07A[3][b]. Law N. 85-660, arts. 1, 45–51, 1985 JO 7495–7500.

aimed at data processing, and programs limited to small, eight-bit computers.[121.23]

[121.23] See Atkin & McKenzie, "Licensing Computer Software in Latin America: The Impact of the Technology Transfer Laws," 1 Computer Law. 22, 24 (1984).

[7] Netherlands

The copyright statute does not expressly include or refer to computer software, but Dutch case law supports the conclusion that programs are protected by copyright.[121.24]

Patent law provisions are apparently analogous to those discussed in reference to European patent laws generally. Patents for devices using software are available, but not for software standing alone.[121.25]

The Netherlands is a signatory of both the Uniform Copyright Convention and the Berne Convention.

[121.24] See Atari, Inc. v. Philips Nederland, Auteursrecht/ Amr 56 (Court of Appeals of Amsterdam [Gerechtshof] Mar. 31, 1983) (copyright applies to both visual and underlying program aspects of video game); Holland Int'l Computer Servs. v. Business Automation Sys. BV, District Court Hertogenbosch, January 30, 1981, Bijblad Industriele Eigendom 323 (1983); Keustermans, "Protection of U.S. Software in Belgium and the Netherlands," 2 Computer Law. 19 (1985).

[121.25] See In re Electrical & Musical Indus., Bijblad Industriele Eigendom, n.r. 104 (Jan. 10, 1983).

[8] United Kingdom

The Copyright (Computer Software) Amendment Act 1985, effective in September 1985, defines a computer program as equivalent to a literary work for copyright. The act defines "a version of the program in which it is converted into or out of a computer language or code, or into a different computer language or code" as an adaptation of the program.[121.26] Beyond that, case law in the United Kingdom supports the contention that copyright protection is generally available, probably independent of the form or type of program involved.[121.27]

[121.26] See ¶ 8.07A[2].

[121.27] See Sega Enters. v. Richards, 9 FSR 73 (1983); Trustcode v. WW Computing Ltd., 9 FSR 502 (1983); Format Communications Ltd. v. ITT (UK) Ltd., 9 FSR 502 (1983). As to the scope of protection under copyright, see Leyland Motor Corp. v. Armstrong Patents Ltd., 31 PTCJ (BNA) 500 (1986) (House of Lords holds that copyright holder in spare parts drawings cannot restrain others from using the drawing to make spare parts).

PART III Information Age Issues

CHAPTER 9

Computer Crime

defendant filed a motion to suppress the drugs seized when he was arrested. The court observed that

> the good-faith exception recognized by the Supreme Court in *Leon* applies only to evidence seized by police officers acting on a facially valid search warrant issued by a judge. It does not apply to an arrest or search without a warrant.

Where the computer data is the subject of a search or seizure, rather than the basis for one, the rules of probable cause and zones of expected privacy established for other types of property apply. One result of this is illustrated in *United States v. Horowitz,*[0.5] where the defendant transmitted data on pricing and other contract bid matters by modum to a third party who would prepare bids on government projects. This material was taken from the confidential records of a competitor and enabled the third party to underbid the competitor on government contracts. The third party stored the material on computer tapes in his own premises. When those premises were seized under a valid search warrant, the material was discovered and used to convict the defendant of making false statements to the Air Force. The court held that the defendant had no reasonable or enforceable expectation of privacy in the tapes and no expectation of privacy in the third party's premises.

[0.5] 806 F2d 1222 (4th Cir. 1986).

PART B. STATE LAW

¶ 9.04 FINANCIAL FRAUD

Page 9-9:

Add note 15.1 at end of last paragraph in subsection.

[15.1] See, e.g., State v. Langford, 467 So. 2d 41 (La. Ct. App. 1985). The court in *State v. Langford* held that a conviction for theft was proper where, knowing that a bank would not voluntarily loan him $225,000, the defendant capitalized on a computer error that assigned him a code indicating a right to unlimited overdrafts without charge on his checking account. The defendant obtained more than $800,000 without informing the bank of the error until he spent the money, which he could not repay. Id. See also People v. Schlicht, 709 P2d 94 (Colo. Ct. App. 1985) (theft conviction was appropriate when defendant withdrew $9,000 that had been mistakenly credited to his account; no defense of mistake of fact existed under facts). *Langford* has been affirmed. See State v. Langford, 483 So. 2d 979 (La. 1986). (Conviction for theft was appropriate where defendant knew that bank was making a mistake in permitting overdrafts of over $800,000 after having refused to loan

Page 9-11:

Add note 23.1 at end of next to last sentence in second complete paragraph.

[23.1] See Evans v. Commonwealth, 308 SE2d 126 (Va. 1983) (conviction of larceny by embezzlement was affirmed because defendants had no standing to challenge statute that defines data in computer as property that may be subject to various forms of theft; no proof of value of misappropriated customer list was required for petit larceny conviction). Compare State v. McGraw, 480 NE2d 552 (Ind. 1985) (no theft occurred where use of computer involved excess capacity of system and did not deprive owner of system of any access, use or other value, even if it is assumed that computer use is proper subject of theft charge).

Add note 23.2 at end of first sentence in paragraph.

[23.2] See State v. Gillies, 662 P2d 1007 (Ariz. 1983) (evidence sustained conviction for computer fraud).

Page 9-12:

Add at end of subsection.

Where computer-related fraud offenses are recognized, distinctions of parallels must be drawn for purposes of assessing penalties for various forms of crime. Often, the bases for the distinctions created may not be apparent or may turn on seemingly unimportant factors. One issue in computer and other types of fraud penalties involves the extent to which the presence or absence of an identifying mark signature relates to the degree of penalty or the basic criminal liability itself.

In *State v. Gomez,*[25.1] the court commented on the relevance of a signature in a financial crime. It held that the defendants could be charged with wrongful use of a financial transaction card by "signing" a sales slip, which carried a more severe sentence and proscribed different conduct than that proscribed in a statute prohibiting fraudulent use of a financial transaction card. "It is true that the reason for the distinction between . . . the financial transaction card offenses is rather hard to fathom, especially when most credit card sales probably involve a 'signing,' but we cannot say it is irrational or arbitrary. The court noted that examples of transactions that do not involve a 'signing' includes purchases by telephone or computer modem, use of a bank automated teller machine, or use of a credit card for identification."

[25.1] 722 P2d 747 (Utah 1986). See also State v. Standifer, 48 Wash. App. Ct. 119, 737 P2d 1058 (1987) (theft conviction appropriate based on use of ATM card, which, for purposes of statute, falls within definition of "credit card").

tion 165.07 regarding the crime of unlawful use of secret scientific information, which includes the act of making a tangible reproduction or representation of such secret scientific material. Scientific information is defined under Section 155.00 to include anything that evidences or records "a scientific or technical process, invention or formula . . . and which is not, and is not intended to be, available to anyone other than the person or persons rightfully in possession thereof."

The court held, in essence, that a computer program can fall into the pertinent categories in the statute as a scientific process.

> [A computer program] is the result of time spent and effort exerted on the part of a trained individual or individuals. Because such training requires study . . . the resulting program [is] both 'scientific' and 'technical.' Because the computer program directs a computer to perform steps in a prescribed procedure and operates on data to produce a desired result, it is a process.

Despite this ruling, however, the defendant was later acquitted by directed verdict for failure to prove unlawful copying.[49.2]

[49.2] See 3 Computer Law. 40 (1986).

[4] Valuation

Page 9-19:

Add note 50.1 at end of first paragraph.

[50.1] Some of the more recent state legislation dealing with information theft attempts to avoid the valuation issue. For example, the Virginia Computer Crimes Act creates criminal offenses relating to computer trespass, invasion of privacy by computer, and theft of computer services, each of which establishes a criminal offense independent of the dollar value of affected property. Va. Code Ann. 18.2-152.4–18.2-152.6 (Supp. 1986). The Texas Computer Crimes legislation punishes as a crime the breach of computer security without regard to valuation of the affected property. It does, however, define a higher-degree offense for "harmful access" conditioned on alteration of data and keyed in severity to the value of the property affected. Tex. Penal Code Ann. §§ 33.02–33.03 (Vernon 1986).

¶ 9.06 ACCESS AND USE CRIMES

[1] Criminal Access to a Computer

Page 9-21:

Add at end of note 57.

Recently enacted criminal legislation in Texas punishes access in the form of "breach of computer security." This action is defined in terms of using a

3. Computer invasion of privacy (intent to injure by examining employment, salary, credit, or other financial or personal information of another person); and
4. Personal trespass by computer (intent to cause physical injury to another).

Va. Code Ann. §§ 18.2-152.3–18.2-152.7 (Supp. 1986).

[3] Criminal Modification of Data

Page 9-23:

Add at end of note 65.

See also Va. Code Ann. § 18.2-152.4 (Supp. 1986) (computer trespass); Tex. Penal Code. Ann. § 33.02 (Vernon 1986) (harmful access).

Page 9-24:

Add at end of subsection.

In some questions about tampering, modification and misuse of computer systems arise where the modifications made by the defendant are relatively permanent, absent relatively expensive repairs or replacements, and where they are harmful to the proprietor of the system. These are relatively straightforward criminal events.

Other cases, however, involve modifications and uses that do not permanently harm or alter the system, its data or its programs. These cases require closer analysis of what interests are protected by criminal statutes regarding tampering and similar crimes.

In *Mahru v. Superior Court,*[65.1] a California court held that the statute prohibiting malicious alteration of computer systems does not penalize actions of an employee who, with employer's approval, merely operated the employer's computer in the course of business in a way that inconveniences or inflicts expense on another. Both the transience of the effect and the apparent authority to act weighed against criminal prosecution here.

In contrast, in *People v. Versaggi,*[65.2] a New York trial court properly applied that state's computer tampering statute to a situation in which the defendant had entered program commands into the system, causing it to shut down a telephone system. The defendant had argued that tampering requires permanent changes or damage to a system, but

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65.1 191 Cal. App. 3d 545, 192 Cal. Ct. App. 3d 90, 237 Cal. Rptr. 298 (Cal. Ct. App. 1987).

65.2 136 Misc. 2d 361, 518 NYS2d 553 (NY City Ct. 1987).

was no direct comparison of the counterfeits to those actually on file in copyright office.

Where the criminal action is based on claims that there is a copyright infringement, however, it is essential that the complaint and evidence actually establish that various exceptions to improper copying have not occurred. In some cases, there can be serious errors in coverage of the evidence leading to judgments for the defendant. This occurred in *United States v. Goss*,[68.2] in which the appellate court reversed a criminal conviction for allegedly unlawful distribution of counterfeit audiovisual works (video games entitled Karate Champ and Kung Fu Master). The prosecution had established at trial that the defendant had sold several circuit boards of each game to an undercover agent.

The prosecution's case was based on the allegation that the circuit boards were counterfeit. The court noted that this required a close examination of what parts of the game constituted the allegedly illegal "copy." The defendant presented evidence that the audiovisual works were actually in ROM chips placed on the boards. The court held that the chips rather than the boards were the relevant copies.

> We note the factual narrowness of our ruling. The technology of video games, like other computer technologies, is diverse and constantly changing. No single rule of law can be developed regarding what constitutes a 'copy' in a video game. Instead, the question of what component or components of a video game constitutes the 'copy' in which the audiovisual work is fixed is a determination of material fact which must be made by the trier of fact in each copyright case. We simply hold that, in light of extensive, uncontradicted expert testimony presented at trial, a reasonable jury could only conclude that the copies in this case were the ROMs."

The court found the chips to be the copies, but concluded that there was inadequate evidence to show that these were illegal. In particular, Goss raised the defense that he owned the chips legally and through a valid first sale he could resell them. "[Selling] such legally obtained [chips] would not infringe the copyright . . . regardless of whether [they] were attached to a counterfeit board."

[68.2] 803 F2d 638 (11th Cir. 1986).

[2] Communications Abuses

Page 9-26:

Add at end of note 80.

See United States v. Gregg, 629 F. Supp. 958 (WD Mo. 1986). (The provisions of Title III that regulate the "interception of wire or oral communitem undertake technologically to restrict access. For example, regarding radio transmissions, "readily accessible" means that the communication has not been scrambled or encrypted.[80.4]

Unauthorized interception of an electronic, oral, or wire communication in violation of the federal privacy law results in both criminal and potential civil liability. With respect to civil recovery, the injured party is entitled to appropriate relief, including injunctive relief, damages, punitive damage recovery, and attorney's fees.[80.5] If the interception is of a private satellite video transmission or a radio transmission that is not scrambled or encrypted, and the interception is not for tortious purposes or commercial advantage or gain, damages are limited to either $500 or $1000 depending on whether this is the first violation. In all other cases, the damages are the greater of either the sum of actual damages to the plaintiff and profits to the wrongdoer, or statutory damages of a maximum of $10,000 assessed at $100 per day.[80.6]

In addition to restricting interceptions of data transmissions, the Privacy Act also provides for criminal sanctions for unauthorized access to electronic communications that are stored in a facility involved in electronic communications services. An "electronic communication service" includes any service that provides users with the ability to send or receive wire or electronic communications.[80.7] Federal law now provides that it is an offense to intentionally access without authorization, or intentionally exceed an authorization to access, a facility through which an electronic communication service is provided and thereby obtain, alter, or prevent authorized access to a wire or electronic communication while it is in electronic storage in such system.[80.8] If the offense is committed for commercial advantage, malicious destruction, or damage, the first offense is punishable by up to $250,000 in fines and imprisonment for up to one year.

A final provision relevant to electronic transfers involves restrictions placed on the operator of the service. The Privacy Act prohibits any person operating an electronic communication service from knowingly divulging the content of a communication while in electronic storage or providing remote computing services to the public from knowingly disclosing the content to any communication that is carried or maintained on behalf of a customer and solely for the purpose of pro-

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[80.4] 18 USC § 2510(a)(16).

[80.5] 18 USC § 2520(b).

[80.6] 18 USC § 2520(c).

[80.7] 18 USC § 2510(a)(15).

[80.8] 18 USC § 2701(a).

trict court, in a case involving video recordings, held that the rationale of the *Dowling* case with respect to the National Stolen Property Act applies not only to infringing bootleg copies, but to pirated versions of a copyrighted work as well. A pirated copy is an unauthorized recording of a performance already released commercially. There must be some unauthorized taking of the tangible item, here the cassette, not merely an unauthorized recording.

[4] Electronic Funds Transfer Crime

Page 9-28:

Add at end of note 88.

See Roberts v. United States, 508 A2d 110 (DC 1986) (in an action for theft through unauthorized withdrawals from an ATM machine, a list of ATM transactions was properly admitted as evidence and, taken together, the evidence supported a conviction for ATM theft).

[5] Federal Computer Crime

Page 9-29:

Add at end of subsection.

The federal computer crime law was modified and extended in 1986 by the Computer Fraud and Abuse Act of 1986. The modification added offenses associated with wrongful access to a "federal interest computer." [92.1]

One such offense is committed by accessing the computer without authorization or by exceeding authorized access. The offense requires that the access (or use) further an intended fraud and result in obtaining anything of value, "unless the thing obtained consists only of the use of the computer."

A second access crime involves intentional unauthorized access and conduct that alters, damages, or destroys information in the computer or prevents authorized use thereof.

The third new offense entails trafficking in any password or similar information if the trafficking affects interstate commerce or the computer is used by or for the federal government.

For purposes of the first two new offenses, a "federal interest computer" is defined as a computer (1) exclusively for the use of a financial institution or the U.S. Government or, if not exclusively so used, the offense affects that portion of the use involving a financial institution or the government, or (2) which is one of two or more computers used in committing the offense, not all of which are located in the same state.

[92.1] 18 USC § 1030(a)(4)(5)(6).

CHAPTER 10

The Electronic Transaction Environment

PART A. INDUSTRY STRUCTURE

¶ 10.04 BRANCH BANKING AND REMOTE SERVICES

[1] Intrastate Branching Restrictions

Page 10-10:

Add after fourth sentence in second complete paragraph.

The Court of Appeals for the Fifth Circuit recently expanded the concept of what institutions constitute banks for purposes of implementing competitive equality under the McFadden Act. In *Department of Bank-*

machine in food store, owned and operated by store, is not unauthorized branch banking under federal law).

Add note 33.1 at end of last paragraph.

33.1 In a decision that will affect both EFT and the broader contours of banking, the Supreme Court recently upheld a multistate agreement permitting interstate holdings of banking operations among cooperating states in a region (New England). See Northeast Bancorp, Inc. v. Federal Reserve Bd., 105 S. Ct. 2545 (1985).

[3] Unauthorized Banking Services

Page 10-14:

Add at end of note 37.

See Independent Bankers Ass'n of NY v. Marine Midland Bank, NA, 757 F2d 453 (2d Cir. 1985) (automated teller machine in food store, owned and operated by store, is not unauthorized branch banking under federal law).

¶ 10.05 ANTITRUST CONSIDERATIONS IN EFT SYSTEMS

Page 10-15:

Delete see ¶ 12.06[3] *in note 39 and add the following.*

A recent decision regarding the credit-card system may also affect the eventual shape of EFT systems. See National Bancard Corp. v. Visa, USA, Inc., 779 F2d 592 (11th Cir. 1986) (interchange fee charged for various member banks in credit-card system was not an unlawful restraint on trade). The court in *National Bancard Corp.* stated:

> The difficulties in a credit-card or "cashless" transaction arise because each such transaction generates a trail of paperwork. This transactional paper representing the exchange is transferred among the parties until each eventually bears the burden that it has contracted to assume. This case concerns certain fees that attach in the transfer of this paper between the merchant-signing bank and the card-issuing bank. . . . In the VISA system this fee, a small fixed percentage of each charge, is levied only when the interchange is conducted through VISA's computerized service known as BASE II. Significantly, the parties to the interchange are not required to use BASE II. . . . In today's technology, the majority of these transactions are automated, so that the banks' and merchants' computers actually credit each others' computerized accounts. The effect, however, is the same as if each party were to present the paper in person and receive cash in exchange.

Id. at 594.

court noted that examples of transactions that do not involve a 'signing' include purchases by telephone or computer modem, use of a bank automated teller machine, or use of a credit card for identification.

Add at end of note 100.

See Roberts v. United States, 508 A2d 110 (DC 1986) (in an action for theft through unauthorized withdrawals from an ATM machine, a list of ATM transactions was properly admitted as evidence and, taken together, the evidence supported a conviction for ATM theft).

Page 10-37:

Add the following new section.

¶ 10.11 COMPUTERS IN TRADITIONAL FINANCIAL TRANSFERS [NEW]

While electronic funds transfer systems are relatively new, banking operations have relied on computerized data processing, recordkeeping, and information transmission for years. This reliance has led to litigation dealing with the effect of computer processes on the substantive law relating to a financial system, much of the substantive law of which was written with reference to less comprehensively electronic processing.[108]

As a matter of practice, most aspects of the processing of personal and business checks are handled electronically. This automation is essential to accommodate the vast flow of checks daily through the check collection process. The automation, however, ensures that in many cases there is not an independent, human review of particular items or, at least, that no such review occurs within ordinary time limits to permit action by the bank to prevent loss.

One aspect of this form of processing concerns the effect of automation on UCC concepts of when a check has been "paid" by the payor bank (the bank holding the account). The significance of "final payment" in this form is that, prior to its occurrence, the bank may simply

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[108] It is not within the scope of this book to deal extensively with the relationship between computerization and the large body of law dealing with deposit accounts, checks, and similar transfers. The text discussion examines only a few major themes that reflect on the degree of substantive law adjustment to computerization of financial transfers. For broader consideration of the relationship between computers and the checking or deposit operations of a bank, see generally HJ Bailey, *Brady on Bank Checks* (5th ed. 1979).

This possibility obviously responds to the automation of the steps actually taken in processing and deciding to pay an item. Automation of the decisional process affects other rights of an account-holding institution. For example, in determining whether a stop order has been placed on an item, most institutions use electronic rather than human screening of items when received. As a result, however, whether or not the stop order will be acted on depends not only on when it was received, but also on what information the system reviews and if that information was correctly supplied by the customer. In this context, because it has a statutory and contract duty to honor timely stop orders, a bank may not be able to safely rely on the automated system when an apparently "minor" error causes the computer not to identify the check when it is received.[111]

Similar problems may arise in situations where internal, administratively adopted holds are established through automation but the applicable program is incomplete or faulty. A balancing of interests occurs in such cases. If the defendant or the recipient of the funds was a wrongdoer and was aware of the bank's error, then restitution should be forced.[112] However, where the bank's claim is against an otherwise innocent party and it had nonautomated information sufficient to avoid the error, recovery may be disallowed.[113] In some cases, the balance

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See also First State Bank of McKinney v. American Bank of Sherman, 732 SW2d 404 (Tex. Ct. App. 1987) (drawee bank's failure to give notice of dishonor midnight deadline after receipt of checks at data processing center of payor bank made bank accountable for checks); Sass Trucking, Inc. v. Security Bank & Trust Co., 737 P2d 113 (Okla. 1987) (in dispute about final payment of check, receipt of checks by data processing center acting as agent and not part of branch-banking system constituted "presentment" and triggered midnight deadline for dishonor).

[111] See Parr v. Security Nat'l Bank, 680 P2d 648 (Okla. 1984) (bank's failure to honor stop payment was wrongful where customer had reasonably identified check, but 50-cent error in amount led to failure to stop payment because bank's computers were programmed to stop payment only when exact amount of check was recorded).

[112] This issue often arises in the context of a criminal prosecution. See People v. Schlicht, 709 P2d 94 (Colo. Ct. App. 1985) (withdrawal of funds erroneously credited to defendant's checking account was an adequate basis for conviction of theft); State v. Langford, 467 So. 2d 41 (La. Ct. App. 1985).

[113] See United States Fidelity & Guar. Co. v. Federal Reserve Bank of NY, 620 F. Supp. 361 SDNY (1985) (depository bank cannot collect against payor bank where it released funds on fraudulent check despite actual knowledge that there was no account at payor bank; depository bank's action was result of its computerized hold placed on check being in error, leading to premature action).

elements of the check does not recapture the ability to locate and stop payment on the check.

The stop order issued by a customer must reasonably identify the check. While a bank can reasonably rely on automation here, however, reasonableness requires at least notification to the customer of what is required and may involve the assumption of some risk by the bank. Typically, the critical information for an automated system is the exact amount of the check and the account number. Small inaccuracies not affecting these variables are routinely treated as irrelevant.[116] A number of courts, however, go further and hold that, especially under circumstances where the customer was not on notice of a contrary requirement, small errors in the amount of the check are not sufficient to render the order ineffective. In the absence of notice to the customer that the bank computer system searches for stopped checks by check amount alone, "[the bank] assumed the risk that it would not be able to stop payment of a check despite the customer's accurate description of the account number, the payee's name, the number and date of the check, and a de minimis error in the check amount." [117]

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[116] In Hughes v. Marine Midland Bank, N.A., 127 Misc. 2d 209, 484 NYS2d 1000 (Civ. Ct. 1985), for example, all items of description were accurate except for the check number and the order was adequate because of the capability of the bank's computer to identify and stop payment on the check by means of the account number and amount.

[177] Staff Serv. Assocs., Inc. v. Midlantic Nat'l Bank, 207 NJ Super. 327, 504 A2d 148 (Law Div. Super. Ct. 1985) (sixty percent error acceptable).

CHAPTER 11

Electronic Publishing and Data Communications

vice within the Communications Act section that requires a licensee to provide equal opportunities to competing candidates. It also erred in concluding that teletext was not capable of a "use," as that statutory term has been interpreted.[26.2]

[26.2] See Quincy Cable TV, Inc. v. FCC, 768 F2d 144 (DC Cir. 1985) ("Must carry" rules applied to cable telecasts violate First Amendment). Following this decision, the FCC adopted new rules that aim, over a 5-year period, toward a phasing out of compulsory carriage rules. Includes interim or transition rules. 51 Fed. Reg. 44606 (Dec. 11, 1986).

[2] Cable Transmission

Page 11-10:

Add note 30.1 at end of first sentence in first full paragraph.

[30.1] See In re Generic Investigation Into Cable Television Servs., 707 P2d 1155 (NM 1985) (State Corporation Commission can validly exercise regulatory control over cable companies' high speed intrastate digital data transmission services as a form of public utility telephone services).

Add after first full paragraph.

Section 532 of the Cable Communications Policy Act of 1984 (Cable Act) contains various provisions intended, *inter alia,* to assure wide diversity of information sources in cable systems by ensuring some level of access to at least portions of the cable system in the form of leased access.[30.2] In developing regulations for this aspect of the Act, the FCC issued an interpretation that found "no basis . . . in the Cable Act that would require cable operators to afford mandatory access to control systems [such as computer systems and associated hardware] by third party commercial channel lessees." The ruling is earmarked toward addressable cable systems and intends to provide a flexibility for protection of proprietary software and other information. This interpretation, along with other of the regulations, was challenged by various parties seeking either invalidation or clarification. The circuit court held that, absent a particular case to which the rule was being applied, the issue was not ripe for review.[30.3]

[30.2] 47 USC § 532.

[30.3] ACLU v. FCC, 823 F2d 1554 (DC Cir. 1987).

Add at end of section.

In some cases, the competitive issues regarding a particular database system are relatively clear and explicitly regulated. This is the case, for example, in the context of computerized reservation systems maintained in the airline industry. In 1984, the Civil Aeronautics Board (CAB) issued regulations dealing with the competitive characteristics of these systems.[46.1] The two alleged abuses were (1) so-called "display bias," the structuring of Computerized Reservations Systems (CRS) so that flights appear on travel-agency display terminals in an order determined not solely on the basis of service-related factors (e.g., time of departure and arrival, or directness of connections), but on the basis of airline identity or other factors that give precedence to flights offered by the operator or by other airlines that have contracted for such advantage and (2) "discriminatory access," the refusal of CRS operators to include in their data flight information of competitors at reasonable, nondiscriminatory prices. The CRS regulations limited the ability of CRS operators to bias travel agency displays, required operators to provide other airlines with nondiscriminatory access, and forbade CRS operators to "receive payment from any [airline] for CRS services unless made pursuant to a contract complying with the regulations."

In *Republic Airlines Inc. v. United Airlines Inc.,*[46.2] in a breach of contract lawsuit, the court held that there was no actionable breach because the underlying contract was unenforceable under these provisions. The contract provided that one airline agreed to include the other airline's flight information in its own computerized reservation system data base and failed to comply with governing regulations by providing that certain airlines would receive display preference and by providing for a price that was discriminatory.

[46.1] See Carrier-Owned Computer Reservations Sys., 49 Fed. Reg. 32,540, 32,562–32,564 (1984) (codified as amended at 14 CFR Pt. 255 (1986)).

[46.2] 796 F2d 526 (DC Cir. 1986).

¶ 11.06 DEFINING THE PRODUCT

Page 11-15:

Add at end of section.

As electronic and other methods of collecting and communicating information to a subscription audience proliferate, an increasingly common issue entails determining the conditions under which access to exist-sought an injunction on both a copyright action against Legi-Tech and a claim that its use violated the federal election law. The Circuit Court held that a decision on the election law issue should be made by the FEC. The copyright claim is invalid if the use of the lists sought by Legi-Tech is authorized by the election law. "Inasmuch as Congress expressly provided . . . for public dissemination of the precise type of compilation at issue here, the provisions of the Copyright Act . . . dealing with compilations generally, must be construed in a manner that will accommodate the [election law]."

¶ 11.07 INFORMATION AND PROPERTY

[1] Books and Articles

Page 11-16:

Replace citation in note 51 with 81 Colum. L. Rev. 516.

[2] Factual Items

Page 11-17:

Replace citation in second reference in note 55 with 81 Colum. L. Rev. 516.

Page 11-18:

Replace citation in note 59 with 81 Colum. L. Rev. 516.

Add at end of note 60.

Compare Rockford Map Publishers, Inc. v. Directory Serv. Co. of Colo., 768 F2d 145 (7th Cir. 1985) (plat map showing location of various parcels of real estate was copyrightable and was infringed by competitor's copying of output of the plat maps).

Page 11-19:

Add at end of note 61.

Compare Eckes v. Card Prices Update, 736 F2d 859 (2d Cir. 1984) (compilation of several thousand baseball card descriptions along with prices chargeable for each was copyrightable work based on fact that it was a selection from among over 18,000 possible cards; copyrighted work was infringed when defendant produced a newsletter describing prices for cards, although in a different form where mixed evidence supported a finding of copying based in large part on repetition of errors and abbreviations in names between two publications).

Replace citation in note 71 with 81 Colum. L. Rev. 516.

Page 11-21:

Add after last paragraph.

As discussed in the main text at ¶ 11.07[3], telephone directories continue to be a major source of litigation concerning copyright protection of predominantly factual material. The volume of litigation in this field reflects both the value of the data compilation and the fact that telephone directory services became a major, competitive commercial market after the deregulation of the telephone industry.

Most of the decisions dealing with the protection of directories have held that database is a protected work and that comprehensive duplication of the entries contained in it constitute an infringement of the copyright.[76.1] To the extent it is based on an analysis of creative effort in selection and arrangement, this conclusion is most supportable in connection with Yellow Pages directories. So-called White Pages consist simply of an alphabetical list of names and numbers, rendering any realistic claim of originality in arrangement difficult or impossible to sustain. These directories are protected, if at all, under analyses that permit the developer to obtain protection through effort and cost in compiling the information and should be covered only as against truly literal duplication.[76.2]

[76.1] See Southern Bell Tel. & Tel. Co. v. Associated Tel. Directory Publishers, 756 F2d 801 (11th Cir. 1985) (Yellow Pages protected, but ads usable if customers consent); Hutchinson Tel. Co. v. Fronteer Directory Co. of Minn., 770 F2d 128 (8th Cir. 1985) (White Pages); Rural Tel. Serv. Co. v. Feist Publications, Inc., 663 214 (D. Kan. 1987) (White Pages are copyrightable and were infringed by directory publisher).

[76.2] Compare Hercules, Inc. v. Marsh, 659 F. Supp. 849 (WD Va. 1987) (holding that the company that supplied information to Army for compilation of directory could not prevent disclosure of that directory information because in the absence of clear competition it could show no potential competitive harm).

Add at end of note 72.

See generally Rockford Map Publishers, Inc. v. Directory Serv. Co. of Colo., Inc., 768 F2d 145 (7th Cir. 1985) (plat map showing location of various parcels of real estate was copyrightable and infringed by copying output of plat maps); Southern Bell Tel. & Tel. Co. v. Associated Tel. Directory Publishers, 756 F2d 801 (11th Cir. 1985) (defendant violated copyright in

Furthermore, the evidence established that the effort involved in obtaining the information did not entail any substantial subjective judgment or even substantial work.

Equally important, the court also rejected claims of misappropriation under state law. It held that the misappropriation claims in this context were preempted by copyright, even though the net effect was to leave the work unprotected in its entirety. The court specifically held that no general exception to preemption applied for claims involving any form of commercial immorality.

> We believe that no such exception exists and reject its use here. Whether or not reproduction of another's work is 'immoral' depends on whether such use of the work is wrongful. If, for example, the work is in the public domain, then its use would not be wrongful. Likewise, if, as here, the work is unprotected by federal law because of lack of originality, then its use is neither unfair nor unjustified.

In addition to litigation regarding the factual data itself, significant litigation arises with reference to access or reference system copying. In effect, in these cases, the alleged infringer does not attempt to copy the entire data base of the original party, but to provide its users with information about access to portions of the other data base. In the cases that have been decided to date, where a comprehensive reference system has been appropriated for use by the second publisher, the issue of liability has turned on whether the first database is protected by copyright as to its structure and organization.

For example, in *West Publishing Co. v. Mead Data Central, Inc.,*[78.2] the Court upheld a preliminary injunction against the use of the Lexis "star pagination" system based on the claim that this cross-reference system violated the West copyright in the organization and structure of its case reporter system. The star system would have provided Lexis users with the ability to obtain the exact page citation in the West system for any material on a screen in the Lexis system. The court concluded that the reporter system arrangements were copyrightable in that they were the functions of substantial creative effort consisting of labor, talent, and judgment. The Star system would, in effect, allow the Lexis user to obtain the entire arrangement of the data in the West system. "[A]ccess to these particular numbers . . . would give users of Lexis a larger portion of what West has spent so much labor and industry in compiling." The important competitive injury that the system

78.2 799 F2d 1219 (8th Cir. 1986).

Add at end of subsection.

In determining whether there is an infringement of a database, it is important to focus on what protected elements, if any, characterize the database and whether the alleged infringer has duplicated these elements. For example, finding that database arrangement was a copyrightable expression, the court in *West Publishing Co. v. Mead Data Central, Inc.*[81.1] held that a cross reference system provided to enable users of a Lexis database to access all page references in the West publishing system violated the West copyright. In contrast, based on a finding that the underlying factual data in a bond reporting system was not copyrightable as to content or organization, the court in *Financial Information, Inc. v. Moody's Investors Service, Inc.*[81.2] held that the database was not protected even against comprehensive duplication under either state or federal law.

> Whether or not reproduction of another's work is 'immoral' depends on whether such use of the work is wrongful. If, for example, the work is in the public domain, then its use would not be wrongful. Likewise, if, as here, the work is unprotected by federal law because of lack of originality, then its use is neither unfair nor unjustified.

In *Gem Products, Inc. v. Robershaw Control Co.,*[81.3] the district court held that there was no infringement of a copyrighted replacement parts catalog when the defendant loaded that catalogue into a computer to facilitate cross-referencing because the material contained in the catalog was unprotected factual information, not expression.

[81.1] 799 F2d 1219 (8th Cir. 1986).

[81.2] 808 F2d 204, 1 USPQ2d (BNA) 1279 (2d Cir. 1986).

[81.3] 1986 Copyr. L. Dec. (CCH) ¶ 25,975 (CD Cal. 1986).

[2] Fair Use and Substantial Similarity

Page 11-25:

Replace 91 Colum. L. *with* 81 Colum. L. *in fourth line in note 83.*

Add at end of note 83.

See also Cooling Sys. & Flexibles, Inc. v. Stuart Radiator, Inc., 777 F2d 485 (9th Cir. 1985) (even if copyright was valid despite problem of notice, copyright in arrangement of original parts catalogue was not infringed by defendant's catalogue and the two were not substantially similar).

> established that BDV's use of the information contained in the NADA Guides has not, and will not, impair the market for such Guides.

In a somewhat differently based ruling, a district court denied protection to a database of parts and numbers against loading the data into a computer for cross-referencing purposes. It noted that the data were unprotected facts.[88.2]

> [Gem] might have a copyright in the creative arrangment of the catalog, it did not have a protectible interest in the 'facts' [contained] therein . . . The arrangement and manner of expression is all that is entitled to protection. Otherwise, the free flow of new expression would cease as authors captured various pieces of factual information.

The central test for infringement and "substantial similarity" is whether the infringing work duplicated the copyrighted elements of the original. Thus, where organization is copyrightable, a system that replicates or permits replication of that organization and arrangement constitutes an infringement. This was the case, according to the court, in the action by West Publishing to prevent Lexis from including references in its system to page numbers from the West reporter system.[88.3] In a similar manner, where the data base elements are themselves copyrightable expression even without the arrangement and selection elements, duplication of these elements is an infringement. In *Educational Testing Services v. Katzman,*[88.4] the court affirmed a preliminary injunction against the use of questions allegedly copied from out of the plaintiff's standardized tests. The copies were made by a company involved in providing review or preparation courses for the persons who plan to take the ETS tests. The court properly held that the fact that the tests were registered as compilations did not preclude copyright protection for individual questions in the tests themselves. In this context, the questions themselves were clearly copyrightable expression.

The court dismissed the argument that in copying only a few questions out of the thousands that ETS produces, there was no substantial similarity in the two works. Here the court relied heavily on the Supreme Court decision in the Ford Memoirs case. "ETS produced evidence . . . that the integrity of its test scores is vital to the college

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[88.2] Gem Prods., Inc. v. Robershaw Control Co., 1986 Copyr. L. Dec. (CCH) ¶ 25,975 (CD Cal. 1986).

[88.3] West Publishing Co. v. Mead Data Central, Inc., 799 F2d 1219 (8th Cir. 1986).

[88.4] 793 F2d 533 (3d Cir. 1986).

otherwise creating technological restrictions that impede third-party access, and on the extent to which the third party used technologically advanced, but not generally used, devices to obtain reception of the signal. In essence, there may be movement toward a view that holds that broadcast or otherwise transmitted or stored information is protected in direct relationship to the effort of the proprietor to protect it and the degree to which it is readily accessible to the general public through ordinary reception methods.

The 1984 Cable Act, for example, proscribes unauthorized reception of cable signals only if the signals are scrambled or otherwise protected against easy reception.[95.1] In effect, by failing to use protections made possible by the technology, the proprietor commits the material to the public domain. Similarly, the Copyright Act permits reception of broadcast signals on apparatus of a kind normally used in homes, apparently indicating the absence of any special reception technology.[95.2]

In *Home Box Office, Inc. v. Corinth Motel, Inc.*,[95.3] a hotel operater used a satellite dish to receive cable TV programming for viewing by hotel guests. The court held that this constituted an infringement of the copyrighted cable broadcasts. Section 111(b) of the Copyright Act provides that an infringement occurs if there is a secondary public transmission of a primary transmission that was not originally intended for the public at large. This applies to cable programming. Providing the programs to the guests at the hotel was a secondary transmission.

The court noted that under Section 111(b) the secondary transmission of private copyrighted programming constitutes an infringement. In this case, the hotel was not protected by the exemption for public performances on a single receiving apparatus of a kind commonly used in private homes because HBO's transmission could only be received by regular television sets equipped with special equipment not commonly used in a home.

The receptions also violated the Federal Communications Act. The infringement in this case occurred before 1984, at which time the Federal Communications Act prohibited any unauthorized reception of any radio communication. The defendant was not protected by revised rules that permit individual reception for private viewing unless the signals in a broadcast are scrambled. The court concluded that satellite transmissions of entertainment programming are radio communications for purposes of this exemption.[95.4]

[95.1] See 47 USC § 705.

[95.2] 17 USC § 110(5).

[95.3] 647 F. Supp. 1186 (ND Miss. 1986).

[95.4] 47 USC § 705.

protects communications that involve purely data transmissions, rather than voice transmissions. The Act now applies to three types of transmission: (1) wire (defined to include an "aural transfer" involving wire, cable or similar means), (2) oral communications (defined as non electronic), and (3) electronic communication. An electronic communication includes any "transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photooptical systems that affects interstate commerce. . . ." [95.8]

The act prohibits any unauthorized interception or disclosure of wire, oral, or electronic communications.[95.9] The definition of "intercept" includes any acquisition of oral, wire, or electronic communications through electronic, mechanical, or other devices.

The liability is limited to cases in which some efforts have been made to restrict access to the system. It excludes any liability for intercepting or accessing an "electronic communication made through an electronic communication system that is configured so that such electronic communication is readily accessible to the general public. . . ." [95.10] The standard of ready access to the general public requires that, for protection, the communications system undertake technologically to restrict access.[95.11]

Unauthorized interception in violation of federal law carries both criminal and potential civil liability. With respect to civil recovery, the injured party is entitled to appropriate relief, including injunctive relief, damages, punitive damage recovery, and attorney's fees.[95.12] If the interception is of a private satellite video transmission or a radio transmission that is not scrambled or encrypted and the interception is not for tortious purposes or commercial advantage or gain, damages are limited to either $500 or $1000 depending on whether this is the first violation. In all other cases, the damages are the greater of either the sum of actual damages to the plaintiff and profits to the wrongdoer, or statutory damages of a maximum of $10,000 assessed at $100 per day.[95.13]

[95.8] 18 USC § 2510(a)(12).

[95.9] 18 USC § 2511.

[95.10] 18 USC § 2511(g)(i).

[95.11] 18 USC § 2510(a)(16).

[95.12] 18 USC § 2520(b).

[95.13] 18 USC § 2520(c).

Add note 102 at end of third sentence in second complete paragraph.

[102] This standard derives from application of the concepts outlined in the Restatement concerning negligent misrepresentation. Restatement (Second) of Torts § 552 (1966).

Add at end of section.

The standard of liability regarding inaccurate, published, and commercially relevant information remains in flux. The Supreme Court has refused to apply constitutional restrictions from the first amendment requiring proof of malice to inaccurate information that is not dealing with an issue of public interest or with a public figure.[103]

The terms under which liability apply will be primarily a matter of state regulation. In *Blatty v. New York Times Co.,*[104] the author of a literary work brought action against a newspaper arising from the newspaper's failure to include the work in its list of best sellers, asserting claims of negligent interference with prospective economic advantage, intentional interference with prospective economic advantage, negligence, and trade libel. The Supreme Court held that First Amendment required that the best-seller list, containing alleged injurious falsehood that served as gravamen of author's causes of action, be "of and concerning" the author or his work in order to establish liability based on negligence in this context.

The mere fact that an information product contains inaccuracies does not, in itself, establish the liability of the information provider. A finding of no liability was reached in *Sunward Corp. v. Dun & Bradstreet, Inc.*[105]

The Tenth Circuit held that a private credit report distributed to over 300 subscribers and containing inaccurate information was not subject to First Amendment protection in the absence of proof of a matter of public concern in the report.

In *Sunward,* however, the plaintiff failed to establish a basis for liability under state law. It alleged that the reporting agency inaccurately listed the plaintiff company as much smaller than it was and that this created a severe drop in the company's business because the pertinent industry requires relatively large capital enterprises. The evidence failed to establish that anyone "ever understood the credit reports in the defamatory manner inferred by defendant." The only pertinent proof was

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[103] See supra note 99, this Supplement.

[104] 42 Cal. 3d 1033, 728 P2d 1177, 232 Cal. Rptr. 542, (Cal. 1986).

[105] 811 F2d 511 (10th Cir. 1987).

The court also believed that liability was barred under First Amendment restrictions, which preclude liability for nondefamatory, negligently untruthful news. "The defendant's service is one of the modern, technologically interesting, alternative ways the public may obtain up-to-the-minute news. It is entitled to the same protection as more established means of news distribution."

In *Wood v. National Computer Systems, Inc.*,[108] the court upheld a finding that no liability existed where a computer test-scoring company negligently mailed teacher competency test scores to the wrong persons. This action did not constitute tortious invasion of privacy and state law did not recognize a cause of action for negligent infliction of emotional distress. The court noted: "defendant was certainly negligent, possibly even grossly negligent, but this kind of error, especially when dealing with large numbers of people is unfortunately more common than it should be, and cannot reasonably be characterized as atrocious or exceeding all possible bounds of decency."

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[108] 814 F2d 544 (8th Cir. 1987).

Page 11-33:

Add the following new section.

¶ 11.11 REGULATION AND PROPRIETARY RIGHTS IN DATA [NEW]

Recent federal legislation substantially expands the scope of proprietary rights and potential enforcement methodology for electronic publishers.

The Electronic Communications Privacy Act of 1986 deals primarily with regulation of the right to intercept electronic communications. It substantially expands existing federal wiretap laws to expressly encompass interceptions of data communications and data processing in interstate facilities. Because the statute contains express civil remedies, however, it also gives database providers a means to enforce proprietary rights and prevent unauthorized access to data. The primary application will be to database providers of "online" services, where a continuing stream of information might otherwise be accessed and used.

In 1986, federal law was modified to expressly provide criminal penalties for unauthorized interceptions of "nonaural" electronic communications. "Aural transfers" include any transfer involving the human voice at any point between and including the point of origin and the to electronic communications that are stored in a facility involved in electronic communications services. Federal law provides that it is an offense to intentionally access "without authorization [or intentionally exceed an authorization to access] a facility through which an electronic communication service is provided . . . and thereby [obtain, alter, or prevent] authorized access to a wire or electronic communication while it is in electronic storage in such system . . ." [115] If the offense is committed for commercial advantage, malicious destruction, or damage, the first offense is punishable by up to $250,000 in fines and imprisonment for up to one year.

A final provision relevant to electronic transfers involves restrictions placed on the operator of the service. The Privacy Act (1) prohibits any person operating an electronic communication service from knowingly divulging the contents of a communication while in electronic storage and (2) prohibits any person who provides remote computing services to the public from knowingly disclosing the contents to any communication that is carried or maintained on behalf of a customer and solely for the purpose of providing storage or processing service to the customer, if the service provider is not authorized by the service agreement to access the contents of the communication for purposes other than storage or processing.[116] These provisions apply to the electronic mail systems and to services that provide time sharing and other remote computer services on a subscription or fee basis. The restrictions on disclosure are made subject to governmental requests based on warrants or administrative subpoenas.[117]

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[115] 18 USC § 2701(a).

[116] 18 USC § 2702.

[117] 18 USC § 2703.

CHAPTER 12

Computer Privacy and Data Disclosure

PART A. DATA COMMUNICATIONS

¶ 12.04 INTERCEPTED DATA TRANSMISSIONS

[1] Federal Legislation

Page 12-8:

Add at end of note 13.

See PJ v. State, 453 So. 2d 470 (Fla. Ct. App. 1984) (computer tracing of incoming call at request of person receiving call was not an "intercept" of

The Privacy Act excludes criminal liability for intercepting or accessing an "electronic communication made through an electronic communication system that is configured so that such electronic communication is readily accessible to the general public . . ." [18.3] Apparently, the standard of ready access to the general public requires that, for protection, the communications system undertake technologically to restrict access. For example, regarding radio transmissions, readily accessible means that the communication has not been scrambled or encrypted.[18.4]

Unauthorized interception of an electronic, oral, or wire communication in violation of the federal privacy law results in both criminal and potential civil liability. With respect to civil recovery, the injured party is entitled to appropriate relief, including injunctive relief, damages, punitive damage recovery, and attorney's fees.[18.5] If the interception is of a private satellite video transmission or a radio transmission that is not scrambled or encrypted and the interception is not for tortious purposes or commercial advantage or gain, damages are limited to either $500 or $1000 depending on whether this is the first violation. In all other cases, the damages are the greater of either the sum of actual damages to the plaintiff and profits to the wrongdoer, or statutory damages of a maximum of $10,000 assessed at $100 per day.[18.6]

In addition to restricting interceptions of data transmissions, the Privacy Act also provides for criminal sanctions for unauthorized access to electronic communications that are stored in a facility involved in electronic communications services.[18.7] If an offense against such a system is committed for commercial advantage, malicious destruction, or damage, the first offense is punishable by up to $250,000 in fines and imprisonment for up to one year.

[18.3] 18 USC § 2511(g)(i).

[18.4] 18 USC § 2510(a)(16).

[18.5] 18 USC § 2520(b).

[18.6] 18 USC § 2520(c).

[18.7] 18 USC § 2701(a).

[2] Constitutional Limitations

Page 12-10:

Add at end of note 19.

Especially as U.S. Supreme Court decisions tend toward being more conservative and less active in establishing new rights, state constitutional litigation becomes more significant. See People v. Chapman, 36 Cal. 3d 98, 201 679 P2d 62, 201 Cal. Rptr. 628 (1984) (under California Constitution, service" includes any service that provides users with the ability to send or receive wire or electronic communications.[28.1] Federal law now provides that it is an offense to intentionally access "without authorization [or intentionally exceed an authorization to access] a facility through which an electronic communication service is provided . . . and thereby [obtain, alter, or prevent] authorized access to a wire or electronic communication while it is in electronic storage in such system . . ." [28.2] If the offense is committed for commercial advantage, malicious destruction, or damage, the first offense is punishable by up to $250,000 in fines and imprisonment for up to one year.

The Privacy Act also placed restrictions on the operator of the computer service. It prohibits any person operating an electronic communication service from knowingly divulging the contents of a communication while in electronic storage or providing remote computing services to the public from knowingly disclosing the content to any communication that is carried or maintained on behalf of a customer and solely for the purpose of providing storage or processing service to the customer, if the service provider is not authorized by the service agreement to access the contents of the communication for purposes other than storage or processing.[28.3] These provisions apply to the newly developing electronic mail systems and to the services that provide time sharing and other remote computer services on a subscription or fee basis.

The restrictions on disclosure are made subject to governmental requests based on warrants or administrative subpoenas.[28.4] If the communication has been in storage less than 180 days, a warrant is required. In cases where there has been a long term storage, the act permits disclosure subject to warrant or subpoena. In such cases, however, use of a subpoena requires notice to the customer while use of a warrant may permit disclosure without notice. Where notice is required, a form of delayed notice of up to 90 days may be used where there is proof or certification that adverse effects may result from earlier notice in the form of endangering the physical safety of an individual, flight from prosecution, destruction or tampering with evidence, intimidation of witnesses, or otherwise seriously jeopardizing an investigation.[28.5]

[28.1] 18 USC § 2510(a)(15).

[28.2] 18 USC § 2701(a).

[28.3] 18 USC § 2702.

[28.4] 18 USC § 2703.

[28.5] 18 USC § 2705(a).

such right exists. The underlying basis of the privacy law emanates from individual rights aspects of the Constitution and, as a result, few courts directly consider corporate privacy as such. Nevertheless, privacy protections can be approached from two distinct directions that establish at least some safeguards for corporate privacy.

One federal circuit court has recently held directly that a corporation has at least a limited privacy right. In *Tavoulareas v. Washington Post Co.,*[38.2] the court refused to permit public disclosure of 3,800 pages of deposition testimony taken with reference to a libel action but not actually used at trial. The court held that although there is a presumption of openness and access to trial-related data not used at trial, this derives from the Federal Rules, not from any common law or constitutional right of access. Both the common law of torts and federal statutes regarding secret information reflect that some privacy interest attaches or is recognized as offsetting the presumption of openness. The corporation has a constitutional right to privacy conditioned by the need to police or regulate their conduct.

> Discovery, however, is not conducted to police or regulate litigants, but to prepare for the trial of a dispute. . . . Therefore, in the context of confidential discovery materials not used at trial, a corporation's privacy interest in nondisclosure is essentially identical to that of an individual.[38.3]

The court's reference to a right conditioned by regulatory interests is significant. The federal courts have recurrently held that there is no right to refuse to submit data or secrets to regulatory agencies based on the alleged secrecy or confidential nature of the information. In *Ruckelshaus v. Monsanto,*[38.4] the Supreme Court held that there was no taking of corporate property for purposes of the due process clause when secret data on pesticides was required to be submitted for licensing purposes under a scheme whereby subsequent applicants could be given access to the data for a determined fee.

However, *Ruckelshaus* does establish the second approach to obtaining constitutional protection for corporate privacy interests. In that case, although it found no taking based on the regulatory disclosure procedure, the Court expressly recognized that, to the extent created by

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[38.2] 724 F2d 1010 (DC Cir. 1984).

[38.3] Id.

[38.4] Ruckelshaus v. Monsanto, 104 S. Ct. 2862 (1984).

question and contest the data. This analysis was applied by the New Hampshire Supreme Court in *In re* Bagley.[41.1] The court held that the Division for Children and Youth Services, when it determined that the report of child neglect was "founded, problem resolved," engaged in official adjudication of status with potentially injurious consequences that deprived parents of their liberty because of the influence that the creation and potential distribution of this information might have on the individuals.

> If the records were intended to remain entirely confidential, there would be no reason to store them. Under its rules the division may in some circumstances exchange information with other agencies or individuals. . . . The division also fails to take into account the possibility of unauthorized disclosure of central registry records.
>
> Today governments collect great quantities of data about their citizens, data which, when stored in computers, potentially are available to large numbers of people. The dangers presented by governmental possession and use of inaccurate information are greater than ever. The principles of due process are our most effective shield against these dangers. In our zeal to prevent the abuse and neglect of children we ought not to forget them.

The existence of the record of the division's determination in the central registry poses dangers to the individuals. The records contain information about the most private aspects of personal and family life, which, if disclosed, could stigmatize all who are mentioned in the report. "At the moment the division entered the record of its investigation in the central registry, the Bagleys' lives became a little more complicated and a little less free." Because it entailed a deprivation of liberty under the state constitution, the action by the division required due process protections. These were inadequate, according to the court in this case, because the procedure established to notify the individuals of this action was inadequate to permit a full response by them. It held that the notice must give a reasonably complete statement of the information upon which the proposed action is based, the full reasons for that action, and must specifically identify the person or persons affected by the action.

[41.1] 513 A2d 331 (NH 1986).

¶ 12.08 DISCLOSURE OF COLLECTED DATA

Page 12-21:

Add note 50.1 at end of third sentence in third complete paragraph.

[50.1] See Chrysler v. Brown, 441 US 281 (1979) (FOIA is a disclosure statute, not a set of rules to preclude disclosure).

the Supreme Court held that there is a property interest that falls under constitutional protection in trade secret research information regarding chemicals. The federal statute in this case required submission of the research data and made the data available for a predetermined fee to third party applicants for licensing purposes. This required submission and disclosure framework, however, and did not violate due process in taking property of the initial applicant since the degree of the protected property interest was determined by whether, in light of existing disclosure laws, the first applicant had a protected, investment-backed investment in the property. The degree of protected interest was determined by the existing law regarding disclosure.

Page 12-23:

Add after last paragraph in section.

The arguments involving disclosure of data from government files typically focus on two distinct issues. As previously discussed, the first issue involves questions about the discoverability of the data itself. This ordinarily involves balancing a perceived right of access by third parties against identifiable interests in retaining confidentiality of the requested material. In most states and in the federal system, there are enacted public records or freedom of information statutes that define as a preliminary matter the right to access government files. Rights of access can exist based on statute, constitutional free speech theories, or equal protection concepts.[53.1] The offsetting interests working against disclosure include national security, protecting privacy interests of individuals who would be affected by the disclosure,[53.2] restrictions against disclosure of internal

[53.1] See generally Legi-Tech v. Keiper, 766 F2d 728 (2d Cir. 1985) (free speech interest); Hataway v. Joint School District No. 1, 116 Wis. 2d 388, 342 NW2d 682 (Wis. 1984) (computer-generated list of parents with students enrolled in a school district is not a confidential record but a public record that requester had a right to review); Mahan v. National Conservative Political Action Comm., 315 SE2d 829 (Va. 1984) (statute defining and limiting who can obtain copies of list of registered voters is unconstitutional; equal protection challenge); Pensyl v. Peach County, Ga., 252 Ga. 450, 314 SE2d 434 (1984) (open records law applies prima facie to tax information about real property ad valorem digest, returns, and related records including data gathered to compose digest and computer summary of such information prepared by taxing authorities).

[53.2] See generally Mahan v. National Conservative Political Action Comm., 315 SE2d 829 (Va. 1984) (statute defining and limiting who can obtain copies of list of registered voters is unconstitutional as applied to a political action committee and is not least burdensome method of protecting rights of privacy of listed voters; equal protection challenge); Davies v. Suplex statistical analysis programs.[53.5] These materials are, in fact, often the central items in dispute when the impact or other analyses are directly challenged.

In contrast, analytical programs that are used primarily to guide the agency in directing its discretionary activity will often not be obtainable in full under FOIA or other related statutes since they constitute an integral feature of the agency's internal practices. In this respect, for example, courts have limited or entirely precluded disclosure of computer programs designed to select out particular subjects for IRS or similar investigation, the essence of the program being merely a concretely formatted documentation of the agency's discretionary decision-making.[53.6] Similarly, at least one court has held that the Commerce Department cannot be forced to disclose computer programs that are used to determine if a foreign company violated anti-dumping laws.[53.7]

Add the following new subsection.

[1] Form and Accessibility [New]

Assuming that some right of access exists, the second issue relates to the form in which access should be granted. Significant questions are generated by the fact that computer records can be searched, organized, and reported in many different ways without disturbing the underlying data base. Requirements that agencies undertake such manipulation of data in their search and reporting activities maximally protects interests in disclosure but creates a risk of severely impinging on the operations of the agencies.

Although not uniformly applied, the cases generally support the idea that there is no obligation on the part of the data holding agency to undertake extraordinary reconstruction or analysis of its data in response to disclosure requests.[53.8] The discussion of the Court in *Miller v.*

[53.5] Ohio v. United States Envtl. Protection Agency, 798 F2d 880 (6th Cir. 1986).

[53.6] See Internal Revenue Serv. v. Bureau of Economic Analysis, 825 F2d 225 (9th Cir. 1987) (entitled to only limited disclosure of program used by IRS for taxpayer compliance analysis).

[53.7] Windels, Marx, Davies & Ives v. Department of Commerce, 576 F. Supp. 405 (DDC 1983).

[53.8] See Mullin v. Detroit Police Dep't, 348 NW2d 708 (Mich. Ct. App. 1984) (under state FOIA law, while plaintiff sought data only for purposes of statistical study, police accident report tapes were covered by privacy other item personal to her. In this case, the requester had been mentioned in a report conducted concerning other parties. Since it was not indexed under her name, it could not be an "accessible record" under the Privacy Act.

Add the following new subsection.

[2] Form of Disclosure [New]

A related question involves the form of the disclosure. This issue ordinarily arises where the party seeking access to the material requests disclosure in the form of computer tapes or discs to permit ready access to processing volumes of material. Generally, there is no obligation to provide the data in the *most* convenient form.[53.13] There may be an obligation, however, to use available resources to provide the disclosure in a reasonably usable form and, in some situations, this may entail disclosure through computer records.

A recent circuit court decision establishes a potential constitutional dimension to this issue. In *Legi Tech v. Keiper,*[53.14] New York State had enacted a statute denying access to its own computerized data base of legislative developments. Access was denied only to entities that planned to redistribute the data commercially to third-party subscribers. The service providers, as well as the general public, retained a right of access to manual data concerning the legislature's actions.

The court remanded the case for further factual findings. It concluded that there was a right to access to the legislative material under concepts of free speech where the general public could obtain the subscription service. The denial of access had the effect not only of regulating access to information in a particular format, but also implicated the corporation's First Amendment right of publication. The access could be conditioned on payment of the actual cost of the service and thus would have been a less severe restraint that could still accomplish the

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[53.13] See Dismukes v. Department of Interior, 603 F. Supp. 760 DDC 1984) (under FOIA, requester does not have right to specify form of disclosure, and agency's action providing microfiche rather than computer tapes of participants in Bureau of Land Management lotteries was a satisfactory alternative, even though computer tapes were less expensive and more convenient form of access).

[53.14] 766 F2d 728 (2d Cir. 1985). See also Mahan v. National Conservative Political Action Comm., 315 SE2d 829 (Va. 1984) (statute defining and limiting who can obtain copies of list of registered voters is unconstitutional as applied to a political action committee and is not least burdensome method of protecting rights of privacy of listed voters).

Analysts v. United States Department of Justice,[53.18] in a request by a publisher of a nonprofit tax magazine for weekly access to federal district court opinions. The request was under the Freedom of Information Act (FOIA). The court held that the request could be denied by the Tax Division of the Department of Justice. The opinions were not "improperly withheld" under FOIA since the information was publicly available for inspection even though there would be substantial burden and expense involved in such activity. The publisher could only obtain access to decisions through specific requests, rather than by imposition of a general injunction ordering disclosure.

Add the following new subsection.

[3] Proprietary and Private Rights [New]

Where the disclosure affects proprietary or privacy rights of individuals or organizations, these considerations may be offset against the desire to encourage public dissemination. This was the case, for example, in context of fingerprint information collected in connection with licensed motor vehicle drivers in *Perkey v. Dept. Motor Vehicles.*[53.19] In *Perkey,* the California Supreme Court upheld the enforceability of a requirement that fingerprints be taken as a reasonable step related to governmental interests. However, it imposed a confidentiality restriction on any subsequent disclosure of fingerprint information pursuant to state information control laws.

> [Fingerprint] clearly relates to the 'physical condition' of the applicant [thereby requiring restrictions on disclosure]. Also, it furthers the general underlying purpose of the provision, which is to protect the confidentiality of information revealed by a driver's license application where exposure will improperly infringe the applicant's privacy rights. . . . Any interpretation of the Act's statutory scheme, which would permit the DMV to freely disseminate its fingerprint files to all interested parties, would raise serious concerns under the state constitutional right of privacy.

Although personal and proprietary rights may create a reason to restrict governmental disclosures, courts and legislative systems vary on the degree to which they require protection against disclosure. In *Penin-*

[53.18] 643 F. Supp. 740 (DDC 1986).

[53.19] 42 Cal. 3d 185, 721 P2d 50, 228 Cal. Rptr. 169 (Cal. 1986).

withhold disclosure of data on bid submitted for telecommunications update precludes raising issue at appellate level).

PART C. PRIVATE DATA SYSTEMS

¶ 12.10 FAIR CREDIT REPORTING

Page 12-27:

Add at end of section.

Another illustration of data system review occurred in *Taylor v. Checkrite, Ltd.*[71.1] Taylor sued for the failure of a check reporting agency to note on the list sent to retailers regarding individuals whose checks might be questionable that Taylor disputed the right of the bank to dishonor a check that it had rejected. The law suit was under the Fair Credit Reporting Act and against the parent company for the actions of a franchisee.

The court held that the control exercised by the parent over the operations of the franchisee created an agency relationship for purposes of liability. The control extended to procedures for creating new accounts, billing procedures, bookkeeping, and preparation of computer generated lists. Significantly, the parent outlined the content of the reports in a manual the franchisee was required to follow. "The Manual . . . in providing step by step instructions for preparation of the computer listing sheet does not permit inclusion of a statement of dispute in this report. . . . [The] franchisee who must follow Defendant's Manual, could not include a statement of dispute in the Checkrite Bulletin."

In addition to accuracy issues, the Fair Credit Reporting Act establishes obligations to actually maintain the privacy of the data that has been collected. In *Yohay v. City of Alexandria Employees Credit Union,*[71.2] a credit union was held to be liable to a consumer under the Reporting Act where the union's attorney accessed the consumer's credit data. The attorney was able to do this in part because the union had not maintained security of the access codes.

[71.1] 627 F. Supp. 415 (SD Ohio 1986).

[71.2] 827 F2d 967 (4th Cir. 1987).

Cumulative Table of Cases

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sula Counseling Center v. Rahm,[53.20] patients, hospitals, and others sued to enjoin the Department of Social and Health Services from carrying out regulations requiring disclosure to the state of the name and diagnosis of patients receiving state and federal funds in use of state subsidized mental health facilities. Consistent with rulings in other states, the Supreme Court held that the system of required disclosure of information was permissible as carefully tailored to meet valid governmental interest where it was adopted pursuant to a statute enacted due to federal requirement of adequate accounting systems to ensure federal funds are actually spent in treating mentally ill patients.

Similarly, a claim to proprietary rights under copyright laws was rejected as a basis to limit disclosure in *National Republicon Congressional Committee v. Legi-Tech.*[53.21] The National Republican Congressional Committee (Committee) supports candidates for congressional elections through fund-raising activities. It uses a list of contributors for targeting solicitations. Federal election law requires that lists of names of contributors of more than $200 be filed with the Federal Election Committee (FEC) and made available to public inspection and use, except that the information may not be sold or used for soliciting contributions or for commercial purposes. Legi-Tech sought access to the registered list in order to make it available to subscribers to its computer database system. The Committee sought an injunction on both a copyright action against Legi-Tech and a claim that its use violated the federal election law. The circuit court held that a decision on the election law issue should be made by the FEC. The copyright claim is invalid if the use of the lists sought by Legi-Tech is authorized by the election law. "Inasmuch as Congress expressly provided . . . for public dissemination of the precise type of compilation at issue here, the provisions of the Copyright Act . . . dealing with compilations generally, must be construed in a manner that will accommodate the [election law]."

As previously noted in 12.08[3], however, when dealing with commercial information under federal law, the FOIA exempts trade secret and confidential material from disclosure, but does not, in itself, require that the material be kept secret or confidential. Agency rules will ordinarily govern the release of such material.[53.22] An agency claiming a right to resist disclosure of even trade secret or confidential material must expressly state the reasons for restricting disclosure.[53.23]

[53.20] 105 Wash. 2d 929, 719 P2d 926 (Wash. 1986).

[53.21] 795 F2d 190 (DC Cir. 1986).

[53.22] See ¶ 12.08, this Supplement.

[53.23] See AT&T Information Sys., Inc. v. General Servs. Admin., 810 F2d 1233 (DC Cir. 1987) (agency failure to provide reason for refusal to state's cost- and profit-oriented objectives in denying the third party any access. The statute's validity would also depend on the degree of cost and effort involved in converting the hard copy files to computer files. If this conversion was de minimis, the statute would be valid as drafted, since the third-party service provider could show no harm.[53.15]

As indicated in the Legi-Tech case,[53.16] issues about disclosure of governmental data increasingly raised questions involving material sought for purposes of commercial publishing or data dissemination purposes. The questions in such cases include determining not only a right of access to the data, but also the form and cost for disclosure. Generally, the party seeking access to the data desires to obtain it in machine-readable or other readily transmittable form at a cost reflecting mainly the cost of distribution to it.

Where there are no individual privacy or trade secrecy issues involved in the material, the issues involve determining the extent to which the government should participate in encouraging and supporting data dissemination. The issue was directly faced in these terms in *National Association of Securities Dealers, Inc. v. Securities & Exchange Commission.*[53.17] There, the court reviewed SEC regulations about the terms and cost under which computer data about securities would be released. The SEC had established fees for access to the computer information. A national securities association sought review of two orders concerning the fees. The court held that a low, cost-based fee for subscriber access to raw data was necessary as applied to the national securities association, who sought the raw data to be furnished to vendors and then processed the data for resale to subscribers. The national association, however, had to separate query function costs from other computer information system costs. The computer query function was not integral to the process of collecting securities quotations because market makers had to use the query function before entering new quotations into the system.

A principal issue in such systematic disclosures is to ensure that the system of transmitting data furthers social objectives and does not encourage governmental secrecy. This latter aspect was at issue in *Tax*

[53.15] Compare Price v. Fulton County Comm'n, 170 Ga. App. 736, 318 SE2d 153 (1984) (contract with county commission giving company right to obtain copies of public records in machine-readable form and other public information in printed form was not void or an illegal infringement in clerk's functions).

[53.16] See supra ¶ 12.08 ns. 53.1 and 53.10, this Supplement.

[53.17] 801 F2d 1415 (DC Cir. 1986).

Department of State[53.9] suggests the character of this approach.

> Moreover, the filing system which an agency uses is designed in most instances to serve its internal needs; in responding to a FOIA request, the agency is required to make a diligent effort calculated to uncover the requested document but need not restructure its entire system in order to satisfy the request. The competence of a records search must be determined in relation to the circumstances of the case. If the appellant is able to show circumstances indicating that further search procedures were available without the Department's having to expend more than reasonable effort, then summary judgment would be improper. . . . Appellant has not shown here that other reasonable means would have satisfied his request. He alleges that the search was insufficient because the Department did not do all that it could; we agree with the District Court, however, that it did all the Act required.[53.10]

Under a reasonable diligence standard, however, there may frequently arise situations in which the agency must use available technology to strike out privileged material, permitting disclosure of the remaining matter consistent with statutory requirements.[53.11]

In *Baker v. Department of Navy,*[53.12] the Privacy Act of 1974 was held to be inapplicable to enable retrieval or correction of agency reports that were not retrievable under requester's name or under any

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rights exemption from disclosure where tapes included names of parties, names of officers, reports of any associated arrests, and investigative techniques used; there was no obligation to excise this information from tapes and supply remainder to plaintiff).

[53.9] 779 F2d 1378 (8th Cir. 1985).

[53.10] Miller v. Department of State, 779 F2d 1378 (8th Cir. 1985). See also McGehee v. Central Intelligence Agency, 697 F2d 1095, 1100 (DC Cir. 1983), modified in part on reh'g, 711 F2d 1076 (DC Cir. 1983); Founding Church of Scientology v. National Sec. Agency, 610 F2d 824, 834 (DC Cir. 1979).

[53.11] See Davies v. Superior Court, 36 Cal. 3d 29, 682 P2d 349, 204 Cal. Rptr. 154 (1984) (in action to recover for single vehicle accident injuries, data held by state regarding other accidents that occurred at same location was relevant and discoverable; data was not covered by state law giving confidentiality to accident reports where reports involved reports from which identifying indicia had been or could be deleted). Compare Mullin v. Detroit Police Dep't, 348 NW2d 708 (Mich. Ct. App. 1984) (although plaintiff sought data only for purposes of statistical study, police accident report tapes were covered by privacy exemption from disclosure where tapes included names of parties, officers, reports of any associated arrests, and investigative techniques used; there was no obligation to excise this information from tapes and supply remainder to plaintiff).

[53.12] 814 F2d 1381 (9th Cir. 1987).

operation practices of agencies,[53.3] and protecting business secrecy of potentially valuable trade secrets.[53.4]

As agencies have increased their use of computer analyses to guide administrative decision-making, conflicts have arisen concerning the discoverability of the analysis tools themselves under Freedom of Information legislation.

In cases where the computer assessments are substantively relevant, the statistical and other models used by an agency will often be obtainable. This occurs frequently, for example, in connection with environmental agency action where impact assessments recurrently utilize com-

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perior Court, 36 Cal. 3d 29, 682 P2d 349, 204 Cal. Rptr. 154 (1984) (in action based on single-vehicle accident injuries, data held by state regarding other accidents that occurred at same location was relevant and discoverable; data was not covered by state law giving confidentiality to accident reports where reports involved reports from which identifying indicia had been or could be deleted); Mullin v. Detroit Police Dep't, 348 NW2d 708 (Mich. Ct. App. 1984) (under state FOIA law, police accident report tapes were covered by privacy rights exemption from disclosure where tapes included names of parties, names of officers, and reports of any associated arrests); Cochran v. United States, 770 F2d 949 (11th Cir. 1985) (information about a disciplinary proceeding was required to be disclosed under FOIA and disclosure was not a violation of Privacy Act); Maher v. Freedom of Information Comm'n, 192 Conn. 310, 472 A2d 321 (1984) (FOIA Commission acted within its authority in ordering release to newspaper of information concerning prescription drugs furnished to recipients of state medical assistance).

53.3 See generally Wightman v. Bureau of Alcohol, Tobacco & Firearms 755 F2d 979 (1985) (materials consisting of an investigatory report for enforcement purposes, investigative procedures, information that could lead to discovery of confidential sources of information, and material relating to internal practices (i.e., computer codes) were exempt under FOIA); Mitman v. County Comm'rs of Chester County, 423 A2d 1333 (Pa. Commw. Ct. 1980) (computer tapes containing district attorney's "history file" and indicating assignments given to various prosecuting attorneys are not discoverable under state Right to Know Act, since this information is not a public record). See Plough Inc. v. Nat'l Academy of Sciences, 530 A2d 1152 (App. 1987) (manufacturer is not entitled to disclosure of Science Academy evaluation of study on connection between aspirin and Reye Syndrome which reflected closed deliberation of committee concerning review of methodology of study and preliminary drafts of reports and documents reflecting confidential deliberations of committee).

53.4 See generally Chrysler Corp. v. Brown, 441 US 281 (1979) (no right of action to prevent disclosure of trade secret or confidential material under UTSA or FOIA, but there was right of action under Administrative Procedure Act); Tavoulareas v. Washington Post Co., 724 F2d 1010 (DC Cir. 1984).

Page 12-22:

Add after first full paragraph.

The FOIA contains various exemptions relieving the federal agency from disclosing the exempt material. One such exemption pertains to "trade secrets and commercial or financial information [that is] confidential." [51.1] This exemption language has been a controversial source of litigation concerning whether or not the FOIA provides, in itself, a barrier to disclosure or merely creates a right for the agency to refuse a disclosure request.

In *Chrysler v. Brown*,[51.2] the Supreme Court held that the FOIA exemptions do not create an affirmative right of action by a third party to *prevent* disclosure of material by the agency through injunction or other action against the agency. Instead, the Court viewed FOIA as purely a disclosure statute which exempts some material from the obligation to be disclosed.

The Court in *Chrysler* also held that the federal Trade Secrets Act (TSA)[51.3] does not create an affirmative right of action by third parties to preclude disclosure of trade secrets held by the government. The TSA creates only a criminal penalty against disclosures not authorized by law.

Under these rulings, actions to prevent disclosure of information by an agency must occur under agency rules or the provisions of the Administrative Procedure Act. In fact, following *Chrysler*, most agencies have established procedures to restrict disclosure consistent with FOIA and a right of action by affected third parties arising under these rules. In many instances, the rules parallel the terms of the TSA or other similar federal statutes. For example, in *Hercules, Inc. v. Marsh*,[51.4] the court declined to prevent disclosure of data compiled by the plaintiff company for use by the Navy in the compilation of a directory. The information was not a trade secret and could not be shown to be confidential in light of the fact that no competitive harm would result from disclosure. The plaintiff here had routinely been awarded the information contract by the Navy without competitive bids and this indicated a lack of competitive impact.

Disclosure of confidential material may also be authorized or regulated under express statutory rules. In *Ruckelshaus v. Monsanto*,[51.5]

[51.1] 5 USC § 552(b)(4).

[51.2] 441 US 281 (1979).

[51.3] 18 USC § 1905.

[51.4] 659 F. Supp. 849 (WD Va. 1987).

[51.5] 467 US 986 (1984).

state law, trade secrecy interests are property rights protected by the Constitution.[38.5]

The protected status of a corporation's secrets where the business submitted data to a governmental agency and the claim is that of a third party seeking disclosure of this information to it was recognized by the Motana Supreme Court in *Belth v. Bennett*.[38.6] The Court reaffirmed prior rulings that the state constitution, which creates a public "right to know" subject to individual rights of privacy can be relied on by corporate entities to protect submitted data. In *Belth*, the data consisted of analyses of financial status compiled by a national insurance association for use by state regulators. The data could be duplicated as to particular companies from published, annual reports; the compilation however was disseminated with statements indicating that it was confidential.

The court held that the expectations of privacy were reasonable, relying especially on the fact that the compilations admittedly were preliminary summaries and had potential distortions or inaccuracies due to inconsistent compilation and summary standards. Also, the privacy interest outweighed the benefits of disclosure, partly because the state agency itself made available similar nonsubjective summaries about particular companies.

[38.5] The issue of disclosure of trade secrets and other confidential material submitted to federal and state officials is extremely controversial. The primary source of threatened disclosure ordinarily involves action under the federal Freedom of Information Act (FOIA). FOIA contains exemptions from the obligation to disclose imposed on federal agencies. See ¶ 12.08. One exemption refers to "trade secrets and commercial or financial information [that is] privileged or confidential." 5 USC § 552(b)(4). In *Chrysler v. Brown*, the Court held that FOIA exemptions do not provide an affirmative basis for action by the affected company or person to enjoin disclosure; they merely create a right of governmental agencies to refuse to disclose the material. 441 US 281 (1979). An action to prevent disclosure occurs under the applicable agency rules and Administrative Procedure Act proceedings.

[38.6] 740 P2d 638 (Mont. 1987).

[2] Data Collection Accuracy

Page 12-18:

Add at end of subsection.

A common response to concerns about the accuracy of data collection in governmental agencies is to impose due process notification or hearing standards permitting the individual affected by the data to

PART B. GOVERNMENTAL DATA AND DATA BASES

¶ 12.06 DATA COLLECTION

[1] Constitutional Right of Privacy

Page 12-17:

Add after first paragraph.

Consistent with the view that governments can collect statistical data regarding the operations of governmental programs is the court's ruling in *Peninsula Counseling Center v. Rahm.*[37.1] In that case, patients, hospitals, and others sued to enjoin the Department of Social and Health Services from carrying out regulations requiring disclosure to the state of the name and diagnosis of patients receiving state and federal funds in use of state subsidized mental health facilities. The Washington Supreme Court held that this system of required disclosure of information, adopted pursuant to a statute enacted due to federal requirement of adequate accounting systems to ensure federal funds are actually spent in treating mentally ill patients, was permissible as carefully tailored to meet valid governmental interests.

[37.1] 105 Wash. 2d 929, 719 P2d 926 (Wash. 1986).

Add after second sentence in second paragraph.

The issue of privacy interests may also be litigated under state constitutional law. For example, in *Perkey v. Department of Motor Vehicles,*[38.1] the California Supreme Court accepted the validity of a system of obtaining fingerprints of drivers with motor vehicle licenses as a means of collecting enforcement information, but imposed confidentiality restrictions on the use of the fingerprints and their disclosure under state information control laws with at least an allusion to potential privacy rights restrictions under state constitutional law concepts.

[38.1] 42 Cal. 3d 185, 721 P2d 50, 228 Cal. Rptr. 169 (Cal. 1986).

Add after last paragraph in subsection.

Constitutional privacy interests with reference to corporate business entities involve threshold considerations about whether or not any there is a protected right of privacy in an unlisted telephone number, name, and address; seizure of these without a warrant is unreasonable).

¶ 12.05 ELECTRONIC MAIL SYSTEMS

Page 12-12:

Add at end of note 22.

See supra ¶ 12.04[1], note 13, this Supplement.

Add at end of note 23.

See also United States v. Horowitz, 806 F2d 1222 (4th Cir. 1986). In this case, the defendant transmitted data on pricing and other contract bid matters by modum to a third party who would prepare bids on government projects. This material was taken from confidential records of Pratt, a competitor, and enabled the third party to underbid Pratt on government contracts. The third party stored the data on computer tapes in his own premises. When those premises were seized under a valid search warrant, the material was discovered and used to convict the defendant of making false statements to the Air Force. The court held that the defendant had no reasonable or enforceable expectation of privacy in the tapes and no expectation of privacy in the third party's premises.

Add at end of note 24.

See People v. Chapman, 36 Cal. 3d 98, 679 P2d 62, 201 Cal. Rptr. 628 (1984) (under California Constitution, there is a protected right of privacy in unlisted telephone number, name and address; seizure of these without a warrant from third party in possession of them is unreasonable).

Page 12-14:

Add at end of section.

The status of electronic mail and remote data processing services as repositories of private data was substantially clarified by federal legislation in 1986. The Electronic Communications Privacy Act of 1986 enacted expanded protections against unauthorized interception of data transmissions. In addition, it dealt with the security and expectations of privacy involved in data storage systems.

The Privacy Act provided for criminal sanctions for unauthorized access to electronic communications that are stored in a facility involved in electronic communications services. An "electronic communications telephone conversation because no "aural acquisition" of conversation occurred). See also United States v. Gregg, 629 F. Supp. 958 (WD Mo. 1986). (The subsequently amended provisions of Title III that regulate the "interception of wire or oral communications" do not apply to regulate the interception of telex communications. As a result, the magistrate acted properly in authorizing telex interceptions pursuant to rules permitting issuance of a warrant to search for and seize any property that evidences commission of a criminal offense. Furthermore, the warrant was not unconstitutionally broad or arbitrary where it authorized seizure of all telex communications by defendants' business.)

Page 12-10:

Add at end of subsection:

The provisions of federal law regarding communications privacy were extensively amended in 1986 through the Electronic Communications Privacy Act of 1986. The amendments expressly extend statutory protections to data communications and prohibit various forms of non-aural interceptions. "Aural transfers" are transfers involving the human voice at any point between and including the point of origin and the point of reception.

The changes in the substantive scope of the federal law on data access and communication by the Electronic Communications Privacy Act of 1986 expressly recognize that electronic communications merit protection even if the communications involve purely data transmissions, rather than voice transmissions. The Privacy Act applies to three types of transmission: (1) wire (defined to include an "aural transfer" involving wire, cable, or similar means), (2) oral communications (defined as non electronic), and (3) electronic communication. An electronic communication includes any "transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photo-optical systems that affects interstate commerce . . ." [18.1]

The Privacy Act prohibits any unauthorized interception or disclosure of wire, oral, or electronic communications.[18.2] The definition of "intercept" has been broadened to expressly include any aural or other acquisition of oral, wire, or electronic communications through electronic, mechanical, or other device. The liability and criminal penalties enacted with reference to electronic communications are limited to cases in which some efforts have been made to restrict access to the system.

[18.1] 18 USC § 2510(a)(12).

[18.2] 18 USC § 2511.

point of reception. The Electronic Communications Privacy Act of 1986 expressly recognizes that electronic communications merit protection even if the communications involve data, rather than voice transmissions. The Privacy Act now applies to three types of transmission: (1) wire (defined to include an "aural transfer" involving wire, cable, or similar means), (2) oral communications (defined as non electronic), and (3) electronic communication. An electronic communication includes any "transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photooptical systems that affects interstate commerce . . ."[109]

The act prohibits any unauthorized interception or disclosure of wire, oral, or electronic communications.[110] "Intercept" includes any acquisition of communication through electronic, mechanical, or other devices. The liability enacted with reference to electronic communications is limited to cases in which some efforts have been made to restrict access to the system. It excludes any liability for intercepting an "electronic communication made through an electronic communication system that is configured so that such electronic communication is readily accessible to the general public . . ."[111] The standard or ready access requires that, for protection, the communications system undertake technologically to restrict access.[112]

Unauthorized interception in violation of the federal privacy law results in both criminal and potential civil liability. With respect to civil recovery, the injured party is entitled to any appropriate relief, including injunctive relief, damages, punitive damage recovery, and attorney's fees.[113] If the interception is of a private satellite video transmission or a radio transmission that is not scrambled or encrypted and the interception is not for tortious purposes or commercial advantage or gain, damages are limited to either $500 or $1000 depending on whether this is the first violation. In all other cases, the damages are the greater of either the sum of actual damages to the plaintiff and profits to the wrongdoer, or statutory damages of a maximum of $10,000 assessed at $100 per day.[114]

In addition to restricting interceptions of data transmissions, the Privacy Act also provides for criminal sanctions for unauthorized access

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[109] 18 USC § 2510(a)(12).

[110] 18 USC § 2511.

[111] 18 USC § 2511(g)(i).

[112] 18 USC § 2510(a)(16).

[113] 18 USC § 2520(b).

[114] 18 USC § 2520(c).

that a time sequence connection existed between issuance of the report and a downturn in the plaintiff's business. This was inadequate.

In addition, the federal court concluded that Colorado state courts would follow the majority rule and apply a qualified or conditional privilege to the credit reports. Under this privilege, inaccuracies are not actionable unless the plaintiff shows they resulted from a reckless disregard of the truth of its representations. The plaintiff in *Sunward* also failed to prove this element of the case.[106]

Although computer data services provide information of a type that is also available from newspaper and other, general purpose sources, both the method of delivery and the manner of payment for that information differs from the general distribution of factual information. The user contracts directly with the supplier and relies on speed of access. Given these differences, serious questions about the extent to which the supplier can be held responsible for delivering inaccurate information, and whether traditional First Amendment rules limit recovery permeate much of the litigation in this field.

A New York lower court has held that the First Amendment does restrict recovery. The court in *Daniel v. Dow Jones & Co., Inc.*,[107] dealt with a claim that information provided in a computer data base service about the sale of a corporation was inaccurate because the currency in which the price was computed was not indicated to be Canadian dollars. This arguably amounted to negligence.

The court emphasized that the class of plaintiffs permitted to proceed against data providers based on negligent misrepresentation should be carefully circumscribed. Ignoring the contractual character of the service provided, the relationship here, the court believed, was "functionally identical to that of a purchaser of a newspaper. The advances of technology bring the defendant's service into the home or office [but the] instantaneous, interactive, computerized delivery of defendant's service does not alter the facts: plaintiff purchased defendant's news reports as did thousands of others."

The character of the perceived relationship was important to the court here because the claim was based on negligent misrepresentation and, the court believed, this requires a special relationship between the parties. It held, perhaps incorrectly, that this special relationship "must be greater than that between an ordinary buyer and seller."

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[106] See also Riblet Tramway Co., v. Ericksen Assocs., 665 F. Supp. 81 (D. N.H. 1987) (consultant's assessment of risk in ski lift repair contract was not defamatory and did not tortiously interfere with a prospective contract).

[107] 137 Misc. 2d 94, 520 NYS2d 334 (NY Civ. Ct. 1987).

¶ 11.10 PRODUCT LIABILITY

Page 11-32:

Add after first full paragraph.

The U.S. Supreme Court, however, has refused to extend First Amendment protections to private data transmissions and the state law of slander or libel pertaining to them. In *Dun & Bradstreet v. Greenmoss Builders, Inc.*,[100.1] the state court awarded punitive damages and presumed damages in reference to an inaccurate, private credit report. The report incorrectly indicated that the plaintiff had filed bankruptcy, an error resulting from an inaccuracy in the recording of court data. The Supreme Court held that this private communication of data was not covered by constitutional protections where the material did not involve a matter of public interest or a public figure. Accordingly, Constitutional law principles placed no restrictions on whether liability without proof of malice is permitted or on whether punitive damages were appropriate.

This decision, at least temporarily, leaves liability issues regarding information providers as a matter of purely state law concern, rather than federal law. The exclusion of Constitutional limits has been applied by other courts, but does not, in itself, resolve to what extent state law rules require proof of more than mere negligence in order to establish liability for improper, private data communications.[100.2]

[100.1] 472 U.S. 749, 86 L.Ed2d 593 (1985).

[100.2] See Sunward Corp. v. Dun & Bradstreet, Inc., 811 F2d 511 (10th Cir. 1987) (credit agency reports not subject to Constitutional protection); Wood v. National Computer Sys., Inc., 814 F2d 544 (8th Cir. 1987) (negligent mailing of test scores to wrong parties creates no liability under state law).

Add note 100.1 at end of first sentence in last paragraph.

[100.1] See Safeco Title Ins. Co. v. Attorneys' Title Serv., 460 So. 2d 518 (Fla. Ct. App. 1984) (company that provided computerized abstract of title information was liable for errors to title insurer that issued insurance policy relying on inaccurate information).

Page 11-33:

Add note 100.2 at end of runover paragraph.

[100.2] See generally Liberty Fin. Management Corp. v. Beneficial Data Processing Corp., 670 SW2d 40 (Mo. Ct. App. 1984) (in a data processing service contract, disclaimer of liability for ordinary negligence was not unconscionable and would be enforced where disclaimer did not purport to exclude liability for gross negligence).

A similar analysis led to liability in *National Football League v. McBee & Bruno's, Inc.*,[95.5] where the court held that restaurants that received and displayed to patrons NFL football games that were locally "blacked out" are not protected by Section 110(5) of the Copyright Act. The exemption applies only if the performance is received on an apparatus of a kind commonly used in homes. The court here held that "common use" refers to the manner of reception, not to the display. The defendants used a satellite dish and dishes are not the type of equipment to which the exemption applies.

In *Quincy Cablesystems, Inc. v. Sully's Bar, Inc.*,[95.6] the court held that state law claims of conversion based on unauthorized receipt and display in a tavern were preempted by the Copyright Act to the extent that they relate to unauthorized distribution, display, or performance. "These rights are already guarded by the Copyright Act. The elements in plaintiff's action for conversion involve elements that would not establish qualitatively different conduct by the defendants than the elements for an action under the Copyright Act." This establishes an equivalence between the two actions. Because the plaintiff did not allege registration under the Copyright Act, the copyright action was dismissed, but dismissed without prejudice.[95.7]

For online data systems, rather than cable television originators, the primary new legislation in this field is in federal electronic privacy legislation. The Electronic Communications Privacy Act of 1986 substantially expanded federal wiretap laws to expressly preclude interception of data communications and data processing activity using interstate facilities. The statute contains express criminal penalties and civil remedies, and thus provides one method through which on-line database systems can enforce proprietary rights and prevent unauthorized access to their transmissions. These rights are not based on copyright, but on efforts to encrypt or otherwise scramble and protect against access to the data being transmitted.

The Electronic Communications Privacy Act of 1986 expressly

[95.5] 792 F2d 726 (8th Cir. 1986). See also International Korwin Corp. v. Kowalczyk, 665 F. Supp. 652 (ND Ill. 1987) (receiver by which copyrighted songs were picked up and played at nightclub was not an ordinary receiving system of a "kind commonly used in private homes").

[95.6] 650 F. Supp. 838 (D. Mass. 1986).

[95.7] The court also held that there was no trademark violation in displaying the sports programming. Compare Entertainment and Sports Programming Network, Inc. v. Edinburg Community Hotel, Inc., 623 F. Supp. 647 (SD Tex. 1985).

admission process [and] that defendant's copying compromised its test forms" requiring it to develop new forms. The court also rejected the argument that the use in classes constituted a fair use of the questions, holding that the highly commercial character of the use and the secret nature of the original works militated against any finding of fair use.

[4] Broadcast Teletext

Page 11-27:

Add note 92.1 at end of first paragraph.

[92.1] See California Satellite Sys. v. Seimon, 767 F2d 1364 (9th Cir. 1985) (unauthorized interception of subscription television signals was properly enjoined, since reception of microwave signals violated Federal Communications Act and statute violated no First Amendment right of access to radio signals).

Page 11-29:

Add at end of note 95.

See also Hubbard Broadcasting, Inc. v. Southern Satellite Sys., Inc., 777 F2d 393 (8th Cir. 1985). In *Hubbard*, a cable system qualified for the carrier exception for copyright in rebroadcasting television signals. The court stated that retransmission is not affected by the Copyright Act section dealing with secondary transmission that is "controlled and limited to reception by particular members of the public." Policies underlying the carrier exception and the Act in general were ruled not to have been violated by the cable practice of commercial substitution in retransmission.

Page 11-29:

Add the following new section.

[5] Protected Signals: The New Proprietary Rights [New]

As we move into the era of electronic data communication, Congressional actions are increasingly becoming designed to protect the provider of information or entertainment against reception and use of the signal by third parties. While much of this protection can be structured around forced interpretations of copyright concepts of creative content and electronic copying, there is a clear tendency to build a new form of protected right around a concept of precluded access.

In the actions that have occurred to date, statutory rights to preclude access to electronically transmitted data or other signals have begun to focus on the extent to which the originator of the signal has undertaken to protect against access by scrambling, encrypting, or

Add note 83.1 at end of third sentence in first complete paragraph.

83.1 See West Publishing Co. v. Mead Data Cent., Inc., 616 F. Supp. 1571 (D. Minn. 1985). In *West Publishing Co.*, the page numbering and arrangement of cases in West case reporter system were entitled to copyright protection. A preliminary injunction was issued against a competitor's use of a system that permitted the user to access those page numbers beyond the first page of the case. This went beyond fair use of the copyrighted arrangement in that it would represent appropriation of the entire system of arrangement. "[Mead's system] will reproduce West's copyrighted arrangement by systematically inserting the pagination of West's reporters into the LEXIS database. LEXIS users will have full computer access to West's copyrighted arrangement."

Page 11-26:

Add at end of subsection.

While in most cases comprehensive duplication of a protected database will infringe the original author's copyright, duplication in a computer for personal use may not constitute an infringement where the data are not then further duplicated and transferred to third parties. For example, in *N.A.D.A. Services Corp. v. Business Data of Virginia*,[88.1] the defendant purchased a copy of the plaintiff's book, which listed prices for various used cars, and then entered the data from this book into a computer database that it used to assess values of vehicles for various state revenue agencies. It did not sell the tapes, only the appraisal services. The court held that the transcription of this factual information into a computer data base was not an infringement of the copyrights since the use made in the computerized form was essentially the same use that was intended for the book, which was properly purchased by the defendant. Even if there was an infringement potential here, the court held that the use made by the defendant was a protected fair use, although it was clearly a commercial use because the defendant received monetary compensation for its service of assessing vehicle values.

> Accordingly, it would appear that BDV's use of such information must be considered presumptively unfair. . . . [Furthermore,] compilations of facts . . . are traditionally accorded less protection under the copyright laws than are more creative works . . . [However, the effect on the market factor] is the single most important element in determining whether there is fair use. A use which does not materially impair the marketability of the copyrighted work will be deemed fair. . . . The Court finds that defendants successfully

88.1 651 F. Supp. 44 (ED Va. 1986).

would have on the West publications was a major element in the decision.

In contrast, in *Toro Co. v. R&R Products Co.*,[78.3] the Eighth Circuit denied protection to the owner of a parts numbering system in which part numbers were randomly assigned by the manufacturer. The alleged infringement involved reproduction of the numbering in the parts catalogue by a competitor for purposes of providing cross references to its own replacement parts. The court denied protection because the random assignment of parts numbers did not meet minimum standards of required originality for copyright protection. Unlike other numbering or organizational systems, there was no evidence here that any particular series of numbers denoted a certain type or category of parts or that the numbers used encoded any kind of information at all. They were purely arbitrary and random. The court noted that many numbering systems may be protected if they can be considered original works. "[Any system] that uses symbols in some sort of meaningful pattern, something by which one could distinguish effort of content, would be an original work." [78.4]

[78.3] 787 F2d 1208 (8th Cir. 1986).

[78.4] See also Gem Prods., Inc. v. Robershaw Control Co., 1986 Copyr. L. Dec. (CCH) ¶ 25,975 (CD Cal. 1986) (No infringement of copyrighted replacement parts catalog because the material contained in the catalog was unprotected factual information, not expression. The alleged infringement involved entry of the parts and model numbers for cross reference into a computer data base designed to cross-reference Robertshaw's lists.)

¶ 11.08 DATA BASE INFRINGEMENTS

[1] Downloading and Reproduction of Data

Page 11-24:

Replace citation following Rand McNally & Co. v. Fleet Management Sys., Inc. in note 81 with 600 F. Supp. 933 (ND Ill. 1984).

Add at end of note 81.

See also Rockford Map Publishers, Inc. v. Directory Serv. Co. of Colo., 768 F2d 145 (7th Cir. 1985) (plat map showing location of various parcels of real estate was copyrightable and was infringed by competitor's copying of output of plat maps).

Atlanta Yellow Pages, but could use advertisements appearing in Yellow Pages if advertisers consented).

Replace citation in fourth reference in note 74 with 600 F. Supp. 933 (ND Ill. 1984).

Replace citation in first reference in note 75 with 600 F. Supp. 933 (ND Ill. 1984).

Page 11-23:

Add at end of subsection.

In the absence of a holding that effort justifies protection under copyright law, factual databases of substantial value may be subject to wholesale appropriation under both federal and state law. This result occurred in *Financial Information, Inc. v. Moody's Investors Service, Inc.*[78.1] The database in that case involved so-called "bond cards," collections of limited information concerning the price at which bonds were traded. The circuit court held that the bond reporting data was not copyrightable in this case and further held that the plaintiff's claims of misappropriation under state law were preempted by the federal Copyright Act.

As to the copyright claims, the court agreed with the conclusions of the district court.

> The statute thus requires that copyrightability not be determined by the amount of effort the author expends, but rather by the nature of the final result. To grant copyright protection based merely on the 'sweat of the author's brow' would risk putting large areas of factual research material off limits and threaten the public's unrestrained access to information.

In this case, the bond cards contained only five fields of information and this was inadequate expressive material to form the basis of copyright.

[78.1] 808 F2d 204, 1 USPQ2d (BNA) 1279 (2d Cir. 1986). See also Gem Prods., Inc. v. Robershaw Control Co., Copyr. L. Dec. (CCH) ¶ 25,975 (CD Cal. 1986). (No infringement by loading copyrighted replacement parts catalog into computer because the material contained in the catalog was unprotected factual information, not expression. "[Gem] might have a copyright in the creative arrangement of the catalog, it did not have a protectible interest in the 'facts' [contained] therein . . . The arrangement and manner of expression is all that is entitled to protection. Otherwise, the free flow of new expression would cease as authors captured various pieces of factual information.")

Add at end of note 62.

See also United States Golf Ass'n v. St. Andrews Sys., Data-Max, Inc., 749 F2d 1028 (3d Cir. 1984) (no copyright claim made and defendant's use of organization's golf "handicapping" formula for a computer-based system did not constitute "misappropriation" under New Jersey law).

Replace citation in note 64 with 81 Colum. L. Rev. 516.

[3] Selection, Arrangement, and Effort

Page 11-19:

Replace citation in second reference in note 65 with 81 Colum. L. Rev. 516.

Replace citation in second reference in note 67 with 600 F. Supp. 933 (ND Ill. 1984).

Page 11-20:

Replace citation in second reference in note 68 with 600 F. Supp. 933 (ND Ill. 1984).

Add at end of note 69.

See also Eckes v. Card Prices Update, 736 F2d 859 (2d Cir. 1984) (compilation of several thousand baseball card descriptions along with prices chargeable for each was a copyrightable work based on fact that it was a selection from among over 18,000 possible cards; copyrighted work was infringed when Defendant produced a newsletter describing prices for cards, although in a different form where mixed evidence supported a finding of copying based in large part on repetition of errors and abbreviations in names between two publications).

Add at end of note 70.

See also West Publishing Co. v. Mead Data Cent., Inc., 616 F. Supp. 1571 (D. Minn. 1985), aff'd, 799 F2d 1219 (8th Cir. 1986). In *West Publishing Co.*, page numbering and the arrangement of cases in the West case reporter system were entitled to copyright protection. A preliminary injunction was issued against competitor's use of system that permitted user to access those page numbers beyond the first page of the case. The court described its holding as that "[Mead's system] will reproduce West's copyrighted arrangement by systematically inserting the pagination of West's reporters into the LEXIS database. LEXIS users will have full computer access to West's copyrighted arrangement."

ing governmental databases will be permitted. In part, these issues involve an aspect of privacy or data access law in which the desire for information by one party may be offset by individual privacy concerns or concerns about efficient government operation. This is an important area in which private and public rights are balanced in the electronic information era.[49.1] They also involve basic determinations of the form and restrictions of access established for purposes of governmental operations.

In *National Association of Securities Dealers, Inc. v. Securities & Exchange Commission*,[49.2] for example, the court dealt with a review of SEC regulations establishing the terms and cost under which computerized data about securities would be released. The SEC had established prices and fees for access to computerized information regarding securities. The national securities association sought review of two orders concerning the fees. The court held that a low, cost-based fee for subscriber access to raw data was required for the national securities association for raw data on securities. The raw data was then sold to vendors who then processed the data for resale to subscribers. Furthermore, the national association had to separate query function costs from other computer information system costs. In this regard, the SEC ruled that the computer query function was not integral to process of collecting quotations because market makers had to use the query function before entering new quotations into system.

In *National Republican Congressional Committee v. Legi-Tech*,[49.3] the issue focused more on whether access would be provided and who had the primary authority to determine the conditions of access to a database consisting of federal election contributors. The court properly held that the terms of express federal disclosure or secrecy statutes preempt any provisions of the federal copyright act in reference to data collected and held by the government.

The National Republican Congressional Committee (Committee) supports candidates for congressional elections through fund-raising activities. It uses a contributors list for targeting solicitations. Federal election law requires that lists of names of contributors of more than $200 be filed with the Federal Election Committee (FEC) and made available to public inspection and use, except that the information may not be sold or used for soliciting contributions or for commercial purposes. Legi-Tech sought access to the registered list in order to make it available to subscribers to its computer database system. The Committee

[49.1] See supra ¶ 12.08, this Supplement.

[49.2] 801 F2d 1415 (DC Cir. 1986).

[49.3] 795 F2d 190 (DC Cir. 1986).

PART B. PRODUCT AND STRUCTURAL ISSUES

¶ 11.05 ANTITRUST AND OWNERSHIP

Page 11-13:

Add at end of runover paragraph.

Even absent issues of direct antitrust violation, questions arising about the market position and control of a particular vendor of information may affect the enforceability of contractual and other rights. In *Trans Union Credit Information Co. v. Associated Credit Services, Inc.,*[44.1] the local market prominence and control of a credit reporting bureau was a factor in permitting a party injured by a breach of contract to receive specific performance as a remedy in a computer service credit reporting service agreement because of the unique value that could be attributed to the data service.

The plaintiff (TUC) supplied a national data processing service and a credit reporting service. The defendant (ACI) was a major competitor. Both parties had contracts with various local credit service bureaus and own others. The codefendant (CB) was the major local credit bureau in Cincinnati. TUC entered an agreement with CB in which the parties each granted the other full access to their credit information and, as a result, TUC deferred creation of its own local company in Cincinnati. ACI then purchased CB and, eventually, CB repudiated the contract with TUC.

The court granted specific performance to TUC:

> Given the monopolistic position CB has in the Cincinnati market, it and it alone has not only all of the individual credit reports for the area . . . but also updated credit inquiry data and pertinent historical information unavailable elsewhere. In addition, the synergistic loss . . . of goodwill and exposure that TUC would have otherwise enjoyed . . . certainly does not easily lend itself to a damages computation.

In contrast, however, a strong market position was inadequate to deny enforcement of a copyright to data in a multiple listing service relating to real estate sales.[44.2] Comprehensive duplication of the listing material for competitive purposes was not a fair use, although the result was to impose a severe competitive hardship on companies who did not join the listing service.

[44.1] 805 F2d 188 (6th Cir. 1986).

[44.2] Supermarket of Homes, Inc. v. San Fernando Valley Bd. of Realtors, 786 F2d 1400 (9th Cir. 1986).

PART A. COMMUNICATIONS REGULATION

¶ 11.03 DATA PROCESSING

Page 11-6:

Add at end of note 19.

See also United States v. Western Elec. Co., 604 F. Supp. 256 (DDC 1984) (telecommunications holding companies are granted a waiver of restrictions, permitting them to engage in various businesses such as computer sales and foreign operations); United States v. American Tel. & Tel. Co., 604 F. Supp. 316 (DDC 1985) (AT&T is not required to provide other operating companies with a data base system that would enable operation of a WATS system, but it is required to provide software, hardware, and knowhow adequate to permit companies to develop their own data base systems). See United States v. Western Elec. Co., 627 F. Supp. 1090 (DDC 1986) (the consent decree regarding AT&T was "clarified" to the effect that absent an express waiver of the decree, local companies can provide telecommunications exchange services, including cellular radio, only within its own exchange area and that local companies are prohibited from providing information services, including voice storage and retrieval services).

¶ 11.04 ELECTRONIC PUBLISHING REGULATION

[1] Broadcast Teletext

Page 11-9:

Add at end of runover paragraph.

In *Telecommunications Research and Action Center v. FCC,*[26.1] the court of appeals reviewed the terms that FCC regulations established concerning teletext insofar as these pertain to political party or candidate access. The court held that the FCC had acted reasonably and within its authority in concluding that it should not apply to teletext those Communications Act rules that require a broadcast licensee to allow reasonable access to use of a broadcast station to all legally qualified candidates for federal office. Furthermore, it was also reasonable to conclude that the public interest does not require that "fairness doctrine" rules apply to teletext.

The court held that the FCC, however, was incorrect in concluding that the teletext system does not constitute a traditional broadcast ser-

[26.1] 801 F2d 501 (DC Cir. 1986).

may be determined by external law, such as that associated with limits of liability in FDIC takeovers of insolvent banks.[114]

The applicable liability standard for processing checks or similar instruments in a computerized environment should defer initially to the standard procedures of the individual bank (or similar institution) and the standards or procedures of the industry, unless these are patently inadequate to protect third-party rights. This deference was illustrated in *Woods v. Bank of New York*,[115] where a mutual fund shareholder had sent in a check with specific written instructions on the memorandum portion of the check and the bank, acting as a transfer agent, applied the check without considering the written instructions. Basing its analysis on the nature of check processing procedures generally, the court held that the bank might have a duty to read and follow special instructions and might be liable for not following the instructions, but only if its normal operations assumed an obligation to be bound by the written instructions, rather than merely an obligation to process in ordinary form.

In addition to questions about final payment, computerization affects the bank's responsibilities regarding stop orders and the relationship between the internal system for blocking payment of selected checks and the actual notice to stop payment of the check received from the customer.

In the typical checking account, by law and by contract, the customer (depositor) has a right to stop payment on any check issued or drawn by it. This right can be acted on by merely giving adequate or reasonable notice to the bank, prior to the bank's payment of the check.

Processing of stop orders routinely relies on computerized matching between the content of the order and the content of the check. In this system, errors in describing the check are significant and prevent implementing the order only if they affect the terms used for comparison of the order and the received checks. On the other hand, once an error in these terms occurs, even completely accurate data on other

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[114] See Federal Deposit Ins. Corp. v. McKnight, 769 F2d 658 (10th Cir. 1985), in which the FDIC, when it took over insolvent bank, placed computerized holds on any transaction in excess of the $100,000 limit. Through error, the program did not include cashiers' checks, and the defendant obtained payment in excess of the hold amount. The court held that federal law preempts UCC payment provisions and that the National Bank Act (12 USC § 191) permits recovery of this amount from defendants as unjust enrichment.

[115] 806 F2d 368 (2d Cir. 1986).

return the check to prior institutions in the collection chain. After final payment, the bank's rights to return the item are very limited, and it must ordinarily look to the customer for payment. In most cases, of course, this occurs from the immediate debit to the account, but not if the customer's signature was forged or the account is insufficient or nonexistent.

Under the UCC, "final payment" occurs either when the bank completes the process of posting the check or upon the expiration of a time limit that begins when the check is received by the bank, whichever is earlier.[109] This latter standard creates difficulties of interpretation when the item is first received by a data processing center affiliated with the bank and only later conveyed to the bank itself. Depending on the character of the services performed by the data processing center, even if the center is an independent contractor, the time of receipt for purposes of the deadline may be when the center receives the item and, as a consequence, the time to return (dishonor) the check may expire before it reaches the physical confines of the bank itself.[110]

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[109] UCC § 4-213. See also Nelson v. Platte Valley State Bank & Trust Co., 805 F2d 332 (8th Cir. 1986). (Bank completed process of posting check and became accountable for the amount of the check when the check was sorted, the computer had verified that there was a sufficiency of funds, the check was marked "paid," and was filed to await dispersal to drawer. Under these circumstances, the bank remained liable of the instrument and acted wrongfully in later attempting to dishonor the check.)

[110] See South Sound Valley Nat'l Bank v. Citizens Valley Bank, 672 P2d 1198 (Or. Ct. App. 1983) (in defining whether receipt at data processing center constitutes beginning of time in which bank must act to dishonor checks before midnight deadline, it is not critical that data center is bank's own operation or services performed by another under contract; where center performs steps necessary to honor checks, even though an independent contractor, bookkeeping and accounting functions make it integral to payor bank and time of receipt by data center is critical time for purposes of midnight deadline); South Sound Valley Nat'l Bank v. First Interstate Bank, 65 Or. App. 553, 672 P2d 1194 (1983) (time that checks were received at data processing center constituted time they were "present on and received" by bank for purposes of midnight deadline to dishonor checks; even though data processing center was not on premises of bank, it was integral to bank's operations); Idah-Best, Inc. v. First Sec. Bank of Idaho, NA, 584 P2d 1242 (Idaho 1978) (receipt by data processing center located in another branch bank did not constitute presentment on or receipt by payor bank for purposes of midnight deadline to dishonor where data center merely provided routine accounting steps and then forwarded checks to payor and where data processing center had no means to determine whether there were sufficient funds in account or whether signature was genuine; midnight deadline period begins when checks are physically received by payor bank); Chrysler Credit Corp. v. First Nat'l Bank & Trust Co. of Wash., 746 F2d 200 (3d Cir. 1984) (applying Pennsylvania law).

PART B. TRANSACTION STRUCTURES

¶ 10.08 PAPER DOCUMENTATION AND EFT ERROR

Page 10-27:

Add note 72.1 at end of next to last sentence in second paragraph.

72.1 The transfer of paper entails costs that are ordinarily spread through the system based on patterns of use. See National Bancard Corp. v. VISA, USA, Inc., 779 F2d 592 (11th Cir. 1986) (interchange fee charged for various member banks in credit-card system was not an unlawful restraint on trade). The court in *National Bancard Corp.* stated:

> The difficulties in a credit card or "cashless" transaction arise because each such transaction generates a trail of paperwork. . . . This case concerns certain fees . . . in the transfer of this paper between the merchant-signing bank and the card-issuing bank. . . . In the VISA system this fee . . . is levied only when the interchange is conducted through VISA's computerized service known as BASE II. [The] parties to the interchange are not required to use BASE II. . . . In today's technology, the majority of these transactions are automated, so that the banks' and merchants' computers actually credit each others' computerized accounts. The effect, however, is the same as if each party were to present the paper in person and receive cash in exchange.

Id. at 594.

¶ 10.09 FORGERY AND FRAUD

Page 10-35:

Add at end of section.

In dealing with liability issues in electronic transactions both from a perspective of criminal sanctions and a perspective of civil liability, judgments are made about who should bear the risk of loss and about the seriousness of conduct involved. In this latter respect, often uncertain distinctions are drawn between traditional forms of fraud and forgery and more electronic forms. This was discussed by the court in *State v. Gomez,*[100.1] where the court held that the defendants could be charged with wrongful use of a financial transaction card by "signing" a sales slip. This offense carried a more severe sentence and proscribed different conduct than that proscribed in the statute prohibiting fraudulent use of a financial transaction card. "It is true that the reason for the distinction between . . . the financial transaction card offenses is rather hard to fathom, especially when most credit card sales probably involve a 'signing,' but we cannot say it is irrational or arbitrary." The

100.1 722 P2d 747 (Utah 1986).

ing of Mississippi v. Clarke,[20.1] the court affirmed a decision by the Comptroller's Office allowing a national bank to open a branch more than 100 miles from its main office in Mississippi. Under local law, state banks were prohibited from opening branches outside of the 100 mile area. In contrast, however, local law permitted state chartered thrift institutions to open branches anywhere within the state. The court, in essence, held that federal law controls the definition of what constitutes a state bank for purposes of determining standards of competitive equality. Under federal law, according to this court, a state bank is any state-chartered institution that engages in the business of banking. This included state savings and loans, because savings and loan associations accept deposits, pay interest on accounts, offer checking accounts, act in a fiduciary capacity, make personal loans, sell money orders and travelers checks, service loans, manage investments, and mortgage both personal and real property. As a result of including savings and loans in the federal definition of a state bank, the concept of competitive equality required that the national bank be permitted to compete under the terms applicable to savings and loans. If affirmed by the Supreme Court or followed by other decisions, however, this ruling effectively establishes a form of reverse competitive disadvantage. State "banks" subject to state rules restricting bank activities now have a lesser degree of flexibility than either the savings and loans or the national banks in any state where banking rules are more restrictive than rules about savings and loans.

20.1 809 F2d 266 (5th Cir. 1987).

Page 10-11:

Add at end of note 25.

The ruling that the teller machine was a branch for purposes of federal law was overruled by the Court of Appeals for the Second Circuit. See Independent Bankers Ass'n of NY v. Marine Midland Bank, NA, 757 F2d 453 (2d Cir. 1985) (automated teller machine in food store, owned and operated by store, is not unauthorized branch banking under federal law).

[2] Interstate Branching Restrictions

Page 10-13:

Add at end of note 33.

The initial district court decision on this issue was overruled by the Court of Appeals for the Second Circuit. See Independent Bankers Ass'n of NY v. Marine Midland Bank NA, 757 F2d 453 (2d Cir. 1985) (automated teller

viding storage or processing service to the customer if the service provider is not authorized by the service agreement to access the contents of the communication for purposes other than storage or processing.[80.9] These provisions apply to the newly developing electronic mail systems and to the services that provide time sharing and other remote computer services on a subscription or fee basis.

The restrictions on disclosure are made subject to governmental requests based on warrants or administrative subpoenas.[80.10] If the communication has been in storage less than 180 days, a warrant is required. In cases where there has been long-term storage, the Privacy Act permits disclosure subject to warrant or subpoena. In such cases, however, the use of a subpoena requires notice to the customer while the use of a warrant may permit disclosure without notice. Where notice is required, a form of delayed notice of up to 90 days may be used where there is proof or certification that adverse effects may result from earlier notice in the form of endangering the physical safety of an individual, flight from prosecution, destruction or tampering with evidence, intimidation of witnesses, or otherwise seriously jeopardizing an investigation.[80.11]

[80.9] 18 USC § 2702.

[80.10] 18 USC § 2703.

[80.11] 18 USC § 2705(a).

[3] Interstate Stolen Goods

Page 9-27:

Add at end of note 82.

Any possibility of broadly applying this statute to include electronic impulses or other intangibles taken in actions moving across state lines may recently have been laid to rest by the U.S. Supreme Court in *Dowling v. United States,* 105 S. Ct. 3127 (1985). In *Dowling,* the Court held that no criminal action existed under the National Stolen Property Act where infringing copies of records (music) were transported between states, but no tangible object was stolen. Copyright infringement in itself is an inadequate basis for action under this criminal statute.

Add at end of subsection.

The Supreme Court has held that the National Stolen Property Act does not apply to interstate transportation of infringing copies of works unless tangible property was stolen.[83] In *Nune v. United States,*[84] the dis-

[83] See supra note 82, this Supplement.

[84] 630 F. Supp. 1048 (D. Haw. 1986).

cations" do not apply to regulate the interception of telex communications. As a result, the magistrate acted properly in authorizing telex interceptions pursuant to rules permitting issuance of a warrant to search for and seize any property that evidences commission of a criminal offense. Furthermore, the warrant was not unconstitutionally broad or arbitrary where it authorized seizure of all telex communications by defendants' business.)

Page 9-27:

Add at end of runover paragraph.

In 1986, federal criminal law provisions were modified to expressly preclude unauthorized interceptions of "nonaural" electronic communications. "Aural transfers" are defined as any transfer involving the human voice at any point between and including the point of origin and the point of reception. The Electronic Communications Privacy Act of 1986 made a number of changes in the structure and substantive scope of the federal laws pertaining to data access and communications.

The most wide-ranging change expressly recognized that electronic communications merit protection even if the communications involve purely data transmissions, rather than voice transmissions. The Privacy Act now applies to three types of transmission: (1) wire (defined to include an "aural transfer" involving wire, cable, or similar means), (2) oral communications (defined as nonelectronic), and (3) electronic communication. An electronic communication includes any "transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photooptical system that affects interstate commerce . . ." [80.1]

The act prohibits any unauthorized interception or disclosure of wire, oral, or electronic communications.[80.2] The definition of "intercept" has been broadened to expressly include any aural or other acquisition of oral, wire, or electronic communications through electronic, mechanical, or other device. The liability or criminal preclusion enacted with reference to electronic communications is limited to cases in which some efforts have been made to restrict access to the system. It excludes any criminal liability for intercepting or accessing an "electronic communication made through an electronic communication system that is configured so that such electronic communication is readily accessible to the general public . . ." [80.3] Apparently, the standard of ready access to the general public requires that, for protection, the communications sys-

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[80.1] 18 USC § 2510(a)(12).

[80.2] 18 USC § 2511.

[80.3] 18 USC § 2511(g)(i).

the court rejected this limitation. All that is required is that the tampering alter the program, even though the changes can be subsequently cured. In addition, the New York statute does not require proof of economic loss resulting from the alterations or other tampering.

PART C. FEDERAL CRIMES

¶ 9.07 FEDERAL CRIMINAL LAW

Page 9-25:

Add at end of note 68.

Federal interest has also extended to bank thefts, especially robbery. See United States v. Registe, 766 F2d 408 (9th Cir. 1985). The court in *United States v. Registe* stated:

> [L]arceny by false pretenses, was included by Congress in the definition of larceny in section 2113(b).... Registe opened a checking account at the ... National Bank of Alaska, with a deposit of $100.00. One day later someone within the branch posted the amount of $14,000.00 to Registe's account by computer manipulation, though the bank had received no funds to justify the deposit. Registe attempted to cash a check for $9,980.00 on his new account.

Id. This is entry of a bank with the intent to commit larceny under 18 USC Section 2113(b). See also United States v. Gallo, 599 F. Supp. 241 (WDNY 1984) (conviction of smuggling and criminal copyright violations for unauthorized importation of pirated versions of copyrighted video games was sustained; copyright laws are a valid basis for conviction of smuggling goods).

Add at end of runover paragraph.

While there are increasing difficulties in enforcing intellectual property rights through the use of the federal stolen property act, enforcement through criminal copyright actions remains possible.

In *United States v. O'Reilly,*[68.1] there was a criminal action for infringement through the sale of video games. The introduction of copyright registration certificates for the allegedly infringed games was treated as an adequate proof that the originals were copyrighted. In establishing the criminal infringement, the court admitted, without objection, the copies of the allegedly misappropriated games and permitted the jury to view portions of those in comparison to the alleged counterfeit games. This was adequate to establish the violation of copyright, although there

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[68.1] 794 F2d 613 (11th Cir. 1986). See also United States v. Cross, 2 USPQ 2d 1356 (7th Cir. 1987) (prosecution for conspiracy to willfully infringe videocassette copyrights under 17 USC § 506(a) and 18 USC § 2319(b)(2)(B); held that failure to establish at least seven wrongful sales precludes felony conviction).

computer or gaining access to data in a computer without the effective consent of the owner or licensee if the "actor knows that there exists a computer security system intended to prevent him from making that use or to restrict access." Tex. Penal Code Ann. § 33.02 (Vernon 1986). The express reference to a computer security system both defines the character of the crime and establishes the security or privacy interest being protected. The crime is a misdemeanor, but it is subject to escalation into a more serious offense where the actor intends to cause harm to the machine or to alter or destroy data. Tex. Penal Code Ann. § 33.03 (Vernon 1986).

Page 9-22:

Add at end of subsection.

In some states, access crimes are defined in terms of criminal trespass. In *State v. Olson*,[61.1] the court reversed a conviction for computer trespass. The alleged crime was committed by a university police officer who accessed computer data of students for personal purposes. The court held that this did not constitute trespass where the defendant had the authority to use the computer, but merely misused that authorization.

"The general trespass statutes criminalize the entering and remaining upon the premises when not licensed, invited, or privileged to enter or remain. By analogy, the computer trespass statutes criminalizes the entry into the computer base, not the use of information obtained." While the evidence showed that the data was not used for official purposes, the court held that there was no showing that "permission to access the computer was conditioned on the uses made of the data." "The actus reus of the computer trespass statute is accessing the computer without authorization."

[61.1] 47 Wash. App. 514, 735 P2d 1362 (Wash. Ct. App. 1987).

[2] Computer Use Crimes

Page 9-22:

Add at end of note 62.

See also Tex. Penal Code Ann. § 33.02(a) (Vernon 1986). Recently enacted legislation in Virginia establishes a multipart criminal structure oriented to crimes of criminal unauthorized "use" of a computer. Four criminal acts are defined based on the intent of the unauthorized use. These are:

1. Computer fraud (intent to take property);
2. Computer trespass (intent to remove data or programs, cause a malfunction, alter or erase data);

¶ 9.05 INFORMATION THEFT

[1] Tangibility, Tradition, and Policy Choices

Page 9-14:

Replace face *with* absence *in fifth sentence in first complete paragraph.*

Add at end of note 30.

See State v. McGraw, 480 NE2d 552 (Ind. 1985) (court rejects argument that mere unauthorized use of computer system constitutes exercise of control over property of another with intent to deprive him of any part of value of property; use here was confined to excess capacity of computer system and did not affect computer system owner's access, use storage, or any other value).

[2] Modified Theft Statutes

Page 9-16:

Add at end of note 37.

See also Evans v. Commonwealth, 308 SE2d 126 (Va. 1983) (conviction of larceny by embezzlement was affirmed, since defendants had no standing to challenge statute that defines data in computer as property that may be subject of various forms of theft).

Add at end of note 39.

See State v. McGraw, 480 NE2d 552 (Ind. 1985) (court rejects argument that mere unauthorized use of computer system constitutes exercise of control over property of another with intent to deprive him of any part of value of property; since use here was confined to excess capacity of computer system and did not affect the computer system owner's access, use storage, or any other value, this did not meet the theft-related criterion of "intent to deprive").

[3] Trade Secret Theft

Page 9-19:

Add at end of subsection.

New York law deals with a variation of trade secrecy protection in a statute concerning the unlawful use of scientific information. This statute has been applied to the unlawful copying of a computer program.

In *People v. Russo,*[49.1] the court held that an unauthorized reproduction of a computer program violated New York criminal code Sec-

[49.1] 131 Misc. 2d 677, 501 NYS2d 276 (Suffolk County Ct. 1986).

a lesser sum. The overdraft was permitted due to programming errors, but the act of taking and retaining the funds was theft).

[1] Traditional Theft Crimes

Page 9-10:

Add after first paragraph.

Theft through computer manipulation, of course, is the most common contemporary manifestation of embezzlement or other taking of funds from banks by employees. Depending on the definition adopted by local or federal criminal statutes, such an activity can constitute any of a number of traditional criminal offenses.

The court in *United States v. Registe*[17.1] held that manipulation of computer records and subsequent withdrawal of funds from a checking account constituted entry of a bank with the intent to commit larceny. It noted that

> Registe's offenses, larceny by false pretenses, was included by Congress in the definition of larceny in section 2113(b).... Registe opened a checking account . . . with a deposit of $100.00. One day later someone within the branch posted the amount of $14,000 to Registe's account by computer manipulation, though the bank had received no funds to justify the deposit. Registe attempted to cash a check for [over $9000].

In dealing with criminal events involving bank data manipulation, of course, bank computer records are appropriately admitted into evidence notwithstanding challenges to their reliability.[17.2]

[17.1] 766 F2d 403 (9th Cir. 1985).

[17.2] United States v. Hutson, 821 F2d 1015 (5th Cir. 1987).

[2] Computer Fraud

Page 9-10:

Add at end of note 20.

See also Va. Code Ann. § 18.2-152.1–18.2-152.14 (Supp. 1986); Tex. Penal Code Ann. §§ 33.01–33.03 (Vernon 1986). See State v. Winton, 736 P2d 386, 153 Ariz. 302 (Ariz. Ct. App. 1987) (attempted computer fraud charge was a felony justifying revocation of probation for prior felony).

¶ 9.01 INTRODUCTION

Page 9-2:

Add at end of last paragraph of section.

Litigation in the criminal field increasingly deals with the use of computer data as an evidentiary base and as a means of reaching judgments about the existence or nonexistence of probable cause to act against a suspect.

In respect of their use as evidence of a crime, computer records are treated in a fashion generally analogous to any other business record. Requirements of verification and relevance are imposed.[0.1]

It is in their role related to probable cause and privacy considerations that difficult issues are currently arising with reference to the use of computer data. In general, a properly verified computer report will establish sufficient basis for probable cause to arrest if all other considerations are equal.[0.2]

The issues become more difficult if the computer data is not clearly reliable or accurate, or if the results of a computer data search do not support the alleged probable cause. For example, in *People v. Strong*,[0.3] an Illinois Court held that a search warrant was validly issued even though the affiant, in obtaining the warrant, failed to tell the judge that a prior serial number computer check concerning the guns in question did not indicate that the guns were stolen. The court found that it was not proven that the judge would have found insufficient probable cause for the warrant given such information.

The willingness to support inaccurate or incomplete data disclosure and reliance may be less clearly present in cases where officers act without a warrant. For example, in *People v. Joseph*,[0.4] the arrest was based on information received by the arresting officers from a police computer unit that indicated that the defendant was wanted on a bond forfeiture warrant. In fact, the warrant had been recalled 11 days earlier. The

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0.1 Roberts v. United States, 508 A2d 110 (DC 1986) (in an action for theft through unauthorized withdrawals from an ATM machine, a list of ATM transactions was properly admitted as evidence and, taken together, the evidence supported a conviction for ATM theft).

0.2 People v. Bossert, 722 P2d 998 (Colo. 1986) (in a criminal prosecution for unlawful possession of altered motorcycle parts an affidavit based on verified computer information was sufficient to establish probable cause to search motorcycle for altered parts).

0.3 502 NE2d 744, 104 Ill. Dec. 247 (Ill. App. Ct. 1986).

0.4 128 Ill. App. 3d 668, 470 NE2d 1303, 83 Ill. Dec. 883 (Ill. App. Ct. 1984).

The United Kingdom is a member of both the Uniform Copyright Convention and the Berne Convention.

The Patent Act excludes patent protection for computer programs as such.[121.28] This does not preclude patent protection for software using devices or programs involving an inventive step and an industrial application.[121.29]

[121.28] Patent Act of 1977 § 1(2)(c).

[121.29] In re Application of IBM, FSR 564 (1980).

[9] Other European Countries

Copyright laws in Finland, Spain, Denmark, Belgium, Sweden, and Norway have not been applied specifically to computer programs as of this writing. Nor is there case law in any of these countries holding to the contrary.

In Scandinavian countries, such as Finland, Sweden, and Norway, in addition to the possible coverage of basic copyright protection, separate "catalog" protection is available for a shorter period for lists, schedules, or data compilations. Depending on the scope of the term, these may apply to some forms of software.[121.30]

[121.30] See generally Copyright Act (Finland), art. 49.

[10] Other Asian Countries

With the exception of Japan, the status of copyright protections of software in Asia is uncertain. China does not have a copyright act. The status of protection in Hong Kong, Singapore, and Indonesia is untested. In Korea, the copyright statute does not list computer programs, and it has been reported that the registration officials will not accept copyright registration for programs.[121.31] Taiwan is considering a proposed inclusion of programs within copyright law.[121.32]

[121.31] See Davidson, Greguras & Bahrick, "International Software Protection," 4 CLR 167, 338 (1985). See 32 PTCJ (BNA) 268 (1986) (Korea agrees to enact comprehensive copyright law and special legislation to protect computer software).

[121.32] See id. at 342 (1985); CY Huang, "Computer Software & Copyright in ROC," Asian Pac. Rev. of Computer, Tech. & the L. 136 (Mar. 1985).

tion. A patent has been approved for a programmed process of statistical analysis with reference to the petroleum industry.[121.18]

[121.18] In re Schlumberger, PIBD-1981 N.285 III-175 (Paris Cour d'appel June 15, 1981).

[5] Italy

The copyright act makes no specific reference to computer programs and, although two reported cases support copyright, the statutes of protection for programs involving technical, nonartistic works is uncertain. In *Societe Atari v. SIDLAM,*[121.19] protection of the video output of a video game was permitted in a manner analogous to that provided for screen images in film.[121.20]

The Patent Act expressly excludes patent for computer programs as such. Computer programs are nevertheless patentable insofar as they are incorporated in an otherwise patentable invention.[121.21]

Italy is a member of both international copyright conventions.

[121.19] Giurisprudenzsa Piemontese n.4 (Turin Trib. Oct. 17, 1983).

[121.20] See also In re Unicomp s.r.l. & Italcomputers General Informatics, Giurisprudenzsa Piemontese — (Pisa Magistrate's Court, Apr. 1984). (described in Davidson, Greguras & Bahrick, "International Software Protection," 4 CLR 167, 331 (1985).

[121.21] Supreme Court Ruling 3169, May 14, 1981, Giur. Ital. II n.1371, 58 (1981).

[6] Mexico

Copyright protection is apparently available for computer programs, although the issue is not expressly resolved in the statute or in case law.

Software is covered by Mexico's technology transfer laws.[121.22] This law requires approval and registration of contracts with the National Registry of Technology Transfers. It places express restrictions on the content of license agreements, including restricting the term of any nondisclosure provision.

The regulations, however, exempt recreation or entertainment programs, operating system programs incorporated in products not primarily

[121.22] Law on the Control and Registration of the Transfer and the Use and Exploitation of Patents and Trademarks, 1982 D.O. 15–20.

that the program does not qualify as a "literary work" under the prior law of Australia: "I have not found anything in [U.S.] authorities that has persuaded me that a sequence of electrical impulses in a silicon chip, not capable itself of communicating anything directly to a human recipient, and designed only to operate a computer, is itself a literary work within the copyright act." Legislation in Australia now brings software explicitly within the scope of copyright law in that country.

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not qualify for protection under the copyright law prior to 1984). See generally, Knight, "The Protection of Technology Products in Australia: A Post Mortem?" 5 CLR 169 (1986).

[2] Canada

Copyright law makes no express provision for including software. Canadian cases generally support the existence of copyright protection for some forms of software.[121.8] A recent decision denying Apple computer an injunction against reproduction of programs in ROM casts doubt on the result, since the court held that although international cases indicate that copyright protection exists, there are sufficient contrary arguments to preclude an injunction.[121.9] The protectability of software in Canada was also confirmed by a federal trial court ruling relating to the protection of operating system software embodied in ROM chips. In *Apple Computer, Inc. v. Mackintosh Computers Ltd.*,[121.10] the trial judge held that operating programs embedded in ROM chips constitute copyrightable works. The court rejected an argument that, while source (or assembly language) code is copyrightable, the object code is not. "In my view, the conversion of a work originally written in one code into another code constitutes a translation for the purposes of [copyright]." Furthermore, there is no merger of idea and expression. "[The] evidence that there is a multitude of forms of expression in which any given program can be written seems to me to demonstrate that there is not merger of the idea and the expression of the idea with respect to the programs in issue."

[121.8] See IBM Corp. v. Ordinateurs Spirales Inc., 27 Bus. L. Reps. 191 (1985) (protection granted to object and source code copied in Taiwanese import copy of IBM bios); La Societé d'Informatique RDG Inc. v. Dynobec et autres, [1984] Que. CS 1189, aff'd, Dynabec Lteé v. Societé d'Informatique RDG (Cour d'appel Apr. 4, 1985).

[121.9] Apple Computer, Inc. v. Macintosh Computers, Inc., 3 Canadian Patent Cases (3d) 34 (1985).

[121.10] — Bus. Rep. — (Fed. Ct., T. Div. Apr. 29, 1986), reprinted in 32 PTCJ (BNA) 99 (1986).

A far less unique but nevertheless hybrid form of protection for software was enacted in France in 1985.[98.43] This legislation expressly includes software ("logiciel") as a type of work expressly covered by copyright, but defines specific limitations and extensions of the rights given to the proprietor of this form of work. Initially, the term of protection is limited to 25 years following the *creation* of the program, as contrasted with the length of the author's life plus 50 years, the term of protection applied to other works. In addition, the legislation attempts to balance the types of rights conveyed to the program author. It excludes the "moral right" to oppose unauthorized modifications of the work and "repent" or cancel the license in the event of such modification. This right is given to other works by copyright law in France. In addition, the law permits the owner of a copy to make a backup copy for private use. In contrast, the law grants the program author a right to prevent or control "use" of the program, an extended right not available to other copyrighted works. The law also adopts changes in traditional French law regarding ownership of the program.

The French legislation attempts to tailor the new law in a manner designed to make modifications from normal copyright principles, but to maximize the likelihood that the software protection will fall within international conventions regarding copyright.

[98.43] Law N. 85-660, arts. 1, 45-51, 1985 JO 7495-7500.

¶ 8.09 JAPAN

Page 8-30:

Add after first paragraph.

As discussed elsewhere,[115.1] there have been major proposals for special treatment of software in Japan that attempted to blend patent disclosure rules with copyright protections. These were discarded in the face of substantial international criticism. In June 1985, Japan promulgated an amendment to the Copyright Act expressly incorporating "programs" in the copyright law.[115.2] The new statute expressly excludes copyright protection of any programming language, rule, or algorithm used for making the program.[115.3]

Japan is a signatory member of both the Berne Convention and the Universal Copyright Convention.

[115.1] See ¶ 8.07A[3][b], this Supplement.

[115.2] Law for Partial Amendments to the Copyright Law (No. 62, June 14, 1985); published in WIPO, Copyright (July–August 1985).

[115.3] Id. § 4.

tain guarantees similar to those in patent systems that the protected technology will even be disclosed to the public. The unique character of computer program technology permits publication without assuring the disclosure of a code, and it creates a potential dominance of a technology without creating the opportunity for development work by others. This is accentuated by the relatively long terms of protection under copyright and the fact that few substantive entry barriers exist to obtaining protection.

Claims of underprotection, to the extent that they are made, focus on the fact that copyright does not ordinarily preclude independent development and does not convey control to the proprietor over important, innovative technology except insofar as it applies to direct reproduction. Significantly, under copyright law, there is ordinarily no clearly available protection against unauthorized *use* of a work.

The discussion of international protections for software products began in the early 1970's under the auspices of WIPO, the organization charged with administering the Berne Convention. In the late 1970's and early 1980's, model draft proposals for national legislation relating to computer programs were developed, and a draft treaty was tentatively proposed in 1983.

The draft treaty focused on protection against unauthorized disclosure, copying, and the use of program descriptions to create corresponding programs. It also provided for a national treatment principle for software. The term of protection for computer programs would have been reduced to 20 years.[98.36] The proposal was discussed in 1983, and a substantial number of participating countries expressed the view that no treaty was needed because copyright protection was adequate.[98.37]

The model draft legislation applies to software that is original and the result of the author's own intellectual effort. The proposal expressly excludes rights of control of the concepts on which the software is based.[98.38] Significantly, the draft national legislation extends to the proprietor rights to prevent "disclosure" of the software before it is made public and to prevent use of the program to control a computer.

The WIPO proposals have not had major effects on the national software protection laws, but they do illustrate an international pattern of intermittent, serious review of what protections are appropriate. A recent, highly controversial manifestation of this form of review oc-

[98.36] WIPO, Doc. LPCS/11/3.

[98.37] WIPO, Copyright 271–279 (Sept. 1983).

[98.38] WIPO, Model Provisions on the Protection of Computer Software §§ 3–4.

ware, and proposals, at least, have emerged that seek to define a more appropriate and focused protection vehicle. In the analogous area of semiconductor protections, action in the United States leading to changes in other jurisdictions is introducing a hybrid protection system for that type of property. To date, however, there has been less dispositive action in reference to software.

[a] Inertia and Forms of Protection

Although serious proposals for new systems are frequently debated, there is substantial inertia limiting actual changes in legal structure. Initially, at least insofar as it is usable against commercial piracy, the sentiment in the software industry is that copyright would be an acceptable protection format if only the availability of copyright could be established uniformly and the uncertainty about what forms and types of software are protected could be resolved. As a consequence, while there is industry pressure for enacting protective legislation, there is no strong effort to move outside the framework of copyright.

Equally important, inertial effects are augmented by the fact that including programs in a copyright system conveys potentially immediate access to any existing international treaties and conventions that establish reciprocal enforcement of copyright, whereas taking the path of enacting wholly distinct forms of protection for software may exclude the technology from these existing networks.

The two international copyright conventions are the Berne Convention (76 subscribing countries but not the United States) and the Universal Copyright Convention (over 40 subscribing countries, including the United States, Japan, Canada, the United Kingdom, Australia, and the Soviet Union). The Berne Convention exists in numerous drafts that have been revised over time and are not fully subscribed to by all of the participant countries. The drafts establish that works of a national of a participating country published in a member country must receive the same protection in all member states that nationals of that country receive (national principle). In addition, the Convention requires that copyright protection be automatic. The Convention also requires protection of the author's "moral rights" by member states. These requirements led to nonparticipation by the United States. The Berne Convention applies to all "literary and artistic" works and generally creates a minimum term of protection of the author's life plus 50 years.[98.33]

[98.33] See generally World International Intellectual Property Organization (WIPO), Berne Convention for the Protection of Literary Works (Texts), (Berne Convention 1886, arts. 1, 6).

curs in detailed form that addresses at least some specific issues that arise with reference to forms and types of software.

The Australian Copyright Amendment Act was drafted in reaction to a court decision holding that copyright did not apply to computer programs. Before the statute had been enacted, the full Australian Federal Court reversed the decision in *Apple Computer Inc. v. Computer Edge Pty. Ltd.*[98.24] The case involved duplication of Apple software in ROM chips by a Taiwanese computer company. The full court held that copyright applied to both the source code and the object code infringement of the Apple programs. "The source codes . . . express meaning as to the ordering and arrangement of instructions [and] it is incorrect to describe them simply as components of a machine. . . . The object codes . . . are a straightforward electronic *translation* into a material form . . ." (per Fox, J.).

The legislation was enacted roughly one month after this decision, and it expressly incorporates computer programs under Australian copyright law. The Copyright Amendment Act defines a computer program as "an expression, *in any language, code or notation,* of a set of instructions . . . intended . . . to cause a device having digital information to perform a particular function."[98.25] Although now resolved by special legislation (see ¶ 8.10A[1], this Supplement), the circumstance of software protection in Australia under copyright took one final turn in 1986. The Australian Supreme Court reversed the federal court and held that software operating systems embodied in ROM did not qualify for copyright protection under the preexisting copyright law.[98.26] The majority held that the program does not qualify as a "literary work" under the prior law of Australia: "I have not found anything in [U.S.] authorities that has persuaded me that a sequence of electrical impulses in a silicon chip, not capable itself of communicating anything directly to a human recipient, and designed only to operate a computer, is itself a literary work within the copyright act." Legislation in Australia now brings software explicitly within the scope of copyright law in that country.

The Copyright Amendment Act provides direct answers to some of the recurring uncertainties in this area of law, although it is clear that not all ambiguity is resolved. An adaptation of a computer program is defined as "a version of the work (whether or not in the language, code, or notation in which the work was originally expressed) not being a reproduction of the work."[98.27] This clearly brings into the coverage of the act any translations or compilations of the original program.

[98.24] 53 ALR 225 (1984).

[98.25] Copyright Act § 31(1)(a)(i) (Australia).

[98.26] See ¶ 8.10A[2], this Supplement.

[98.27] Copyright Amendment Act of 1984 (Australia) § 3(a).

At present, with the arguable exception of Brazil,[98.21] no country that has directly addressed the issue has denied at least some form of protection for software under copyright principles. This, of course, leaves open substantial issues regarding the scope of protection, whether all forms or types of software are protected, and what protections exist for works copyrighted by nationals of other countries.

The barriers to using copyright to protect software technology are substantial because the blend between the technology and the character of copyright is not a good one. Although some programs or aspects of programs involve creative, artistic work communicated to humans, many programs are oriented solely to controlling the internal operation of a computer and do not communicate in the manner normally associated with the product of artistic work. Especially when programs are "written" on ROM chips or diskettes, the connection between a machine readable code and works of fiction or other traditional forms of authorship is not abundantly clear. There are several recurring issues that arise in different categories regarding the *availability* of copyright for computer programs. These include:

1. If copyright applies to work in a form usable only by a machine that would exclude programs in machine form;
2. If copyright requires some communication to another human (e.g., an output) that would exclude programs purely oriented to operating the internal management of a computer; and
3. If copyright extends to an output, a code, and/or flowchart.

These are largely technical issues that do not directly address the actual policy questions involved in deciding whether copyright of software is appropriate under any particular national law. They do reflect, however, the character of the adjustments in perspective needed to make copyright law fit all forms and types of computer software.

[98.21] See generally Atkin & McKenzie, "Licensing Computer Software in Latin America: The Impact of the Technology Transfer Laws," 1 Comp. Law. 22 (1984). Brazil has adopted a nontraditional approach to intellectual property and other technology protections (see ¶ 8.07A[2][b], this Supplement). The approach was oriented toward an attempt to capture the technology rights in Brazil, providing in part for the release of exclusive rights after a limited period of licensing and for nonprotection of various forms of technology interests. Under various forms of pressure to move more toward traditional forms of intellectual property rights, Brazil recently proposed a 25-year term of protection for software. See 33 PTCJ (BNA) 118 (1986) (proposed Brazilian law contemplates a 25-year term of copyright protection for computer software).

mathematical algorithm (formula) in abstract and unconnected to an overall, patentable system, machine, or process.[98.13]

European and other national patent laws ordinarily exclude scientific discoveries and natural laws from patent protection, and this raises the issue pertaining to mathematical algorithms as it has in the United States. Many foreign patent laws also contain express language excluding patents for computer programs "as such."[98.14]

The controversy that can arise over the interpretation of such language is illustrated by current developments in the European Patent Office. The underlying law expressly excludes from consideration as inventions "programs for computers," "mathematical methods," and "presentations of information" *as such*.[98.15] The interpretation of this language by the European Patent Office has undergone several transformations over the years, and the process of change is ongoing. The current, correct position is that the exclusion in the patent laws does not bar protection of any invention containing a program, but only "inventions" defined solely by the program.

Even then, recently proposed guidelines comment:

> [An invention] must be of both a concrete and a technical nature. . . . [If] a computer program is claimed in the form of a . . . disc, the contribution to the art is still no more than a computer program . . . [and is] excluded subject-matter. . . . If, on the other hand, a computer program in combination with a computer causes the computer to operate in a different way from a *technical* point of view, the combination might be patentable.[98.16]

The recurring issues in patent law systems involve defining when a patent is available for the computer program standing alone or operating solely in connection with the host computer to produce results or data analysis. In part, the issue involves distinguishing protection of an *invention* from protection that preempts methods of calculation in the abstract. The line is fuzzy and uncertain regardless of the country in which it is drawn. The difficulty of drawing such lines is exacerbated when courts begin to read claims for patent protection that are broad enough to encompass mental rather than "technical" steps. These issues produced a line of cases in the United States with uncertain results and continue to do so internationally.

[98.13] See ¶ 2.05, main volume.

[98.14] See ¶ 8.10A[3], 8.10A[4] (France and West Germany), this Supplement.

[98.15] Articles 52(1)–52(3), European Patent Convention (EPC) (Annex 1).

[98.16] European Patent Office Guidelines, C-IV, 2.2.

case law is by nature incomplete and leaves speculation and uncertainty regarding particular types or forms of programs. This uncertainty is a reflection of the amorphous character of computer technology.

In many industrial countries, the next stage entails legislation expressly incorporating some form of protection for software. There has been such legislation in the United States,[98.4] France,[98.5] Portugal, Australia,[98.6] West Germany,[98.7] and Japan.[98.8] As described in the following discussion, however, even this legislation does not necessarily resolve all classification and protection issues in most countries and uncertainty is a common result as attention shifts to particular types or forms of programs.

While this pattern is common, there are a large number of jurisdictions in which no formal protection is yet enacted. Often this results from no overt, negative policy choice against protecting software, but rather it reflects that the issue has not arisen in court and has not attained adequate recognition as a social problem of sufficient priority to result in legislative action. This status exists in many countries, such as Belgium, Denmark, Sweden, and other European countries in which the likely eventual result is that software protection will be found to exist if the case or other need arises. The primary problem concerns uncertainty rather than adverse decision in most countries. A notable exception may be in Brazil, where national "informatics" policy and legislation may incorporate an affirmative decision to defer protection to software in favor of technology transfer laws that emphasize retention of the technology in that country.[98.9]

[98.4] 11 USC § 101–117.

[98.5] See ¶ 8.10A[4], this Supplement.

[98.6] See ¶ 8.10A[1], this Supplement.

[98.7] See ¶ 8.10A[3], this Supplement.

[98.8] See ¶ 8.09, this Supplement.

[98.9] See generally Atkin & McKenzie, "Licensing Computer Software in Latin America: The Impact of the Technology Transfer Laws," 1 Comp. Law. 22 (1984).

[2] Types of Traditional Protection

Assuming that at least some forms and types of programs should be protected against third-party appropriation, the next questions focus on what area or field of protection applies and whether new methods of protection should be developed. The controversy about new kinds of protection is discussed in the following paragraphs; the focus here is on the fit between software and existing protections.

of deciding in which existing legal regime software protection should reside and the extent to which specially tailored legislation is necessary or desirable.

In assessing international developments regarding software protection, it has become increasingly important to move away from categorical labels and focus instead more squarely on the types of protections implemented. This is especially true as various countries begin to address the underlying questions of to what extent existing regimes of protection provide optimal models and the extent to which new systems should develop.

In terms of the types of software protections sought, an initial distinction can be made between protections founded in contract or other agreement and protections created without a requirement of a contractual basis. Both types bring with them basic questions of to what extent contracts (licenses) that mandate secrecy are enforceable, and to what extent there can be enforceable restrictions of employee or licensee competition with the original proprietor of the technology.

Questions concerning the legal classification of software are more often associated with extending protection beyond a contract relationship, although the nature of the intellectual property protection can affect the permitted range of contract rights in a particular transaction. The primary focus is on determining the extent to which noncontract restraints are placed on third-party actions dealing with the technology.

In this regard, the classification questions are often defined as selecting between patent, copyright, and confidentiality as methods of primary protection for software. In truth, however, the core issues focus more directly on what third-party protections are or should be provided for software in the international market and what methods are best suited for implementing this protection.

In this respect, the types of potential protections are distinguished by:

1. The accessibility of protection in terms of the qualifying steps and level of innovation required;
2. The aspects of the program that are protected;
3. The scope of protection in terms of actions that others are prevented from taking;
4. The extent to which public disclosure is a requirement for obtaining protection; and
5. The duration of protection.[98.1]

[98.1] Kinderman, "Review of Suggested Systems of Software Protection," in Brett & Perry, *The Legal Protection of Computer Software* 139 (ESC Oxford 1981).

tegic interests of the United States, that the prohibition or curtailment of contracts will be "instrumental" in remedying this, and that the controls will last only as long as necessary for this effect.[74.9]

The EAA alters preexisting licensing provisions by creating a new comprehensive operations license, primarily for expedited operations between a U.S. company and subsidiary or similarly related foreign entities.[74.10]

The EAA also attempts to streamline prior approval procedures, which were often excessively time-consuming. One action in this regard is that the EAA orders integration of the separate control lists previously maintained by the Department of Commerce and the Department of Defense's list of militarily critical technologies.[74.11]

[74.9] 50 USC § 2405m(A)–2405m(C) (Supp. 1986).

[74.10] 50 USC § 2403a(2)(B) (Supp. 1986).

[74.11] 50 USC § 2404d(4).

[1] National Security and Foreign Availability

Page 8-22:

Add at end of note 78.

Although the EAA retains the basic structure of national security controls moderated by foreign availability evaluations, the amendments to the EAA in 1985 promulgate substantial changes in required foreign availability determinations. 50 USC § 2404f (Supp. 1986). In addition, the EAA establishes an Office of Foreign Availability to compile and maintain data for such assessments by the Secretary of Commerce and the President. This office will make periodic reports to Congress. 50 USC § 2404f(5) (Supp. 1986).

Add at end of note 79.

In one respect, Congress enacted a specific balance. The EAA provides that export controls based on national security purposes cannot be imposed on items simply because they contain an embedded microprocessor "if such microprocessor cannot be used or altered to perform functions other than those it performs in the good in which it is embedded."

[2] Foreign Policy Controls

Page 8-23:

Add at end of subsection.

The EAA was officially extended in amended form in 1985. The amendments retain the President's right to impose foreign-policy-based restrictions on exports, but place significant restrictions on that right.

acter Depictions,[43.1] the ITC held that a copyright licensing program, standing alone, cannot constitute a domestic industry for purposes of Section 337 of the Tariff Act. It did, however, find an industry based on the production activities of the copyright licensees, but held that this was not substantially injured by the imported products.

[43.1] No. 337-TA-201 (ITC Jan. 16, 1986), reprinted in 31 PTCJ 267 (1986).

[4] Customs Enforcement Beyond Section 337

Page 8-17:

Add at end of subsection.

Substantial controversy exists concerning Customs Service enforcement of so-called "grey market" imports property brought into the country under a U.S. trademark without written consent of the U.S. trademark holder. In *Olympus Corp. v. United States,*[58.1] the circuit court held that the regulations of the Customs Office permitting entry of grey market goods are valid, notwithstanding the apparent mandate of Section 526 of the Tariff Act of 1930 making it unlawful to import merchandise of foreign manufacture that bears the trademark of a U.S. manufacturer unless written consent by the trademark owner is produced at entry. "[The] variations in the grey market are numerous . . ." Consequently, "the administrative difficulties inherent in requiring the Customs Service to exclude grey market goods make clear why Customs has long and consistently interpreted Section 526 to allow it to refuse to exclude the goods." The DC circuit, however, held to the contrary and the issue is currently being reviewed by the Supreme Court.[58.2]

[58.1] 792 F2d 315 (2d Cir. 1986). See Vivitar v. United States, 761 F2d 1552 (2d Cir. 1985).

[58.2] Coalition to Preserve US Trademarks v. United States, 807 F2d 934 (DC Cir. 1986).

PART B. EXPORT CONSIDERATIONS

¶ 8.06 EXPORT REGULATION

Page 8-21:

Add after runover paragraph.

The EAA was officially extended by an act of Congress in July 1985.[74.1] The extension retained much of the original structure of the

[74.1] 50 USC § 2401–2406 (Supp. 1986).

a separate product. Within this definition, the ITC concluded that a serious injury had occurred to the domestic industry:

> Although U.S. manufacturers were able to hold, and even increase their market share, it has been at the expense of meeting prices far below what could reasonably be expected, based on the typical declining cost structure of this industry. The financial position of the U.S. industry has consequently suffered during the period under investigation.

During early 1987, the next stage of the anti-dumping controversy began when President Reagan announced the imposition of a countervailing tariff against various Japanese electronics products.

¶ 8.04 INTELLECTUAL PROPERTY AND IMPORT INFRINGEMENT

Page 8-11:

Add at end of runover paragraph.

Because of the clearly international character of the industry, especially with reference to products other than applications software, there has been continuing and extensive litigation regarding alleged violations of intellectual property rights through importation of computer products from other countries.

The decisions reached by courts and the ITC have varied in the degree of protection according to U.S. intellectual property claims. For example, in *In re Certain Double-Sided Floppy Disk Drives and Components Thereof,*[30.1] the ITC held that there was no violation of Section 337 of the Tariff Act in importation of floppy disk drives allegedly infringing patents held by Tandon Corp. The ITC not only found that there had been no patent infringement, but also that the imports do not have the effect or a tendency to substantially injure a domestic industry. Similarly, in *Texas Instruments Inc. v. ITC,*[30.2] the federal Circuit Court of Appeals upheld an ITC decision that importation of calculators did not infringe a patent held by Texas Instruments for a miniature, portable, battery-operated electronic calculator even though every function described in the TI patent was performed by the allegedly infringing calculators. The court's decision was a highly controversial application of patent standards of infringement that tends to lessen the scope of the patent protection. The court acknowledged that the patent at issue in this case was a "pioneer" patent. Nevertheless, despite a traditional rule

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[30.1] No. 337-TA-215 (ITC Feb. 6, 1986).

[30.2] 805 F2d 1558 (Fed. Cir. 1986).

PART A. IMPORT CONSIDERATIONS

¶ 8.03 IMPORTS AND PRICE CUTTING

[1] Dumping

Page 8-6:

Add at end of note 7.

Although not directed toward dumping, Section 301 of the Trade Act of 1979 was recently employed by semiconductor companies in an effort to force an opening of markets in Japan for U.S. semiconductor chips. The action, filed by the Semiconductor Industry Association, coincided with a newly active effort by U.S. companies to use existing import laws to combat alleged price cutting and dumping activity by Japanese firms in the semiconductor industry. See Schuchat, "The Semiconductor Industry and International Trade: Getting Down to Cases," 4 CLR 319 (1985).

[b] The Trade Agreements Act of 1979

Page 8-7:

Add at end of note 16.

See Matsushita Elec. Indus. Co. v. United States, 750 F2d 927 (Fed. Cir. 1984) (antidumping duty order relating to color televisions upheld, based in part on conclusion that video game and computer market for color tubes would not accommodate excess Japanese capacity).

Add at end of note 18.

There has been substantial recent litigation in the ITC related to alleged dumping by Japanese computer and semiconductor manufacturers. See Schuchat, "The Semiconductor Industry and International Trade: Getting Down to Cases," 4 CLR 319 (1985). See also In re 64K Dynamic Random Access Memory Components From Japan, Inv. No. 731-TA-270 (pre-

quacy of probable cause for search warrants and arrests.[120] The issue becomes significant here where an action by police or other enforcement officials is based on inaccurate information, but leads to the discovery of incriminating evidence.

Under current rules, the primary seizure or right to search can be validated only under a finding of probable cause, which may not require a conclusion that the information used by the officer was factually accurate. The evidence seized can be excluded from trial if, as a result of lack of probable cause the evidence was a product of an inappropriate search and seizure. The Supreme Court has enacted an exception to the rule of exclusion if the officers acted in good faith. The issues often are whether (1) this exception can save the seizure or (2) there was in fact a good faith reliance on wrong data in computer systems controlled primarily by the enforcement agencies themselves.

In *United States v. A Residence Located at 218 Third Street, New Glarus*,[121] in obtaining an affidavit for a search warrant against a taxpayer, the IRS agent stated that he had information that the subject had not filed a tax return. In fact, the subject of the warrant had filed a return, but the IRS computer failed to indicate that this had occurred. The court held that the search warrant was not invalid. The proper standard was whether or not the agent had acted in bad faith or with a reckless disregard for the truth when he made the statement. In this case, in the absence of any showing about the agent's state of mind concerning the truth of the underlying conclusion about whether a return had been filed, the reliance on the computer record was not a reckless disregard sufficient to invalidate the warrant.

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[120] The issue also arises in connection with whether governmental delay violates applicable speedy trial rules when it is due to errors in a computer system for tracking cases. See State v. Perkins, 713 SW2d 689 (Tenn. Ct. App. 1986) (Under standards applicable to constitutional rules of speedy trial, five-year delay caused by computer error that reported that defendant was no longer wanted on those charges was not chargeable to the state).

[121] 55 USLW 2313, 805 F2d 256 (7th Cir. 1986). Compare People v. Strong, 502 NE2d 744, 104 Ill. Dec. 247 (Ill. App. Ct. 1986) (warrant was valid even though the affiant, in obtaining the warrant, failed to indicate to judge that prior gun serial number computer check did not indicate that guns were stolen and since it was not proven that judge would have found insufficient probable cause for the warrant given such information); People v. Bossert, 722 P2d 998 (Colo. 1986) (in a criminal prosecution for unlawful possession of altered motorcycle parts, an affidavit based on verified computer information was sufficient to establish probable cause to search motorcycle for altered parts).

[122] 644 F. Supp. 1508 (D. Del. 1986).

is that the government has a policy not to report the underlying structure or basis of its weather computing system, or of changes therein. Such a policy is a classic discretionary matter not subject to judicial review.

The issues are materially different where the underlying cause of action is based on standards of review appropriate to normal agency decision-making and the issue is whether the decision was appropriate under applicable statutes. For example, various governmental agencies use computer models to predict the effect of environmental and other activity. Where the decision that flows from such models is subject to judicial review in itself, it is appropriate to consider whether the model was valid, the database reasonable, and the analytical inferences sustainable in determining whether or not the methods used by the agency were appropriate and reasonable.[117]

As this suggests, in cases where the governmental use of a computer database extends to provide support for decisions and actions that are reviewable in any event under general rules of law, the computer system becomes integrated as an element in the overall analysis of the governmental actor's reasonableness and potential liability. This occurs frequently in connection with actions by governmental agencies to collect debts or tax liability based on underlying computer records. If the computer data is inaccurate and the attachment of a lien or other action is not substantively justified, the fact of good faith reliance on wrong data does not validate the action, but may establish limitations on the degree of liability incurred.[118]

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[117] See Ohio v. United States Envtl. Protection Agency, 798 F2d 880 (6th Cir. 1986) (in making decisions regarding emissions limitations, the use of a computerized atmospheric model without validation was arbitrary and capricious) (see also 784 F2d 224); Public Citizen Health Research Group v. Tyson, 796 F2d 1479 (DC Cir. 1986). ("To calculate the risk facing employees exposed to EtO under both the current and proposed standards, OSHA applied its mathematical model to an experimental database... [which] allows OSHA to estimate the number of humans likely to be adversely affected by EtO exposure at experimental levels, once the animal data is converted into human equivalents. The mathematical model then extrapolates that number into areas where experimental data do not exist." In such case, the court appropriately reviewed the mathematical model, the conversion of the database from animal results to human equivalents, the database to which the model was applied, and the validity of the model itself.)

[118] See Haywood v. United States, 648 F. Supp. 188 (D. Kan. 1986) (where the levy had been released and computer correction made, the taxpayer suffered no damages from an improper IRS levy against her property for monies believed to be due from her deceased husband's estate because

Page 7-40:

Add the following new section.

¶ 7.12 GOVERNMENTAL COMPUTER USE AND LIABILITY [NEW]

As one of the primary users of computer systems, governmental actions are frequently premised on computer data and analysis. Because of this fact, there is an increasing body of law dealing with various aspects of computer use in governmental functions. The cases deal with various aspects of computer-based activity, ranging from nonuse of computer systems through simple computer error questions and including issues about the extent to which the quality of the data and the processing system can be challenged by persons who are adversely affected by it.

Where the underlying issue involves the adequacy of the governmental system for decision-making, the nature of the legal issue is affected by the manner in which governmental conduct is challenged. In one context, the basic complaint is that an individual has been injured by negligent conduct on the part of the governmental officials. Here, the plaintiff must establish both the existence of culpable conduct and the fact that governmental immunity has been waived so as to permit suit for damages.

This was the setting for one of the first cases to expressly deal with negligence based on a failure to use a computer system. In *United Stated Fire Insurance Co. v. United States*[115] there was an action for damages based on an accident in which a vessel struck an underwater object, a wrecked daybeacon. United States procedure manuals require the Coast Guard to conduct a comprehensive search after discovering wreckage of such an object to discern whether there was a resulting hazard to navigation. The vessel owner claimed that the Coast Guard was negligent in placing and maintaining temporary bouys to warn vessels of the wreckage.

One reason for the misplacement of the markers was the method used to locate the damage or wreckage. The Coast Guard used a manual, three-prong protractor method to locate the lost beacon, rather than a computer method. The protractor was recognized as having a larger error margin. Governmental operations manuals indicated that the manual method was inferior. The court held that by using the proper method the government would either have probably found the damaged daybeacon or would have positioned a temporary radar reflecting buoy to

[115] 806 F2d 1529 (11th Cir. 1986).

constitute a waiver of the right to terminate the policy when payments are due or (2) create an estoppel preventing termination of the life insurance policy). See also Zuckerman v. Pacific Sav. Bank, 187 Cal. App. 3d 1394 (Cal. Ct. App. 1987) (no accord and satisfaction proven in reference to mortgage payment dispute based on alleged computer error in payment statement issued to debtor).

Page 7-40:

Add after last paragraph.

A common circumstance of alleged waiver or estoppel occurs when one party makes an overpayment or conveys an excess credit to another party. Ordinarily, in the absence of detrimental reliance, the party making the mistake based on computer error or a failure of the computer system to prevent disbursement may recoup the funds from the person to whom they have been transferred.[112] In some cases, where the other party is aware of the mistake but accepts the funds, criminal prosecution may ensue.[113]

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[112] See Daleview Nursing Home v. Axelrod, 62 NY2d 30, 464 NE2d 130 (1984) (overpayment of medicaid reimbursement to health facility due to computer error in rate of reimbursement can be recovered, even though facility was not aware of error until seven months after state officials became aware of it); Federal Deposit Ins. Corp. v. McKnight, 769 F2d 658 (10th Cir. 1985) (FDIC took control of insolvent bank and programmed computers to refuse payment of any items in excess of $100,000). In *Federal Deposit Insurance Corp.*, the program mistakenly did not include cashier's checks and, before the error was discovered, cashiers checks over the limit were cashed. The court held that the National Bank Act preempts state law on the final payment and, since the checks were converted to deposits under federal law, the payment was an unjust enrichment entitling the FDIC to restitution. Id. See also United States v. Consolidated Edison Co. of NY, 590 F. Supp. 266 (SDNY 1984) (postal service entitled to recover interest on overcharge for electricity by utility based on error in utility's conversion to computer billing). Compare these cases with the circumstance where the cause of action is claimed against another innocent party who has not received or retained the benefit of the mistake. See United States Fidelity & Guar. Co. v. Federal Reserve Bank of NY, 620 F. Supp. 361 (SDNY 1985). In *United States Fidelity and Guaranty Co.*, as the result of a computer error, funds were released on a large check drawn against a deposit that should have been subject to a hold. The deposited check was fraudulent. The payor bank was not liable to the depository where the depository was reckless and knew that the payor had no account or other relationship with the "drawer" of the check. Id.

[113] See generally People v. Schlicht, 709 P2d 94 (Colo. Ct. App. 1985) (theft conviction was appropriate where defendant withdrew $9,000 that had been mistakenly credited to his account; no defense of mistake of fact existed

discovered they were stolen had it checked with a centralized computer system recording thefts of securities. In addition, there were some circumstances that might be read to create suspicion about the ownership of the securities.

The court held that an inquiry should have been made and that a failure to do so disqualified the bank from taking free of the competing ownership interests.

> The place of an SIC [Securities Information Center] inquiry in the overall ability of a purchaser to prove bona fide purchaser status will depend to some extent on the circumstances . . . The difficulty in imposing an affirmative duty on a purchaser is that absent suspicious circumstances, bona fide purchaser law has never placed the initiative of investigation on the purchaser . . . In the old regime of written notice by mail, the victim took the first step by sending notification of lost or stolen securities to prospective purchasers. Once the communication was received, the institution was fairly in notice and any failure to circulate it to proper persons or failure to check the files was no excuse . . . The question now is how to adapt that principle to an era of central, computerized data banks. The victim must still take the first step, but now that constitutes a report to the SIC. For the SIC system to be effective, however, the purchaser must also now make an affirmative act, namely picking up the telephone to call the SIC. Reasonable practice "will often, but not always mean SIC inquiry."

¶ 7.10 WRONGFUL BILL COLLECTION

Page 7-36:

Add note 97.4 at end of first sentence in first complete paragraph.

[97.4] See United States v. Consolidated Edison Co. of NY, 590 F. Supp. 266 (SDNY 1984) (postal service entitled to recover interest on overcharge for electricity by utility based on error in utility's conversion to computer billing).

Add note 99.1 at end of second sentence in second complete paragraph.

[99.1] See, e.g., Cox v. Brooking Int'l Life Ins. Co., 331 NW2d 299 (ND 1983) (computer malfunction apparently led to failure to provide insured of life insurance policy with receipt of notice of premium due and led to wrongful termination or lapse of policy; error was not insulated by company's alleged right to discontinue practice of giving notice of premiums due).

with limitations periods in bail jumping cases is due to fact that case was improperly indexed in West system. It noted that case could be readily found through electronic retrieval systems, but that attorneys generally do not have or use such systems as they are luxuries.)

Add at end of section.

The first decision explicity dealing with negligence based on a failure to use a computer system arose in *United Stated Fire Insurance Co. v. United States*.[97.1] This case was an action for damages against the United States based on an accident in which a vessel struck an underwater object, a daybeacon. United States procedure manuals require the Coast Guard to conduct a comprehensive search after discovering the wreckage of such an object to discern whether there was a resulting hazard to navigation. The vessel owner claimed that the Coast Guard was negligent in placing and maintaining temporary buoys to warn vessels of the wreckage. One reason for the misplacement of the markers was the method used to locate the damage or wreckage. The Coast Guard used a manual, three-prong protractor method to locate the lost beacon, rather than a computer method. The protractor was recognized as having a larger error margin. Governmental operations manuals indicated that the manual method was inferior. The court held that by using the proper method the government would either have found the damaged daybeacon, or would have positioned a temporary radar reflecting buoy to the channelward side of the daybeacon. The Coast Guard's negligence was an actual and proximate cause of the damages incurred by the vessel.

The government argued that it had not waived immunity from liability for this type of conduct since the activity and the choice of method was a "discretionary function" to which immunity waivers did not apply. The court held that the discretionary function exception applies only where the manual or a policy directive requires that the employee commit the allegedly negligent acts or states that the procedure used was the preferred procedure for achieving the goal in question. It did not apply here because the procedures manual permits the employee to select among several permissible procedures, merely indicating that the manual one is inferior to the others.

> In this circumstance, the employee's decision to employ the inferior procedure is not required by a policy directive from above. In addition, the employee's decision also is non-discretionary because the government's determination that one procedure is inferior to another establishes a standard by which the courts can judge the em-

[97.1] 806 F2d 1529 (11th Cir. 1986).

The case illustrates both that the use of a computer system does not insulate one from underlying liability risk and that the process of developing such a system creates a situation in which a court can look directly at the underlying assumptions and processes that would otherwise be treated as mere matters of personal judgment.

In this case, the standard applied was that the investment manager, who was not an independent, professional investment advisor, was required to discharge his duties in good faith and with a degree of diligence, care, and skill that an ordinarily prudent person would exercise under similar circumstances. The court adopted an appropriately circumspect approach, finding a lack of proven negligence in the face of allegations that the investment person had adopted an inappropriate method of making investment decisions.

An expert testified about the availability and preferability of other approaches to investment decisions than that adopted by the defendant in this case. The court, however, properly rejected the argument that a failure to design a system that reflected this competing view of investments constituted negligence.

> The evidence presented in this case does not prove that any one theory constitutes the standard against which negligence is to be measured. Rather, it proves that it was necessary for the [parties] to choose an investment system which would satisfy their objectives while subject to their perceived constraints. It was prudent to design a mechanical system, based on a recognized theory of investment, which routinized the identification of investment targets reflecting the goal of buying strength. It would have been a bad decision and imprudent to have a system based on fundamental security analysis, if that system had to be operated by Seward, because of his lack of formal training.

In this case, the investments chosen with the system incurred serious losses in 1983 and 1984 and underperformed the market, but the court held that there was no proven negligence.

> In hindsight, one can also observe that in 1983–1984, most of the money managers for large institutions underperformed the market averages. . . . Hindsight, as a measure of prudent behavior, is inappropriate because the stock market is inherently unpredictable. The court concludes, therefore, that plaintiff failed to prove ordinary negligence by the greater weight of the believable evidence.

In *Johnson,* the user of the program had no indication that it was faulty and, indeed, it may not have been. Where the system is clearly not performing appropriately, it may be culpable to continue to rely on it. This assessement was relied on by the court in *Chernick v. Fasig-*

of adequate notice can be rebutted. Generally, proven use of a relatively adequate mechanical system to establish that notice was sent cannot be rebutted effectively merely by testimony by the notice recipient that it never received the notice. However, in order to attain this, the system must be shown to be adequate, perhaps based on prior, effective use or based on testimony about what the system does.

Where the alleged recipient denies having received notice, in some cases a jury issue can be formed based simply on the volume of processing involved. For example, the court in *Shave v. Allstate Ins. Co.*,[86.3] held that the issue of whether a policyholder actually *received* notice should go to the jury. "Given the potential for computer error . . . and the fact that notices were sent out to fifty-eight to sixty-two thousand insureds. . . . a real possibility exists that the notices were not sent to the plaintiffs in this action through some error."

[86.3] 549 F. Supp. 1006 (SD Ga. 1982).

Page 7-31:

Add after runover paragraph.

Where the computer system relied on by the defendant is adequate under prevailing industry standards, actions consistent with the character of that system are not invalid simply because a different method of operation may have led the defendant to act differently.[87.1]

[87.1] See Woods v. Bank of New York, 806 F2d 368 (2d Cir. 1986). (A mutual fund shareholder sent in a check with specific written instructions on the memorandum portion of the check that were ignored by the bank, acting as transfer agent. The court held that the bank might have a duty to read and follow special instructions and might be liable for not following the instructions, but only if its normal operations assumed an obligation to be bound by the written instructions, rather than merely an obligation to process in ordinary form.)

Add at end of note 88.

See also McMillan v. Fireman's Fund Ins. Co., 448 So. 2d 899 (La. Ct. App. 1984) (because workman's compensation check was not sent to plaintiff owing to error in computer issuing system, any claim that there had been an unreasonable refusal to pay benefits was precluded and rendered premature). Compare Mutual Life Ins. Co. of NY v. Wesson, 517 So. 2d 521 (Miss. 1987) (in action based on bad faith insurance claim, insurer's unilateral mistake did not give itself proper reason to decline to pay claim).

here, however, the pattern of decision making focuses more closely on arriving at a relatively balanced framework. Actions to protect a first filing despite an error that makes discovery of the record more difficult converts into imposing greater standards of effort and risk for all subsequent searchers. Often, this balance weighs in favor of not compromising the filing system simply to protect one party from the consequences of its own mistake.

This analysis is reflected in *Orr v. Byers*,[84.7] in which the issue involved a misfiling by the holder of a judgment lien. The lien creditor argued that the misfiling should be excused because a computerized system search would discover the filing. The court rejected this argument.

The data base system used by the state was prone to produce excessive names from a record search, requiring later manual verification unless accurate names and identifiers were used. In rejecting the claim of, in effect, harmless error, the Court noted: "We conclude the burden is properly on the judgment creditor to take appropriate action to ensure the judgment lien will be satisfied. . . . As respondents succinctly state, Orr asks us to change the law of notice to accommodate (his) error in such a way that future title searches will be required to be performed only by trained individuals with elaborate and expensive equipment at their disposal or else to go uninsured in a world where prudence demands title insurance. Neither result is satisfactory . . ."

[84.7] 198 Cal. App. 3d 666, 244 Cal. Rptr. 13 (Cal. Ct. App. 1987).

¶ 7.08 NEGLIGENT USE OF A COMPUTER

Page 7-30:

Add note 84.8 at end of fourth sentence in first paragraph.

[84.8] See Brooks v. Medtronic, Inc., 750 F2d 1227 (4th Cir. 1984). In *Brooks,* a patient who received a cardiac pacemaker sued the manufacturer because the pacemaker failed shortly after implant and had to be replaced. The patient alleged that computer links monitoring the system internally were defective. The manufacturer was held not to be responsible because South Carolina law dealing with unavoidably unsafe products *was* applicable. The law provides that there is no defect if the distributor notifies users of the risks. In this case, the duty of notification applied to informing the doctor who had an obligation to communicate it to the patient. The manufacturer had no direct liability to the patient.

Add after second full paragraph.

Questions about the existence and adequacy of notice to third parties often require judicial determinations about the role of comtrolled substance following an arrest where the arrest was based on data in a police computer that erroneously indicated that the defendant was wanted for a bond forfeiture warrant. The forfeiture had been withdrawn 11 days earlier. In essence, the court held that since updating the computer was solely within police control, a delay in changing the records could not validate the arrest.

In other contexts, rather than simply fitting the computer into existing standards of care, there may be a growing tendency to use the presence of a computer to impose a new duty of records' care and of inquiry.[84.3]

The interpretation of records system obligations in light of computer technology requires decisions about both how far a court (or legislature) should go in requiring more than mere mechanical system verifications and, assuming that mechanical systems are adequate, what standards of inquiry, review, and notice are appropriate in the automated system. On this latter issue, courts in various areas of law related to the adequacy of notice giving filings that contain some errors apply standards informed by the nature of the computer system involved.

For example, there has been substantial litigation concerning the adequacy of stop order requests filed by bank customers where slightly inaccurate information is given and the inaccuracy thwarts the bank's effort to comply with the stop order because its computer system fails to find and stop payment on the particular check. The issues here require both a determination of what elements of notice are essential to

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offense was invalid where gun was discovered during an arrest that was illegal because arresting officer was acting on basis of inaccurate information in police computer that incorrectly indicated that defendant's driver's license was suspended for failure to pay fines); United States v. Copley, 774 F2d 728 (6th Cir. 1985) (federal detainer filed to state requesting detention of defendant after state proceedings were complete was not equivalent of arrest for purposes of Speedy Trial Act time provisions where state did not learn of detainer because of computer error but retained defendant in custody for other reasons; under these circumstances, detainer was not significant restraint on defendant's liberty and not equivalent of arrest); United States v. Rutherford, 824 F2d 831 (10th Cir. 1987). Bennett v. State, 470 So. 2d 824 (Fla. Ct. App. 1985) (where defendant failed to timely assert its claim to speedy trial, no constitutional violation occurred based on more than a four-year delay from filing of information that was due in part to defendant's being "lost" in state's computer system). Kabir v. City of Lafayette, 509 So. 2d 464 (La. Ct. App. 1987) (false imprisonment claim does not lie against police officer where arrest based on mistaken computerized stolen property report and officer maintained custody for limited period after discovering facts).

[84.3] See ¶ 7.09, this Supplement. See also First Nat'l Bank of Cicero v. United States, 653 F. Supp. 1312 (ND Ill. 1987).

done with his program where the program does more than merely compute arithmetic figures.[77.1] This is true even though the computer programmer does not offer direct personal assistance to the customers who buy the program. The computer program made substantive determinations about the application of tax law rules to the facts and did more than mere mechanical assistance. An error in the computation of the accelerated depreciation for the taxpayer, if caused by a computer error, exposes the programmer to liability for tax penalties.

In cases where the computer-based system fails to perform adequately because of design or maintenance flaws, the system developer's responsibility for resulting losses will depend, in part, on whether resulting problems are properly chargeable to it or to some other, intervening cause.

In *Akins v. District of Columbia*,[77.2] the alleged flaw came in the failure of IBM to maintain properly a computer system used by a pretrial release agency (PSA). The alleged negligence caused a breakdown in the computer system with the result that PSA after a manual records check, acted to release a defendant who later committed an armed robbery. Without extensively discussing whether negligence occurred, the court rejected the claimed liability, holding that no proximate causation had been shown. The eventuality of an assault by an improperly released defendant might be termed a "remotely foreseeable result of computer failure at the PSA, but when combined with the intervening inaction of the PSA and the discretionary decision of the arraignment judge, there is no way to interpret [the] allegations as showing that . . . IBM had actual knowledge of, or good reason to anticipate . . . the assault."

Even if there is no intervening cause, the computer system provider may avoid liability based on contract disclaimers. These are especially important and potentially effective against the immediate recipient of the service, as contrasted to third parties harmed by the problem. In *Ostalkiewicz v. Guardian Alarm, Inc.*,[77.3] the court denied a claim against the provider of a burglar alarm system. The system was not properly programmed and the silent alarm function it purported to provide did not work. The court applied a disclaimer clause in the contract to preclude liability. The disclaimer stated that the supplier was not an insurer and would not be responsible for any loss resulting from the malfunction of the system or by reason of theft or burglary. The Court held that the disclaimer was enforceable given that the plain-

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[77.1] Rev. Rul. 85-189.

[77.2] 526 A2d 933 (D.C. App. 1987).

[77.3] 520 A2d 563 (RI 1987).

Page 7-22:

Add at end of note 67.

See Unger v. Bryant Equip. Sales & Servs., 335 SE2d 109 (Ga. 1985) (action relating to a venue issue by dairy farmer for negligence and breach of warranties against manufacturer of computerized feeding system for dairy cows; held, utility company, distributor, and manufacturer could be joined in a single negligence action where alleged negligent acts combined into a single and indivisible injury).

Page 7-23:

Add at end of note 69.

Compare Ridge Co. v. NCR Corp., 597 F. Supp. 1239 (ND Ind. 1984) (action in implied warranty and negligence by purchaser against manufacturer and manufacturer of component part of computer system was barred by lack of privity). See also Affiliates for Evaluation and Therapy, Inc. v. Viasyn Corp., 500 So. 2d 688 (Fla. Dist. Ct. App. 1986). (Purchaser of computer system could not maintain an action against manufacturer. In order to recover for products liability based on negligence, plaintiff must show personal injury or property damage and cannot recover for mere economic loss. Here the only damage was lost profit, which was purely economic in nature.)

Add at end of first complete paragraph.

In a case involving a maritime dispute not entailing computer industry products, the U.S. Supreme Court rejected a claim for remote economic damages where the product defect damaged only the product itself. In *East River Steamship Corp. v. Transamerica Delavel, Inc.,*[69.1] the product was a turbine designed and built for use in supertankers. The Court explicitly rejected a product liability claim in an action brought by the charterers of the vessels, not the owner. "Damage to the product itself is most naturally understood as a warranty claim. Such damage means simply that the product has not met the customer's expectations.... The maintenance of product value and quality is precisely the purpose of express and implied warranties."

In an action involving a claim against the manufacturer of a computer system for the negligent selection of a retailer and for negligence in maintaining the system, a Florida appellate court also adopted the majority view that product liability claims require proof of more than mere economic loss. In *Affiliates for Evaluation and Therapy, Inc. v. Viasyn Corp.,*[69.2] the court did not distinguish the negligent selection

[69.1] 106 S. Ct. 2295 90 L.Ed.2d 865 (1986).

[69.2] 500 So. 2d 688 (Fla. Dist. Ct. App. 1987).

Management Assistance, Inc. v. Computer Dimensions, Inc., 546 F. Supp. 666 (ND Ga. 1982) (there is no independent tort or other action for breach of obligation of good faith created under UCC).

[1] Negligent Contract Performance

Page 7-17:

Add at end of note 52.

Liability in negligence may apply to the contracting company or individually to the persons undertaking the work assignment. See White-Wilson Medical Center v. Dayta Consultants, Inc., 486 So. 2d 659 (Fla. Dist. Ct. App. 1986). (Subscriber to technical services agreement relating to data processing counterclaimed against corporation and individual officer. The court holds that individual officers of corporation may be sued for tortious acts or derelictions of duty in which they personally participated, even if such acts are performed within the scope of their employment as corporate agents, although, absent justification for ignoring corporate form, corporate officer may not be held individually liable in contract.)

Page 7-18:

Add at end of note 55.

See also Eaton Corp. v. Magnavox Co., 581 F. Supp. 1514 (ED Mich. 1984) (in a contract for manufacture of a "controller" component for "anti-lock" brake systems, it was improper for component manufacturer to substitute a nonspecified operational amplifier in manufacturing controllers; however, there was no recovery in negligence because claim was only for economic loss). But see Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) (allegation that vendor was negligent in recommending and advisory functions does not allege a claim of computer malpractice, but simply an actionable claim for negligence in business setting: "Negligence in a business setting is clearly actionable").

[2] Reasonable Care and Malpractice

Page 7-21:

Add at end of note 62.

Compare Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) (allegation that vendor was negligent in recommending and advisory functions does not allege computer malpractice, but simply an actionable claim for negligence: "Negligence in a business setting is clearly actionable." Id. at 454.).

Add at end of subsection.

Where a contract involves the provision of services, rather than simply the delivery of goods (see ¶ 7.05[2], main volume), issues of leged. One such effect occurs in the use of securities law allegations to premise a claim for damages based on alleged fraud. Such allegations are especially common in contexts where the company committing the alleged fraud is relatively new or has recently engaged in obtaining equity financing for start up or expansion purposes.

Where there are allegations of securities fraud, it is essential to distinguish between fraud focused on the sales of specific systems and software, and fraud oriented to influencing investment in the company. Properly understood, only the latter form of fraud provides a sustainable basis for securities law violations.

This distinction was emphasized in *Jabend, Inc. v. Four-Phase Systems, Inc.*,[50.2] where the court held that representations by a computer hardware manufacturer regarding suitability of its hardware for the insurance brokerage industry could not form the basis of a securities fraud claim under Section 10(b) of the Securities Exchange Act or Rule 10b-5 by the person who bought common stock of the corporation formed to develop such a system. In order to invoke the protection of Rule 10b-5, a party must be defrauded

> as a result of deceptive practices touching its sale (or purchase) of securities. . . . [Here] there was no direct connection between Four-Phase's alleged misrepresentations and Grosenick's purchase of Jabend's stock. Even assuming that Four-Phase meant to defraud Jabend in the sale of its computers, Grosenick has not shown that such fraud was part of an overall scheme to defraud purchasers of Jabend stock . . . Four-Phase had nothing to gain from Jabend's sale of common stock. . . . In the present case, Four-Phase's profits came from its sale of computer hardware to Jabend, not from Jabend's sale of stock.

If Four-Phase misrepresented the compatibility of its hardware to Jabend's software, the misrepresentation was made in connection with the sale of computers, not common stock.

In a much earlier case, however, a court had previously sustained a securities action based on alleged misrepresentations about a computer product. In *Crofoot v. Sperry Rand Corp.*,[50.3] Sperry Rand had submitted a proposal to a grocery delivery corporation warranting that it could produce a computer system for the corporation's telephone-order marketing plan. After the corporation failed, purchasers of its stock sued Sperry for Rule 10b-5 violations. The plaintiffs alleged that Sperry knew that the corporation's success depended on Sperry's computer sys-

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50.2 631 F. Supp. 1339 (WD Wash. 1986).

50.3 408 F. Supp. 1154 (ED Cal. 1976).

Data General had fraudulently induced Guernsey into contracting for a hardware system from it and software supplied by ICS Corp. The alleged fraud included, among other things, representations that the ICS was experienced and capable of performing even though Data General was aware of ICS's faulty reputation. The court noted: "[Plaintiff] was a seasoned businessman with equal knowledge and opportunity to ascertain the facts equal to that of Data General. The parties were acting at arms length . . . Although Data General may have had reason to doubt [ICS's] ability there is no showing that its knowledge was such as to make what were at most overly assertive business assurances into knowingly fraudulent misstatement. It would be an imposition of much higher standards than those normal for the marketplace to characterize [these statements] as fraud . . ."

¶ 7.04 RELIANCE ISSUES

Page 7-15:

Add after second full paragraph.

A fraud analysis focusing on reliance commonly entails a comparison of the relative technical expertise of the parties, the pertinent business sophistication, and how (if at all) the particular issue was dealt with in the written agreement. These factors were considered as a basis for eliminating a fraud claim in *Citicorp Industrial Credit, Inc. v. Rountree*.[44.1]

There, the claimed fraud involved a misrepresentation about the effect of a lease agreement and its transfer on the rights of the lessee. The alleged fraud related to a matter expressly discussed in the lease agreement. The court rejected the fraud argument, noting: "It is undisputed that appellees are experienced businessmen who are able to read. There is no evidence the [Lessor] . . . employed any artifice to prevent them from reading the agreements. The fact that appellees deemed themselves too busy to read the lease and indemnification agreements prior to signing them will not authorize them to avoid their obligations to appellants."

[44.1] 185 Ga. App. 417, 364 SE2d 65 (Ct. App. 1988). See also Zayre Corp. v. Computer Sys. of Am. Inc., 24 Mass. App., 511 NE2d 23 559 (Mass. App. Ct. 1987) (plaintiff could not reasonably rely on alleged representation that lease would not be terminated by third party since all participants involved were "large sophisticated corporations").

personal or property damage. Recognizing that the misrepresentation or informational element distinguishes this theory from product liability, the court held that a misrepresentation claim could coexist with contract claims based on a computer transaction involving a consulting seller.

As part of a related analysis, a federal district court in *Invacare Corp. v. Sperry Corp.*[41.10] held that liability could be imposed on a consulting computer seller for negligently performing the consulting functions.

> Invacare alleges that the personnel provided by Sperry failed to perform at a level of ordinary care. If machinists, electricians, carpenters, blacksmiths, and plumbers are held to the ordinary standard of care in their professions, the Court fails to see why personnel in the computer industry should be held to any lower standard of care.[41.11]

The analysis focused on the service elements of a transaction in which the computer vendor provided both the system and the consulting services necessary to define the buyer's needs. Although some authors have urged that computer professionals should be exposed to enhanced standards of care under a concept of professional malpractice, the court made clear that its analysis did not depend on alleged professionalism; it merely involved negligence in a business setting.

Whether as negligent misrepresentation or negligence in delivering consultation services, these cases adhere to a view of the buyer-seller relationship consistent with contemporary expectations. The analysis applies only if the vendor has undertaken an obligation to provide information beyond merely delivering a product. In such circumstances, these cases establish that the buyer has a right to rely on the seller's obligation to exercise reasonable care in formulating its basis for recommendation and the information that it transmits.

Application of information negligence standards is the better approach to the cases involving a consulting seller, but it is not uniformly followed. In many jurisdictions, tort liability for information provided to another is caught up in a reluctance to impose negligence or product liability for purely economic loss in a contract relationship. Attempts to apply tort theories for such claims are often construed as an attempt to circumvent contract concepts. However, this effect occurs independently of the existence of information liability due to negligence, recklessness, or intention. The true issue does not concern the desirability of tort liability in fraud for economic loss, but rather the degree of care and reliance that contemporary law anticipates in contracting relationships.

41.10 612 F. Supp. 448 (ND Ohio 1984).

41.11 Id. at 453.

When discussed directly, culpability standards for misrepresentation in a sale transaction are controversial. Stimulated in part by cases involving computer transactions, the reported decisions reflect a process of reconsideration of culpability levels or standards of care and obligation for ensuring the accuracy of the facts represented by a seller. The traditional misrepresentation standard requires knowing, intentional, or reckless misrepresentation. An issue in contemporary fraud litigation concerns whether circumstances exist in which a more exacting standard of care should be imposed reflecting liability, at least for negligent misrepresentation.

Intentional fraud entails a misrepresentation made with the knowledge that the facts are not those that the party making the representations claims them to be. Fraud based on reckless misrepresentation does not meet this standard. Rather, recklessness involves a representation made without knowledge about its accuracy and in conscious or willful disregard for whether the represented facts are true or not.[41.4] In most jurisdictions, reckless or intentional misrepresentation creates a cause of action in tort regardless of whether the transaction entailed a signed contract between the parties.

Negligent misrepresentation refers to representations made without exercising reasonable care about the accuracy of the represented facts.[41.5] Claims based on negligent misrepresentation are distinguishable from liability for negligent construction or manufacture of a product. Negligent fraud reflects a failure of due care with respect to an information or consultation obligation. Whether or not the underlying item contains defects does not affect liability for representations. In addition, the source of the defect does not determine the presence or absence of negligence with reference to the information that is provided. The claim focuses on the responsibility to exercise care in ensuring the accuracy of facts expressly represented in the transaction. The standard of care flows directly from contracting norms in which many buyers rely on the honesty and care of the seller or, more particularly, from actions by the responsible party that undertake an express role in providing information for another with the expectation that the other will rely on the information provided.

Mich. 1961); Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984).

[41.4] See Computer Sys. Eng'g, Inc. v. Qantel Corp., 740 F2d 59, 68 (1st Cir. 1984) (misrepresentations were recklessly made that SOLUTIONS software package was essentially fully developed and tested and that it was a turnkey system, when in fact system actually delivered was not adequately sophisticated without substantial modifications).

[41.5] Restatement (Second) Torts § 552 (1966).

Page 7-14:

Add the following new section.

[5] Fraud in Distributorship Agreements [New]

While fraud allegations are most common with reference to particular sales contracts, there are potential tort liability risks involved in dealing with other aspects of contractual relationships in the chain of computer distribution. One illustration of this occurs with reference to distribution and supply contract.

In *Olivetti Corp. v. Ames Business Systems, Inc.*,[41.1] the retail dealer of word processors brought an action against the distributor/manufacturer of the word processing systems. The court held that the dealer had established a claim for fraud against the distributor based on representations concerning the character and probable future performance of the contract the distributor had with a third party through whom it was to obtain and then supply the word processing systems.

Olivetti did not disclose to Ames that the NBI agreement had been breached by Olivetti or that it had been termiated by NBI. The court held that "Olivetti's conduct in falsely telling Ames . . . that it had a five-year agreement with NBI for the supply of the 701, when Olivetti knew the terms of the Agreement and knew that a long-term agreement was important to the successful marketing of the 701, constitutes intentional and willful fraud. . . ." The false statements were made by Olivetti with the intent to deceive Ames and to induce Ames to take on and promote the 701 product, and they did in fact deceive Ames.

> Olivetti . . . intentionally misled Ames by falsely telling Ames that its relationship with NBI was all right, and that it was negotiating with NBI for a continuation of the NBI Agreement, and that the Agreement provided for certain support for five years, when, in fact, Olivetti had breached its agreement with NBI and the two companies had agreed not to renew the NBI Agreement, and the Agreement did not provide for the support represented by Olivetti,

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[41.1] 81 NC App. 1, 344 SE2d 82 (NC Ct. App. 1986). On review by the North Carolina Supreme Court, the lower court analysis in *Olivetti* was affirmed as to the finding of fraud, but reversed as to damages. Olivetti Corp. v. Ames Business Sys., Inc., 319 NC 534, 356 SE2d 578 (NC 1987). The court held that the misrepresentations about the status of a critical supply contract in the course of negotiating a franchise agreement constituted fraud, but that the start-up company did not establish damages or carry its burden of proving with reasonable certainty that it lost opportunity to become a dealer of another supplier or what profits it would have made.

capability because it was a beta test site for the system during developments. Finally, a representation that the system had been fully tested was not false since substantial lab testing had occurred, although there had been no field testing before delivery to Shapiro.

Add the following new subsection:

[2A] Obsolete and Discontinued Systems [New]

The pattern of new developments and claimed fraud also has aspects relating to prior systems offered by a vendor. Here, the issue is whether a vendor can represent that an existing system will continue to be available and be serviced, although it is aware of the development of a new, replacement system. The court in *Tandy Corp. v. Eisenberg*[29.8] held that a failure to disclose that a system was to become obsolete in the vendor's own line was an actionable deception. Tandy, in this case, never delivered the contracted-for system. It did not deliver because the contracted-for system had been discontinued. The court held that Tandy had deceived the buyer by contracting for the system knowing that it had already been discontinued and was not available. This deception created a cause of action that was not barred by disclaimer language in the written contract. "Plaintiff was deceived by Defendant . . . and frozen into the marketplace as, in effect, Defendant's captive customer, persuaded not to reenter the marketplace to purchase an alternative product with the same capacity and quality from another supplier and would thereby be likely to purchase Defendant's substitute product."

A similar analysis of obsolete systems occurred in *Hundred East Credit Corp. v. Eric Schuster Corp.*[29.9] Here, the computer purchaser brought action for common-law fraud through the Consumer Fraud Act based on allegations pertaining to the premature obsolescence of its computer system due to the manufacturer's discontinuance of the computer line. The manufacturer had represented that the system would be available and that upgrades, replacement, and enhancement elements would continue to be available. This aspect of the purchase was material to the buyer's decision. When the seller made these representations, it already knew that the particular line it was selling to this buyer would be cancelled in the near future. The misrepresentation constituted fraud. The buyer was entitled to recover as damages two-thirds of cost of peripherals, software, and programming.

[29.8] 488 So. 2d 927 (Fla. Dist. Ct. App. 1986).

[29.9] 212 NJ Super. 350, 515 A2d 246 (NJ Super. Ct. App. Div. 1986).

yond those in the contract itself. The relevant point was recognized by the court in *Computerized Radiological Service v. Syntex.*[29.4]

> At worst, Syntex was guilty of misguided optimism. This is the stuff of a contract claim, not fraud. Arguably a defendant may be held liable in fraud for representing that he intends to perform an act in the future when he actually harbors no such intention. The evidence here, however, establishes that Syntex had every intention of succeeding. . . . Any inference to be drawn from the fact that Syntex failed is insufficient to sustain CRS's burden of showing a false statement of intention.[29.5]

In *Syntex,* while there was a breach of a warranty of fitness for a particular purpose, there was no liability in fraud based on a good faith belief that the computerized equipment under development would perform to eventual specification. When the allegation of fraud relates primarily to the defendant's assessment of the riskiness of the venture or to its alleged intention to never perform the agreement, the cases display an appropriate level of circumvention, leaving the allocation of the liability for nonperformance to contract theories.

[29.4] 595 F. Supp. 1495 (EDNY 1984).

[29.5] Id.

Add at end of subsection.

In *Syntex,* the circuit court overruled the district court on fraud issues. While the court of appeals generally accepted the analysis of actionable representations and good faith predictions made by the district court, it found at least one instance of express, factual misrepresentation that might form the basis of a claim in fraud.

The case involved a sale of a computerized CAT scanner system and an attempt to revoke acceptance or to recover for alleged fraud in the inducement. The buyer's reason for selecting this particular system was based in large part on representations that the system would soon be able to perform full body scans and that testing had already begun, although the system was still in development. At the time of the sale, the seller indicated that enhanced capabilities would be created and available in the near future.

> CRS focused its interest on Syntex because it could be delivered sooner than competing models, was cheaper, and required a smaller deposit. However, the scanner displayed [for inspection] was a first generation waterbag head scanner . . . Syntex . . . explained to the doctors that the waterbag was only a temporary

[2] New Systems: Misrepresentation and Incomplete Disclosure

Page 7-9:

Add note 26.2 at end of first complete paragraph.

[26.2] As in other contexts, misrepresentations about newly developed systems may be based on allegedly misrepresented intentions about the completion of the system. Where the claim is based on misrepresented intent, however, the relationship between the fraud and the contract claim is exceedingly close and it is often appropriate to permit the contractual allocation of risk established between the parties to prevail in the event that performance does not occur. This result was reached in CB W. Fin. Corp. v. Computer Consoles, 504 NYS2d 179 (NY App. Div. 1986). As part of a transaction conveying ownership of a computer company to Computer Consoles (CC), CC agreed to work with sellers in the development, manufacture, and marketing of a new computer. CC abandoned the development effort and was sued for fraud. The fraud claim failed. The court noted: "The alleged fraudulent representations of Computer Consoles concern its promise to develop, manufacture and market the [new system]. These promises were actually part of the express terms of the contract. A cause of action for fraud in inducing a contract cannot be based solely upon a failure to perform contractual promises of future acts. An alleged failure to perform such acts is a breach of contract. . . ."

Page 7-11:

Add after runover paragraph.

A degree of circumspection and caution is justified in transactions involving products that are specially designed or developed for a particular transaction or that are contracted for at a time when the product is undergoing development. In either respect, the transaction involves a new product without extensive or even any prior testing and performance history. This form of transaction is especially common in reported computer cases. When the delivered product fails to perform adequately or delivery is delayed, fraud and contract doctrines interact to allocate the risk of loss between the parties.

The developmental relationship particularly requires careful assessment of flexibility and risk to ensure the integrity of the transaction. Under both contract and fraud theories, analysis must account for the obvious fact that newly developed systems may not be immediately capable of perfect performance and that expectations in the development of a system may ultimately be frustrated despite a good faith effort to complete a contracted-for project.

Misrepresentation arguments are often raised in cases dealing with new systems. In fraud cases, the question of whether eventual performance was adequate should not be the primary issue. Misrepresentation sible for any defects in the programming supplied by others. Furthermore, although there were allegations of misrepresentation about the performance characteristics of the system, the representations were not material to the transaction since the buyer never requested the functions that were allegedly misrepresented.)

Add at end of note 21.

See also Hycel, Inc. v. Wittstruck, 690 SW2d 914 (Tex. Ct. App. 1985) (manufacturer and seller of automated blood chemistry analyzer committed actionable misrepresentation with reference to characteristics and uses of analyzer); AMF Inc. v. Computer Automation, Inc., 573 F. Supp. 924 (SD Ohio 1983) (material issue of fact existed as to claims in fraud in transaction involving purchase of computer equipment).

Add at end of note 23.

There are some enforceable obligations of ordinary recognition of apparent facts that either preclude the existence of fraud altogether, or that establish an obligation to assert claims within applicable limitation periods. See generally Hartford Mut. Ins. Co. v. Seibels, Bruce & Co., 579 F. Supp. 135 (D. Md. 1984) (statute of limitations barred claims in fraud based on misrepresentations about computer system capability and availability of computer software for system; training session revealed that program intended for purchased system had not yet been completed, and suit was not brought until four years later).

Add note 24.1 at end of first sentence in third paragraph in subsection.

[24.1] This does not, however, permit clear misrepresentation about the status of a particular system. See Accusystems, Inc. v. Honeywell Information Sys., Inc., 580 F. Supp. 474 (SDNY 1984) (representations were made recklessly and with knowledge of inaccuracy; claims that equipment had been tested and could perform concurrent processing operations and multiuser tasking were misrepresentations of existing fact); Computer Sys. Eng'g, Inc. v. Qantel Corp., 740 F2d 59, 68 (1st Cir. 1984) (actionable misrepresentations were made purporting SOLUTIONS software package to be fully developed and tested and that it was a turnkey system when, in fact, system actually delivered was not sophisticated and was inadequate without substantial modifications).

Page 7-9:

Add at end of note 25.

See also Computerized Radiological Serv. v. Syntex Corp., 595 F. Supp. 1495 (EDNY 1984), rev'd 787 F2d 72 (2d Cir. 1986). *Computerized Radiological Service* involved the sale of computerized CAT scanner currently under development. The court held that no fraud liability existed for from the defendant. The plaintiff alleged various defects in the design, and negligence in the service. Included in the fraud and RICO claims was the allegation that the defendant represented that the switch could be and would be designed, equipped, set, and maintained with secure restriction levels, and that it could and would service the switch promptly and expertly. But the defendant failed to do so. The court granted summary judgment on the fraud claims, holding that these allegations did not establish a case for fraud.

In contrast, in *Trak Microcomputer Corp. v. Wearne Brothers,*[19.12] the court allowed a fraud claim based on allegations that four companies engaged in apparently good faith negotiations regarding the acquisition of microcomputer technology, while in fact wanting merely to obtain disclosure of valuable, confidential business information from the plaintiff (Trak). It held that misrepresentations as to future actions can constitute fraud and that to establish federal mail or wire fraud the plaintiff needed only to establish that such use of communications was foreseeable in the fraudulent scheme.

[19.12] 628 F. Supp. 1089 (ND Ill. 1985).

¶ 7.03 MISREPRESENTATIONS

Page 7-8:

Add after runover paragraph.

Allegations for fraud must ordinarily be made with particularity.[19.13] In addition, of course, there must be proof of an action misrepresentation. In *Graphic Sales, Inc. v. Sperry Corp.,*[19.14] for example, the lessee of a computer system alleged that it had been fraudulently misled to believe that the quoted price was a bundled price including both hard-

[19.13] See generally St. Louis Home Insulators, Inc. v. Burroughs Corp., 597 F. Supp. 100 (ED Mo. 1984) (complaint for fraud in purchase of a computer system was dismissed because it was not stated with sufficient particularity and did not establish a reason why plaintiff could not have discovered fraud and acted within five-year limitation period with exercise of due diligence); aff'd, St. Louis Home Insulators v. Burroughs Corp., 793 F2d 954 (8th Cir. 1986); NCR Credit Corp. v. Underground Camera, Inc., 581 F. Supp. 609 (D. Mass. 1984) (in computer sales contract dispute, allegation that defendants conspired to defraud plaintiff "to its great harm and detriment" was insufficient). See also Riley Hill Gen. Contractor, Inc. v. Tandy Corp., 728 P2d 577, 82 Ore. Ct. App. 458 (1986) (jury instruction regarding burden of proof of fraud that indicated that fraud could be proven through both clear and convincing evidence and preponderance of evidence required reversal).

[19.14] 824 F2d 576 (7th Cir. 1987).

lent scheme cannot form a pattern.[19.5] On the other hand, several decisions hold that multiple schemes are not necessary to form a pattern.[19.6]

Consistent with the general pattern, RICO allegations in computer industry litigation are common. As to the racketeering pattern element, the decisions correspond to the broader case law. For example, in *McIntyre's Mini Computer Sales Group, Inc. v. Creative Synergy Corp.*,[19.7] the court held that a RICO claim was not established where the allegations involved only one alleged scheme to steal and distribute a secret customer list. Although various acts occurred in relation to this single event, the facts did not establish the required "pattern" of racketeering activity essential to a RICO claim. Similarly, but for varied reasons, the court in *Techcreations, Inc. v. National Safety Council*[19.8] dismissed a RICO claim in a controversy involving a contract to develop, install, and administer a software system for graduates of the "defensive driving course." In contrast, a computer-related RICO action was sustained in *Trak Microcomputer Corp. v. Wearne Brothers*.[19.9] In that case, the RICO allegations involved the claim that four companies engaged in apparently good faith negotiations regarding the acquisition of microcomputer technology, while in fact wanting merely to obtain disclosure of valuable, confidential business information from the plaintiff (Trak). The court held that a RICO claim had been outlined and that misrepresentations as to future actions can constitute fraud. Furthermore,

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[19.5] See, e.g., Fleet Management Systems v. Archer-Daniels-Midland Co., 627 F. Supp. 550 (CD Ill. 1986) (a single scheme to market computer software, consisting of at least eight fraudulent acts over a two year period, was not a pattern); Northern Trust Bank/O'Hare, NA v. Inryco, Inc., 615 F. Supp. 828 (ND Ill. 1985) (multiple fraudulent mailings in furtherance of one scheme did not constitute a pattern); Eastern Corporate Fed. Credit Union v. Peat, Marwick, Mitchell & Co., 639 F. Supp. 1532 (D. Mass. 1986) (investor did not state an action under RICO where accountants performing an audit on a financially troubled bank fraudulently or recklessly prepared and certified financial statements, misrepresenting and concealing bank's true financial condition; allegations pertained only to a single audit that, even though distributed through at least three allegedly fraudulent acts, was inadequate to constitute a pattern of racketeering.)

[19.6] See, e.g., Trak Microcomputer Corp. v. Wearne Bros., 628 F. Supp. 1089 (ND Ill. 1985) (pattern established with respect to a single fraudulent scheme); Graham v. Slaughter, 624 F. Supp. 222 (ND Ill. 1985) (same); RAGS Couture, Inc. v. Hyatt, 774 F2d 1350 (5th Cir. 1985) (two related predicate acts of mail fraud constitute a pattern).

[19.7] 644 F. Supp. 580 (ED Mich. 1986).

[19.8] No. 86 Civ. 1399 (ND Ill. Dec. 24, 1986) (WESTLAW DCT Database).

[19.9] 628 F. Supp. 1089 (ND Ill. 1985).

turer of word processing and computer systems fraudulently misrepresented manner in which they would perform under dealership contract were subject to arbitration under contract clause providing for arbitration of disputes "arising in connection with" agreement); NCR Credit Corp. v. Park Rapids Leasing Assocs., 349 NW2d 867 (Minn. App. 1984) (arbitration clause did not indicate clear intention to arbitrate issue of fraud in inducement of contract and therefore did not apply to such issue). See also International Talent Group, Inc. v. Copyright Management, Inc., 629 F. Supp. 587 (SDNY 1986). In this case, the court applied an arbitration clause to a fraud dispute. The transaction involved both hardware and software contracts. The software contract contained provisions for arbitration of "any and all proceedings relating to the subject matter" of the software contract. The hardware contract contained no arbitration clause.

When problems developed in the system delivered to the buyer, it sued alleging fraud in the inducement of the hardware agreement. The court held that the arbitration clause covers all of these claims. Even though the software-related claims sought recission, they were essentially actions for breach of that contract and for fraud related to its creation. These fell squarely within the scope of the arbitration clause. Furthermore, because of the nature of the overall transaction, the claims related to the hardware contract were covered by the broad arbitration reference to "any and all" claims related to the software contract.

Page 7-7:

Add the following new section.

[3] Racketeering Allegations and Commercial Litigation [New]

One impetus for the rapid increase of fraud allegations in commercial litigation generally is attributable to the application of criminal statutes relating to racketeering activity in the context of civil commercial litigation. Although various state law provisions may also be involved, the major litigation here concerns the federal Racketeer Influence and Corrupt Organizations (RICO) Act. The attraction for the litigator is that an action under civil RICO provisions conveys the potential of enhanced damages or punitive damage awards.

Civil RICO claims are commonly premised on allegations of fraud. The Supreme Court has held that, in making a civil claim, the litigant need not establish that the defendant had been convicted of criminal fraud, but merely needs to prove fraud involving interstate commerce, the mails, wires, or another federal interest under the provisions of RICO that list so-called "predicate acts."[19.2] Despite this, the use of RICO in

[19.2] See Sedima SPRL v. Imrex, Inc., 105 S. Ct. 3275 (1985).

distinguish intentional misrepresentation from the mere fact of subsequent nonperformance of a promise. Nonperformance claims are contract issues, while misrepresentation provides the sole basis for a fraud action. In addition, the basic standard for fraud liability concerns whether the allegedly injured party was harmed or would be likely to be harmed by relying on the misstatement (see ¶ 7.04, main volume). Statements about intent convey inherent elements of uncertainty of performance, potentially reducing the need to protect against misstatement since the affected party is more likely to take steps to protect itself.

Although making a promise with the present intention to breach or not perform can constitute fraud, the intention not to perform must be established by more than the mere fact of subsequent nonperformance. For example, in *Brignoli v. Balch Hardy & Scheiman,*[9.2] the developer of a system claimed, but could not prove, that the company to which its use was contracted never intended to perform its contractual royalty obligation. However, allegations that the corporation led its clients falsely to believe that the programs used belonged to the inventor were used to state a claim for relief based upon unfair competition.

[9.2] Brignoli v. Balch Hardy & Scheiman, 645 F. Supp. 1201 (SDNY 1986).

[2] Contract Barriers and Fraud Claims

Page 7-6:

Add note 10.1 at end of third sentence in first paragraph.

[10.1] See, e.g., Lovejoy Elecs., Inc. v. O'Berto, 616 F. Supp. 1464 (ND Ill. 1985) (consultant alleged fraud in inducement in contract under which he delivered a computer chip to defendants in return for a royalty agreement; in context of dispute about whether contract had been breached, consultant was permitted to present parol evidence on issue of fraud).

Add after last full paragraph.

Fraud allegations have a serious impact on the viability of ordinary contract limitations such as warranty disclaimers and parol evidence integration clauses. While it is reasonable to conclude that true fraud claims cannot be barred by the contract that was fraudulently induced, this same theory should not be applied to enable litigants to totally circumvent contract barriers by casting essentially contract claims in the language of fraud. The closer the claims are to simple contract breach allegations, the less willingness there should be to allow their use to avoid agreed to limitations on liability.

PART C. COMPUTER USERS AND LIABILITY RISKS

¶ 7.01 INTRODUCTION

Page 7-2:

Add note 0.1 at end of second sentence in second paragraph.

0.1 As is true in commercial litigation generally, computer-related disputes increasingly involve allegations that one party violated the federal Racketeer Influenced and Corrupt Organizations (RICO) Act. The civil penalties for RICO violations involve increased or punitive damages. See Sedima SPRL v. Imrex, Inc. 105 S. Ct. 3275 (1985). See also Wang Laboratories, Inc. v. Burts, 612 F. Supp. 441 (D. Md. 1984) (cause of action properly alleged under RICO was that as part of a conspiracy to commit fraud). See generally Nathan, "Civil RICO After Sedima," 4 CLR 26 (1985); Cohen & Cohen, "Computer Industry RICO Hypothetical," 4 CLR 349 (1985). See ¶ 7.02[3], this Supplement.

PART A. FRAUDULENT REPRESENTATIONS

¶ 7.02 GENERAL CONSIDERATIONS

[1] Fraud and Contract Law Policy

Page 7-4:

Add at end of runover paragraph.

As discussed in the main text at ¶ 7.02[2], the relationship between contract law and tort law in commercial cases involving computer and software sales involves frequent efforts to adopt fraud theory to circumvent contract limitations. A similar pattern exists with the application of state deceptive trade practice laws and federal racketeering laws.

As a practical matter, the incentive for pressing toward use of these extraneous doctrines in commercial contract environments involves litigation and damage measurement issues. By raising fraud and deceptive relevant information. A failure to comply with these obligations can constitute a breach of contract.

The court in *H/R Stone, Inc. v. Phoenix Business Systems, Inc.*,[236.1] for example, applied an analysis based on a covenant of good faith and fair dealing to resolve a dispute in which the buyer of custom software failed to agree on and provide to the designer the specifications for a research software package.

In *Stone,* the seller agreed to furnish programs, including source code, for both business software and a research software package. The latter was to be designed to fit the specific analysis needs of the buyer. The contract provided that, if an adequate package was not delivered within 150 days of the contract, seller would forfeit a portion of the purchase price. When, after substantial discussion, seller had not yet received complete information and specifications regarding the research package, it refused to submit either product to the buyer. The buyer admitted that it never provided adequate information regarding the research program.

The court properly held that both parties had breached the contract. Initially, the seller's failure to deliver the separate business package was not justified by the buyer's conduct since the buyer's actions in delaying specifications and constantly changing them for the research program did not constitute a complete breach of the agreement. This holding is clearly correct in any case where, as here, the two products are separable and can be separately completed.

The court held, however, that the buyer violated a duty of good faith in respect to the research program. Here, it was apparent that the parties contemplated that the program specifications would evolve over the developmental period and changes in the specifications and objectives of the program were appropriate. However, the contract imposed a duty on the buyer to act in good faith and without unnecessary delay to agree on specifications against which the program could be written. This duty "was clearly implied by the computer contract" because of the provision forfeiting part of the purchase price if the software was not completed in 150 days.

The good faith obligation at least required that the buyer provide sufficient information for the seller to design specifications to meet the market research formula. This was not done. "Although plaintiff's employees often had calculated this formula without computer assistance, the method used in such calculations remained a mystery to individuals, such as defendants, not intimately involved in the broadcast industry."

[236.1] 660 F. Supp. 351 (SDNY 1987).

nois and Louisiana, the contract included in the software package is enforceable only if clearly displayed to the consumer and the consumer's right to reject and return the property is clearly spelled out. Given these conditions, however, the contract is conclusively presumed to be enforceable when the package is opened insofar as it affects title retention and various license provisions. The special statutes do not mention the enforceability of any warranty disclaimer included in the package "contract."

The first reported decision to deal with the state legislation attempting to validate "shrink wrap" license provisions in mass market contracts held that the statutory provisions were preempted by the federal copyright and patent laws and that, absent the special statute, the underlying contract between the buyer and distributor as to the conditions of the license was invalid as a contract of adhesion. See Vault Corp. v. Quaid Software Ltd., 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987). See discussion at ¶¶ 3.12[2] and 5.16[1][4], this Supplement.

¶ 6.18 WARRANTY AND REMEDY LIMITATIONS

[1] Consumer Protection and State Law

Page 6-71:

Add note 202.1 at end of fifth sentence in last paragraph.

202.1 The assumption does not extend to commercial transactions in all states. See United States Welding, Inc. v. Burroughs Corp., 615 F. Supp. 554 (D. Colo. 1985) (Colorado Consumer Protection Act could not be invoked in commercial lease transaction relating to computer system and operating software where contract was purely commercial and there was no indication that alleged fraud related to or affected consumers).

Add at end of note 204.

Compare Ellmer v. Delaware Mini-Computer Sys., Inc., 665 SW2d 158 (Tex. Ct. App. 1983) (warranty disclaimer and remedy limitations do not violate Deceptive Trade Practices Act).

PART E. DEVELOPMENT CONTRACTS

¶ 6.19 DESIGN IMPOSSIBILITY

Page 6-80:

Add at end of section.

The idea of contractual excuse based on technological impossibility is addressed in computer cases in the context of UCC provisions regarding commercial impracticability. In general, the seller of a system is not was subleased by the original lessee. When both parties stopped paying rentals, the lender sued both. Since the lender in the computer lease transaction did not agree to substitute a sublessee for the original lessee, the original lessee remained liable for the full rental payments that were used to secure the underlying debt. The original lessee was not entitled to indemnification of its debt from the lessee or from the individual who was the principal officer of the sublessee.

The lender in *Union,* however, was required to credit payments made under the lease to the amount due and owing because of its use of the rental stream as collateral for the debt. "The cases that Union Mutual cites simply hold that commercial lessees agreeing to 'hell or high water' clauses are bound in various circumstances. They do not prohibit crediting third party payments against amounts due under the Lease." [191.4]

A similar result can occur through use of guaranties. In *Prime Time Television, Inc. v. Coastal Computer Systems, Inc.,*[191.5] after a malfunction of a leased computer system, the lessee sued both the lessor and the supplier of the computer to rescind the lease and obtain damages. The lessor counterclaimed and also sued two individuals based on their guaranty of the lease payments. The court upheld a jury verdict against the guarantors in favor of the lessor. It rejected the argument that the lease never became an effective obligation because the lessor and supplier failed to deliver all necessary software. Despite this lack, an item had been delivered and the lessor paid the supplier based on the lessee's affirmation that it had received delivery. Under the assignment of warranties from the lessor to the lessee, the sole cause of action is against the supplier for any such defects.

In *Pacific American Leasing Corp. v. SPE Building Systems, Inc.,*[191.6] in a common three-party lease format, the lessor purchased a system from a supplier based on specifications supplied by the lessee. The computer was delivered and accepted by the lessee. Subsequently, the lessee refused to pay rent when the computer allegedly failed to perform properly. Notwithstanding the alleged flaws, the court held that the lessor was entitled to the payment of rental. Although this was a lease transaction, the court held that Article 2 of the UCC applied to

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[191.4] See, e.g., Bankers Trust Co. v. Litton Sys., Inc., 599 F2d 492–493 (fraud in the inducement not a defense against assignee-lender); Equico Lessors, Inc. v. Mines, 84 Cal. App. 3d 374, 148 Cal. Rptr. 554 (Cal. Ct. App. 1978) (nondelivery of equipment and disallowance of tax deductions no defense).

[191.5] 484 So. 2d 780 (La. Ct. App. 1986).

[191.6] 730 P2d 273 (Ariz. Ct. App. 1986).

Regardless of the source of warranty law, further questions will ordinarily arise about the extent to which the lease agreement effectively disclaims or restricts the applicable warranties. Here, the dominant approach appears to rely on the treatment of warranty disclaimer rules in Article 2 of the UCC. In general, a conspicuous disclaimer contained in a commercial lease between parties of relatively equal bargaining power and sophistication will be enforced.[182.2]

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or a lease for security, the transaction was the functional equivalent of an installment purchase arrangement. As a result, UCC provisions deriving from Article 2 apply. The lessor here was held to an "implied warranty" of fitness for a particular purpose that could not be disclaimed.); Pacific Am. Leasing Corp. v. SPE Bldg. Sys., Inc., 730 P2d 273 (Ariz. Ct. App. 1986) (in a three party lease, although this was a lease transaction, the court held that Article 2 of the UCC applied to determine the rights of the parties, but no warranties of merchantability or of fitness for a particular purpose were present in this case because of the lessee's involvement in selecting the system).

[182.2] See Meeting Makers, Inc. v. American Airlines, 513 So. 2d 700 (Fla. Dist. Ct. App. 1987) (conspicuous disclaimers in lease and sales agreement enforced); Citicorp Indus. Credit, Inc. v. Rountree, 185 Ga. App. 417, 364 SE2d 65 (Ga. Ct. App. 1988) (conspicuous disclaimer in equipment lease removes warranties).

[2] Third-Party Lessees

Page 6-63:

Add note 183.1 at end of first sentence in second paragraph.

[183.1] See Bancorp Leasing & Fin. Corp. v. Brunner, 672 P2d 357 (Or. Ct. App. 1983) (lease contract involving third-party financing could not be rescinded where independent software suppliers failed to deliver programs of promised kind and quality; lessor did not breach lease, even though it paid suppliers subject to reimbursement from "lessee" because arrangement implicitly allocated risk of supplier failure on lessee).

Page 6-64:

Add at end of subsection.

In a three-party computer sale or lease agreement, the end user ordinarily obtains warranty and other contractual obligations indirectly from the supplier through the creditor-lessor who obtains the property for purposes of the lease. This third-party arrangement typically will be express in the contract itself. In the absence of that, however, as discussed in the main text at ¶ 6.16[2], many states bar any claim of third party beneficiary status for the end user who is not expressly referred to in the main contract.

[debtor's] limited time and . . . resources are necessarily concentrated on more pressing . . . matters. Second, the decision . . . requires a thorough review of system replacement options. . . . Third, any decision . . . must take into consideration whether [there will be a liquidation or reorganization]." The delay was permitted where the debtor continued to make payments as required in the lease.

In a second case arising out of the OPM bankruptcy, a lessee was denied compensation for necessary post-petition expenses.[180.6] The lease was rejected three years after bankruptcy was filed. Under bankruptcy law, however, the claim for damages available to the nonbankruptcy party was computed as if the breach occurred at the time of bankruptcy and treated as a pre-petition claim with no special priority against the estate. In this case, the court applied this rule to payments made by the lessee to third parties for maintenance and the like after the filing of the petition. For claims based on such payments to be treated as priority claims in bankruptcy, they must benefit the estate. No benefit applied here, however, because all lease payments were made directly to third-party financers, not the debtor. The lessee "bore the risk of making post-petition payments which did not benefit the estate, especially when viewed in the context of [lessee's] failure to pursue its Code-granted right to move for an expeditious assumption or rejection of the lease."

[180.6] 56 BR 678 (Bankr. SDNY 1986).

¶ 6.16 WARRANTY AND THIRD-PARTY LIABILITY

Page 6-62:

Add note 180.7 at end of first paragraph.

[180.7] See United States Welding, Inc. v. Burroughs Corp., 615 F. Supp. 554 (D. Colo. 1985) (Colorado Consumer Protection Act could not be invoked in commercial lease transaction relating to computer system and operating software where contract was purely commercial and there was no indication that alleged fraud related to or affected consumers).

[1] Leases and Warranties

Page 6-62:

Add after note 181 in the first paragraph.

Discussion of the lessor's performance of the qualitative terms of a computer lease will often focus on whether the equipment meets contractual specifications and on the presence and performance of qualita-

Page 6-62:

Add at end of first sentence of runover paragraph.

The enforcement of any rental acceleration clause in a true lease may be subject to the doctrine of election of remedies. In essence, under this doctrine, the lessor can accept the property back or take damages for loss of future rent, but cannot recover both. When the lessee terminated a true lease of a computer system, in *Campbell v. Pipe Technology, Inc.,*[179.1] the lessor was required to elect to sue for future rentals or to seek return of the leased property. This election was required even though the lease itself purported to permit both actions to occur. Once the lessor had obtained a return of the leased computer, it was an error to permit any further award of damages for future rental loss.

A pure election of remedies between collecting rent and retaking possession will not be applied by all courts and represents at most a distinct minority position to the treatment of lease remedy provisions. More normally, the lessor retains a series of alternatives that it can choose, subject perhaps to some over-riding obligation to mitigate or, at least, not unnecessarily incur damages.

In *John Pagliarulo Building Contractors, Inc. v. AVCO Financial Services Leasing Co.,*[179.2] for example, the Florida Appeals Court affirmed and adopted a trial court opinion holding that the lessor faced with a breach of the lease had no obligation to sell or make another lease of the computer equipment following breach but could rely on a contract remedy holding lessee liable for all lease payments. The court noted that the lessor had three alternatives after the breach: a) retake the property for its own account terminating all obligations under the lease, b) retake the property and hold the lessee liable for the difference between the contract rent and what the lessor received in good faith from a sale or releasing of the property, or c) do nothing and hold the lessee liable for the lease payments based on an acceleration clause. The lessor elected the third option.

[179.1] 499 So. 2d 111 (La. Ct. App. 1986).

[197.2] 512 So. 2d 1162 (Fla. Dist. Ct. App. 1987).

Page 6-62:

Add at end of runover paragraph.

The classification of the transaction as either a lease or a security agreement also affects the rights of the "lessor" in the event that the "lessee" files for federal bankruptcy relief. The difference can signifi-

¶ 6.15 SUBSTANTIVE LAW DIFFERENCES

Page 6-60:

Add at end of note 175.

See also Bayou Acceptance Corp. v. Superior Hydraulics, Inc., 446 So. 2d 558 (La. Ct. App. 1984) (lessor's nonobjection to lease assignment and acceptance of payments from assignee was not a novation, relieving lessee of all further liability).

Add after first full paragraph.

The distinction between a sale of a computer system and a lease of the hardware may also affect the seller's (or lessor's) obligations to maintain and upgrade the delivered system over a period of time. Although this can be altered by agreement, ordinarily sellers have no obligation under a sale contract after they deliver a defect-free product. Lessors, on the other hand, may more likely be found to have taken on continuing obligations.

The lessee may have an interest in maintaining a system that features 'state of the art' or, at least, not obsolete technology. This may have been one of the reasons behind adopting a true lease, rather than a purchase arrangement. The lessee's interest in maintaining a technologically contemporary system, if expressed in the lease agreement, will be enforced by the court. In *Zayre Corp. v. Computer Systems of America Inc.,*[175.1] for example, the court held that termination of a lease pursuant to a technological obsolescence clause was permitted. The issue here was whether termination was allowed for the entire system or only for the outmoded features. The court permitted termination of the entire system because the nature of the system would have imposed substantial and costly "down time" problems in any effort to upgrade. Given the online use of the system, downtime problems were a serious, protectable concern to the lessee.

In dealing with upgrade and obsolescence contingencies in a lease agreement, however, critical questions of interpretation may occur in reference to applying the terms of the contract to the facts in dispute. For example, in *Computer Systems of America, Inc. v. Western Reserve Life Assurance of Ohio,*[175.2] the court held on the facts presented that the input-output unit of the computer was not obsolete or surplus such

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[175.1] 24 Mass. App. 559, 511 NE2d 23 (Mass. App. Ct. 1987).

[175.2] 19 Mass. App. Ct. 430, 475 NE2d 745 (1986).

acter of lease agreements are likely to undergo substantial transformation in the next few years as a result of activity in the area of uniform law development. In 1987, the Uniform Law Commissioners approved Article 2A of the UCC dealing with personal property leasing.[165.3] When adopted by the states, this enactment will clarify and, in many respects, substantially alter the substantive law of personal property leases in various respects that will influence computer leasing practices. Even before formal adoption in any particular state, however, the provisions of UCC Article 2A are likely to influence case law development of criteria for determining when a true lease exists since the package of reforms associated with Article 2A modifies the definition of security interest found in the UCC.

Under the terms of the proposed change, whether a lease constitutes a security interest or not remains for determination based on all of the facts of the particular case, but the statute no longer refers to leases "intended" as security agreements. In place of a measure of the mythical intention of the parties, Article 2A focuses the determination of the character of the lease entirely on economic factors associated with the lease agreement. A "lease" transaction does not constitute a security agreement unless the consideration to be paid under the lease by the lessee is an obligation for the term of the lease "not subject to termination by the lessee."[165.4] If the agreement meets this condition, characterization as a security agreement requires, further, that one of four explicit economic conditions is also met.

The first two deal with the economic life of the leased property and treat an agreement as a security agreement if the original term of the lease equals or exceeds the remaining economic life of the computer or the lease obligates the lessee to renew the lease for the remaining economic life of the property (or buy the property in lieu of renewal).[165.5]

The second two alternative conditions focus more traditionally on the cost of the lessee's right to retain the property or buy it at the end of the lease. Under these conditions, a lease will be a security agreement if the lessee has the option to purchase the property or to renew the lease for nominal, or no additional, consideration. The revised section, however, specifies that additional consideration will not be treated as nominal if the contract uses a market rental rate renewal or a market purchase price formulation. On the other hand, "additional

165.3 See UCC §§ 2A-101–2A-531 (1988 Approved Draft).

165.4 UCC § 1-201(37) (1988 Approved Draft).

165.5 UCC § 1-20(37) (1988 Approved Draft).

¶ 6.13 UNCONSCIONABILITY

Page 6-53:

Add at end of note 152.

See also Computerized Radiological Serv. v. Syntex Corp., 595 F. Supp. 1495 (EDNY 1984) (in sale of CAT scanner currently under development, liability limits are enforced; buyer can recover only amount it paid on contract while liable for seller's service charges during period after warranty expired and before acceptance was revoked; damages disclaimer not unconscionable); AMF, Inc. v. Computer Automation, Inc., 573 F. Supp. 924 (SD Ohio 1983) (disclaimer of consequential damages not unconscionable).

Page 6-54:

Add at end of section.

In *Hunter v. Texas Instruments, Inc.,*[158.1] the combination of the buyer's business and computer knowledge was relied on to validate a disclaimer and remedy limitations contained in a retail sale agreement to bar action against the manufacturer. In this case, TI was permitted to defend on the basis of contractual disclaimer language in the dealer's contract with the buyer. Furthermore, in this case, the disclaimer and limiting language were not unconscionable as applied to an accountant buyer.

> Where as here, the buyer is aware of the disclaimer, and testifies that he understood it, there is very little basis on which to credibly argue that he was surprised. Nor is the limited remedy clause, [limiting TI to an obligation to replace and repair] unconscionably one-sided under these circumstances. We deal here with a college educated buyer, one with some background in commercial law, who shopped extensively for computer equipment . . .

158.1 798 F2d 299 (8th Cir. 1986).

PART C. COMPUTER LEASING

¶ 6.14 FORMS OF LEASING

[1] Contract Law Standards

Page 6-57:

Add at end of note 165.

See Colonial Leasing Co. of New Eng. v. Larsen Bros. Constr. Co., 731 P2d 483 (Utah 1986) (in action by lessor of equipment to recover damages resulting from default, the court held that parol evidence that lease was in-total and fundamental to transaction); Hartford Mut. Ins. Co. v. Seibels, Bruce & Co., 579 F. Supp. 135 (D. Md. 1984) (contract damages limitation to repair not adequate to bar damage claim at pleading stage because of controversy about success of repairs); AMF, Inc. v. Computer Automation, Inc., 573 F. Supp. 924 (SD Ohio 1983) (summary judgment barred because issues of fact remained about whether exclusive repair and replacement remedy had failed of its essential purpose and whether seller had timely made effective repairs).

[2] Consequential Damage Limitations

Page 6-50:

Add after note 138 in runover paragraph.

In *Cricket Alley Corp. v. Data Terminal Systems, Inc.,*[138.1] the court held that Data Terminal Systems (DTS), the seller of computerized cash registers, had breached an express warranty that the registers could communicate to a remote computer. Under these circumstances, given the breach of warranty, DTS was also properly held responsible for consequential damages in the nature of paying for the increased labor costs involved in responding to the system's failure to perform despite a state statute that precluded charging the seller for damages based on particular needs of the buyer not made known to the seller.

In supporting its view of consequential damages here, the court noted: "Computerized cash registers are manufactured for use in retail business establishments [and DTS actively sought this market]. DTS computerized cash registers are expensive and sophisticated pieces of equipment and the market for them lies largely in the more complex retail establishments. . . . The submission of data from the cash registers to the mainline computer on sales, payrolls, inventory, etc. is a common feature of such equipment and the failure of the cash registers to do so would forseeably create additional labor costs. . . ."

[138.1] 732 P2d 719 (Kan. 1987).

Add note 139.1 at end of first sentence in last paragraph.

[139.1] See generally Computerized Radiological Serv. v. Syntex Corp., 595 F. Supp. 1495 (EDNY 1984) (in sale of CAT scanner currently under development, damages disclaimer not unconscionable); AMF, Inc. v. Computer Automation, Inc., 573 F. Supp. 924 (SD Ohio 1983) (disclaimer of consequential damages not unconscionable).

When an action was brought for damages, the earlier problems were time-barred, but the court held that there was an issue of material fact about whether (or when) the buyer should have known of the fraud involved in the sale and whether the seller made repair attempts and promises that would toll statute of limitations for warranty and breach of contract claims. These precluded summary judgment.[121.3]

The court in *Aubrey's R.V. Center, Inc. v. Tandy Corp.*,[121.4] permitted recision of the contract for a point of sale system nine months after acceptance. It noted that the records indicated a "continuing series of complaints, negotiations, promises and repeated attempts by Tandy to adapt the software to the hardware." Despite these efforts, the eventual system failed to perform the point of sale processing that had been critical to the purchaser. The value of the entire system was substantially impaired because the "system, represented as an integrated whole, did not" perform as represented.

The right to revoke acceptance was not lost by the fact that the buyer continued to use the system after it demanded that Tandy take it back. The continued use of the system did not diminish its value and may have been critical to the buyer. Furthermore, the seller did not demand return of the system after the letter of revocation.

[121.3] St. Louis Home Insulators v. Burroughs Corp., 793 F2d 954 (8th Cir. 1986) (statute of limitations bars action on breach of contract or fraud regarding the sale of computer and accompanying software where the buyer was aware long before the expiration of the limitations period that the inventory software purchased was not operating and could not be made to operate in a satisfactory manner).

[121.4] 46 Wash. App. 595, 731 P2d 1124 (Wash. Ct. App. 1987).

¶ 6.12 LIMITED WARRANTIES AND REMEDIES

Page 6-46:

Add note 122.1 at end of last paragraph of subsection.

[122.1] An increasing number of computer contracts use arbitration provisions for the resolution of disputes about performance and damages. The sorts of disputes encompassed by an enforceable arbitration provision vary depending on the terms of the contract itself. See Monical v. NCR Corp., 467 NE2d 644 (Ill. App. 1984) (arbitration clause was sufficiently broad to include claim of fraud in inducement when fraud was not directed to arbitration clause itself); NCR Credit Corp. v. Park Rapids Leasing Assocs., 349 NW2d 867 (Minn. App. 1984) (lease did not state clear intent to arbitrate issue of fraud in inducement, and action will not stay pending arbitration); Good(e) Business Sys., Inc. v. Raytheon Co., 614 F. Supp. 428 (WD Wis. 1985) (arbitration clause sufficiently broad to include claims under Wisconsin through operation of a statute of limitations bar where it was aware of defects and nonperformance in a system.[116.3]

The expiration of a statute of limitations occurs only after the cause of action accrues. In *The Drier Co., v. Unitronix Corp.*,[116.4] the court held that a contract cause of action does not accrue until a tender of delivery and that tender of delivery in a hardware and software sale requires more than delivery of the hardware.

In *Drier*, the bulk of the hardware for a computerized billing system was delivered in April 1981, but the invoicing portion of an inventory system was not ready until June 1982 and needed revisions not completed before April 1983. In August 1983, the seller acknowledged it had not yet completed an accounts receivable unit and that the inventory system was incomplete. In July 1984, plaintiff "scrapped" the system and sued nine months later.

The sale of computer systems is not simply a matter of simple delivery and installation, but may require custom services and post-delivery modification of the product. All of these are properly considered in determining when, if ever, a proper tender of delivery occurred.

The court noted that

> in our view it is too simplistic an approach to conclude that a vendor tenders delivery of a computer system upon delivery and installation of the hardware . . . The phrase tender of delivery must be understood in the modern day context of computer litigation. . . . It is the software which makes the computer system perform its specific functions. . . . [Tender] of delivery must therefore be interpreted to include . . . the incidental, customized "installation" of the software programs.

Furthermore, installation may require operation of the software with live data for some time in order to detect problems.

116.3 St. Louis Home Insulators v. Burroughs Corp., 793 F2d 954 (8th Cir. 1986) (statute of limitations bars action on breach of contract or fraud regarding the sale of computer and software where buyer was aware long before the expiration of the limitations period that the inventory software was not operating and could not be made to operate in a satisfactory manner).

116.4 3 UCC Rep. Serv. (Callaghan) 3d 1728 (NJ Super. Ct. App. Div. 1987) (citing the treatise).

[2] Revocation

Page 6-45:

Add at end of subsection.

Extended use of a system that does not perform up to anticipated levels may preclude revocation. In *Computerized Radiological Services* a breach of warranty here even though the equipment could occasionally communicate. "Certainly a warranty that the Wang and DTS equipment could communicate carries with it the necessity that such communication would be reliably regular and consistent." Similarly, in *Aubrey's R.V. Center, Inc. v. Tandy Corp.*,[101.4] the court held that computerized cash register systems breached the sales contract where, although they could function as registers, they could not perform the point of sale inventory and accounting procedures that were critical to the buyer.

[101.4] 46 Wash. App. 595, 731 P2d 1124 (Wash. Ct. App.1987).

[2] Causation

Page 6-40:

Add note 103.1 at end of next to last sentence in second paragraph.

[103.1] See Austin's of Monroe, Inc. v. Brown, 474 So. 2d 1383 (La. Ct. App. 1985) (hardware system manufacturer has no liability where its system was not defective and flaws in delivered inventory and accounting system, if any, were in software or other features of system). Compare Unger v. Bryant Equip. Sales & Servs., 335 SE2d 109 (Ga. 1985) (in sale of computerized feed system for dairy cows, distributor and installer of system, manufacturer, and utility could be joined as joint tort-feasors for venue purposes where all three were allegedly negligent).

Add note 104.1 at end of first sentence in last paragraph.

[104.1] See Land & Marine Servs. v. Diablo Data Sys., Inc., 471 So. 2d 792 (La. Ct. App. 1985) (warehousing and inventory program was defective on delivery to dealer and defect was not created by dealer or buyer; buyer's use of computer program designed for warehousing and inventory as system for timekeeping was not outside its expected use).

¶ 6.11 PERFORMANCE ISSUES

Page 6-41:

Add at end of note 107.

However, mere acceptance of the delivered product, whether performance or software, can, under some circumstances, seriously prejudice the receiving party's position. See, e.g., Eaton Corp. v. Magnavox Co., 581 F. Supp. 1514 (ED Mich. 1984) (primary manufacturer's failure to give timely notice of breach of implied warranties barred recovery); Flambeau Prods. Corp. v. Honeywell Information Sys., Inc., 341 NW2d 655 (Wis. 1984) (accord and satisfaction occurred when creditor cashed check tendered in full payment cated first buyer, the used equipment buyer was bound by the manufacturer warranty limitations that were effective against the original buyer and could recover against manufacturer only what its predecessors could have recovered.

PART B. DISPUTES AND REMEDIES

¶ 6.10 DEFINING A BREACH OF CONTRACT

Page 6-38:

Add note 96.18 at end of runover paragraph.

96.18 Questions about the standard of performance arise both in sales or design contracts and in contracts expressly involving services obligations. In data service contracts, the vendor's obligations ordinarily involve reasonable care in the discharge of specified functions. The standard of care can be altered by express contract provision. See generally Liberty Fin. Management Corp. v. Beneficial Data Processing Corp., 670 SW2d 40 (Mo. Ct. App. 1984) (liability limitation in services contract does not violate public policy because it does not apply to willful or grossly negligent acts, and exclusion of liability for ordinary negligence is enforceable where it was a bargaining point between the parties; exoneration of supplier for liability for ordinary negligence allocates loss, was not unconscionable, and did not fail of essential purpose).

[1] System Defects and Perfect Tender

Page 6-39:

Add after second complete paragraph.

A determination of what constitutes adequate performance under any technology contract must blend industry standards and any expressed, contrary expectation of the parties. The industry standards provide a base for measuring the adequacy of performance, but can be altered by the terms of the agreement.

In many cases, adequate performance falls far short of literally "perfect" performance. In *Solitron Devices, Inc. v. Veeco Instruments, Inc.,*[101.1] the purchaser of an ion implanter to be used to imbed minerals into silicon chips sued for breach of warranty when the machines produced a 5 percent wafer breakage rate. Rather than a warranty disclaimer, the contract specified that the delivered product would "if se-

101.1 492 So. 2d 1357 (Fla. Dist. Ct. App. 1986).

questions of product liability but can also arise under more common concepts of contract privity and third-party beneficiary status. This form of recovery is especially important in cases where the losses caused by the defects are purely economic and the jurisdiction is one of the many in which tort claims for purely economic loss are denied.

Courts do not, however, routinely permit actions against the third party manufacturers on contract theories in the absence of special circumstances sufficient to ignore concepts of privity. In *Stayton Cooperative Telephone Co. v. Lockheed Electronic Co.*,[96.13] for example, the court held that the purchaser of the computer system was not a third-party beneficiary of the written dealer purchase agreement with the computer manufacturer and, therefore, not permitted to act against the manufacturer. In this case, plaintiff had purchased a Lockheed system from Columbia for its billings and accounts receivable. Columbia had purchased the computer from defendant under the dealer agreement. Because of software problems, the computer did not perform satisfactorily. After substantial effort, the buyer bought a replacement from a third party.

The plaintiff's claim involved an alleged third party beneficiary right of action against the manufacturer based on the written agreement between Columbia (retail seller) and the manufacturer. That agreement, however, merely indicated that Columbia, as dealer, adds products to the products he purchases to create a final system, referred to as a 'turnkey,' which it then sells or leases to its customer. The court properly held that

> There is no evidence that, at the time that Columbia entered into its agreement with defendant [manufacturer], it was under a duty or obligation, 'actual or supposed or asserted,' to plaintiff which it intended to discharge by that contract. Accordingly, plaintiff was not a 'creditor beneficiary.' There is also no evidence . . . that Columbia entered into the written agreement for the purpose of making, or with the intent to make, gifts to its customers or to confer legal rights upon them.

Absent allegations of beneficiary status, end users often allege that they have claims against the manufacturer based on the warranties made in the original sale of the product. Often, such warranty claims are summarily rejected due to a lack of privity between the manufacturer and the end buyer.[96.14]

[96.13] 79 Ore. App. 193, 717 P2d 1283 (Ore. Ct. App. 1986).

[96.14] See Affiliates for Evaluation and Therapy, Inc. v. Viasyn Corp., 500 So. 2d 688 (Fla. App. 1986). (Purchaser of computer system is not entitled to maintain action for damages against manufacturer for breach of resolved only through close analysis of the events precipitating the termination of the relationship.

Damage measures can be controlled by contract when a breach occurs. This does not always happen, however. If the buyer breaches the contract, the vendor of the data processing services clearly has a right to recover the value of the services actually provided under the agreement.[96.9] Value represents contract price, but may require deduction of costs associated with correcting errors.[96.10] In a data processing agreement, the buyer rather than the vendor ordinarily bears responsibility for the costs of acquiring the data to be processed.[96.11] Where the vendor of the services breaches the contract, damages require return of the amount paid for which services were not received as well as recovery

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rating services, including performance of all computer operations needed to update policy master files. The court held that this created a direct obligation to furnish the master file and conduct monthly updates. The cost of all of this was included in the unit price charged in the contract and thus the demand for increased payment was improper. The court also rejected as unproven the assertions by ASD that there had been a disclosure of proprietary information, indicating that it believed that the true reason for refusing to continue as before had to do with the fact that Empire did not plan to renew the data service contract.

[96.9] See NTA Nat'l, Inc. v. DNC Servs. Corp., 511 F. Supp. 210 (DDC 1981) In *NTA National, Inc.*, the data service provider was entitled to the contract payment for services rendered up to the time of wrongful repudiation by the other party. Damages for breach of a data bank services contract based on repudiation by the customer was not the amount unpaid on the contract but the value of the services performed. This was determined by taking the entire contract price and dividing by the number of months covered by the contract. That rate was applied to the months in which services were provided, since the contract called for graduated payments to coordinate not with the value of the service but with the customer's cash flow. Compare In re Community Medical Center, 623 F2d 864 (3d Cir. 1980) (in a Chapter 11 bankruptcy, data processing contract was rejected and damage claim was limited to monthly minimum charge provided for in agreement).

[96.10] See Kersarge Computer, Inc. v. Acme Staple Co., 366 A2d 467 (NH 1976) (data service provided was entitled to balance of contract price, less contractually required deductions for cost of correcting errors in services).

[96.11] See NTA Nat'l, Inc. v. DNC Servs. Corp., 511 F. Supp. 210 (DDC 1981) (where data contract called for company to provide services to buyer, who would then sell that information to third parties as commercial program of services provided by buyer, responsibility for costs of data acquisition, preparation, and installation was to rest with purchaser). See Joel Popkin & Co. v. Wharton Econometric Forecasting Assoc., 659 F. Supp. 343 (DDC 1987) (forecasting company breached agreement by not paying fees to consulting company, but no proof it failed to adequately market product).

cessed data is delivered in tangible form to the buyer of the service. The buyer does not contract for acquisition of tapes, discs, or the like, but for the care and expertise of the contractor in providing processing services. The character of an information contract is less clear and probably differs depending on whether the contract calls for the special or customized acquisition of information for the particular undertaking or merely involves a buyer who obtains a right of access to preexisting information.

Performance obligations are defined by express terms in service contracts, which always carry the overriding expectation that the *services* will be performed with reasonable care and timeliness.[96.4] This does not necessarily entail a guarantee of accuracy because, in many contexts, reasonable care standards are nevertheless consistent with occasional error. When the transaction involves delivery of information, accuracy guarantees generally arise under standards of negligent misrepresentation. At the least, they focus on the expectation that the vendor exercised reasonable care in ensuring the accuracy of the information on which the buyer will rely in its business dealings.[96.5]

Both negligence standards of reasonable care and underlying doctrine in service agreements lead to the conclusion that contract breach does not occur simply as a result of minor deviations from agreed performance. A concept of material breach prevails in measuring the adequacy of service agreement performance.[96.6] As in cases involving the sale of goods, ordinary contract standards of care and liability can be altered by agreement. For example, in data processing contracts, disclaimers of liability for negligence are analogous to disclaimers of merchantability in sales of goods. An express disclaimer of liability for ordinary negligence in a data processing contract between merchants

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services, since subscribers do not bargain merely for reels of tape and data, but for supplier's skill in entering data).

[96.4] See generally NTA Nat'l, Inc. v. DNC Servs. Corp., 511 F. Supp. 210 (DDC 1981).

[96.5] See generally Restatement (Second) of Torts § 552 (1966). See also Safeco Title Ins. Co. v. Attorneys' Title Servs., 460 So. 2d 518 (Fla. Ct. App. 1984); Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM, 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282 (1982).

[96.6] See Distronics Corp. v. Roberts-Hamilton Co., 575 F. Supp. 275 (D. Minn. 1983) (chronic failure to provide timely and accurate data processing services was material breach of contract, justifying termination by customer where vendor's failure detrimentally affected customer's business); Professional Computer Management, Inc. v. Tampa Wholesale Liquor Co., 374 So. 2d 626 (Fla. Ct. App. 1979) (fact question presented as to whether service provider to liquor wholesaler had failed to perform under contract, justifying termination by wholesaler).

may become part of the basis of the bargain and is not ineffective solely because the manufacturer is not a party to the contract"); Leson Chevrolet Co., Inc. v. Oakleaf & Assoc., 796 F2d 76 (5th Cir. 1986) (although there were various general allegations of poor performance and repeated system breakdowns, there were no specifically proven cases of hardware failure chargeable to the retail seller; Even if there were defects in the hardware system, the seller's responsibility for these was effectively disclaimed by the sale contract).

Add at end of note 80.

Ellmer v. Delaware Mini-Computer Sys., Inc., 665 SW2d 158 (Tex. Ct. App. 1983) (disclaimer of warranty was conspicuous where evidence showed it was actually brought to buyer's attention).

Add at end of note 81.

See also AMF, Inc. v. Computer Automation, Inc., 573 F. Supp. 924, 930 (SD Ohio 1983) (transaction involved "commercially sophisticated businesses,").

¶ 6.09 COLLATERAL OBLIGATIONS

Page 6-31:

Add note 81.3 at end of first sentence in first paragraph.

[81.3] Collateral obligations of a different sort may arise where the transaction involves a dealership or distributorship arrangement. See generally Hawes Office Sys., Inc. v. Wang Laboratories, Inc., 580 F. Supp. 812 (EDNY 1984) (manufacturer breached distribution and dealership contract by failing to process orders or credit dealer with sales); Computec Sys. Corp. v. General Automation, Inc., 599 F. Supp. 819 (DPR 1984) (damage claims available for improper termination of distributorship contract under Puerto Rico Dealer's Act).

[2] Maintenance and Repair

Page 6-36:

Add at end of second complete paragraph.

In *Leson Chevrolet Co. v. Oakleaf & Associates,*[93.1] the purchaser of a computer system sued both the seller and the manufacturer. The manufacturer was held to have some liability for some defects in its system even though the court held that, in general, the computer hardware and software that it sold to the retailer, who then resold it to the end buyer, was not inherently defective.

[93.1] 796 F2d 76 (5th Cir. 1986).

the admitted and clearly provable reliance that the buyer had placed on the advice of the seller in selecting suitable equipment for its needs.[76.2]

In *Neilson Business Equipment Center, Inc. v. Italo Monteleone, M.D.*,[76.3] the contract apparently contained no disclaimers. As part of the agreement, the computer vendor agreed to provide hardware and customize software for use in a doctor's practice for patient billing. The software and hardware were delivered as a single system. After delivery, however, the software failed to provide adequate billing services and produced some incorrect balances due to software problems. After six months, the buyer terminated the lease-purchase agreement for cause. In enforcing an implied warranty of fitness, the court noted that the seller

> admits that it was responsible for selecting the proper equipment and also agreed to customize the software so that the computer system would be compatible with [the doctor's] manual records. There could hardly be a clearer case where a buyer relies on the professional expertise of the seller than that presented here.

[76.2] Analyses based on claims of fraudulent representation also commonly arise with respect to consulting seller cases involving contract disclaimer language. See ¶ 7.03A, this Supplement. See also Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984). One of the underlying issues involved in the fraud litigation relates to the standard of care and honesty to which a vendor must conform, notwithstanding contract disclaimer and the presumptively arm's-length bargaining that is involved in commercial contracting. Clearly, fraud doctrine imposes some obligation of accuracy and honesty. The cases split, however, on the extent to which information transmitted in the buyer-seller relationship carries legally imposed obligations of due care in ensuring the accuracy of information on which the buyer relied. Compare Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM Corp., 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282 (Ill. App. 1982) (advising seller is not in business of supplying information to guide decisions of others and thus is not liable for negligent misrepresentation); Rio Grande Jewelers Supply, Inc. v. Data General Corp., 689 P2d 1269 (NM 1984) with United States Welding, Inc. v. Burroughs Corp., 615 F. Supp. 554 (D. Colo. 1985) (action in negligent misrepresentation survives contract disclaimers).

[76.3] 524 A2d 1172; 3 UCC Rep. Serv. (Callaghan) 3d 1721 (Del. 1987).

[3] Conspicuous Disclaimers

Page 6-31:

Add at end of subsection.

Although many courts expressly enforce warranty disclaimers against business buyers in computer and other types of contracts, the between the parties. This was a question of fact, rather than one of law, but the court emphasized that the intended use and character of the transaction indicated that the statements were more than sales talk.

Similarly, especially when dealing with alleged oral warranties, proving that the statement at issue was actually made may be a major obstacle.[57.2]

[57.2] See Shapiro, Budrow & Assocs. v. Microdata Corp., No. 84 Civ. 3589 (SDNY Feb. 24, 1986) (WESTLAW DCT Database) (the court held that the parties were bound by the limited nature of their contractual warranties in the written contract; it also rejected as not factually established an allegation that Microdata Corp. had made an express warranty that the system would perform more sophisticated accounting activities than it actually was capable of performing).

¶ 6.08 IMPLIED WARRANTIES

Page 6-25:

Add note 60.1 at end of first sentence in second paragraph.

[60.1] To date, at least, the relatively limited effect of the implied warranties between the immediate commercial parties has been paralleled by general rejection of causes of action in warranty against third-party manufacturers. See Professional Lens Plan, Inc. v. Polaris Leasing Corp., 675 P2d 887 (Kan. 1984) (since computer and its component part, hard disc, were clearly not inherently dangerous and damages were for economic loss, implied warranties of fitness and merchantability did not extend to nonprivity manufacturers in favor of remote purchaser); Ridge Co. v. NCR Corp., 597 F. Supp. 1239 (ND Ind. 1984) (purchaser cannot proceed against manufacturer and manufacturer of component part for breach of implied warranty and negligence because it is barred by lack of privity). See also Affiliates for Evaluation and Therapy, Inc. v. Viasyn Corp., 500 So. 2d 688 (Fla. Dist. Ct. 1986) (no claim for breach of implied warranty existed against the manufacturer in the absence of privity of contract between end buyer and manufacturer).

Add note 60.2 at end of last sentence in second paragraph.

[60.2] But see Eaton Corp. v. Magnavox Co., 581 F. Supp. 1514 (ED Mich. 1984) (disclaimer of warranty by manufacturer of components for antilock brake system did not effectively disclaim warranties because contract disclaimers did not mention merchantability and were not conspicuous).

[1] Merchantability Standards

Page 6-27:

Add note 66.1 at end of first sentence in last paragraph.

[66.1] But see Eaton Corp. v. Magnavox Co., 581 F. Supp. 1514 (ED Mich. 1984) (disclaimer of warranty by manufacturer of components for press warranty about the ability to communicate based on the advertisements, a display "showing" the communication capability, and the representations of the DTS sales representative. "The evidence clearly showed that the capability to communicate with plaintiff's Wang computer was the prime consideration in selecting new cash registers."

There was a breach of warranty here even though the equipment could occasionally communicate. "Certainly a warranty that the Wang and DTS equipment could communicate carries with it the necessity that such communication would be reliably regular and consistent." Given proof of the breach, the buyer is not required to prove what defect in the design or construction of the system caused the breach.

[3] Warranties and Parol Evidence

Page 6-23:

Add at end of note 54.

Concerning the enforcement of contract barriers against parol evidence issues see Tandy Corp. v. Eisenberg, 488 So. 2d 927 (Fla. Dist. Ct. App. 1986). (Tandy contracted to deliver a computer to Eisenberg but did not deliver. Tandy claimed that buyer's failure to present sales slips for the trade in machines exonerated its performance. This was rejected because the written contract, which provided that it contained the entire agreement of the parties, did note require such action by the buyer.)

Page 6-24:

Add after first full paragraph.

In a case characterized by a general willingness of the court to protect the buyer of a computer system, the court in *Sierra Diesel Injection Service v. Burroughs Corp.*[55.1] held that an integration clause in a computer sale agreement did not bar admission of evidence regarding contemporaneous representations about the performance of the system.

The buyer was an experienced businessman, but had no expertise with computers or computer terminology. The purchased bookkeeping system was developed by the seller, for its computers, who represented it would meet the buyer's needs. The court, in essence, disbelieved that a person entering into such a transaction would knowingly agree that all representations about performance were eliminated from the contract by the fact that they were not in writing. It held that the evidence established a lack of mutual intent that the writing contain all relevant terms.

[55.1] 656 F. Supp. 426 (D. Nev. 1987).

facts, it was held that both suppliers had contracted to provide a complete system and both were responsible for the breach.

¶ 6.07 EXPRESS WARRANTIES

[1] Contract Specifications

Page 6-21:

Add at end of note 49.

See also Computerized Radiological Serv. v. Syntex Corp., 595 F. Supp. 1495 (EDNY 1984) (express warranties were breached concerning assurance that product would be modular, expandable, and upgradable; these warranties are not barred by contract limitation of warranties to warrant against defective workmanship because of Uniform Commercial Code premise that inconsistent disclaimer gives way to express warranty).

Page 6-22:

Add note 51.1 at end of first sentence in last paragraph.

[51.1] See also Management Sys. Assocs. v. McDonnell Douglas Corp., 762 F2d 1161 (4th Cir. 1985) (purchaser acquired minicomputer software for use in selling systems of hospital accounting, creating an issue of fact concerning whether or not breach of "full disclosure" warranty had occurred because defendant failed to notify purchaser that system delivered was not fully integrated or capable of interchanging programs as a single system).

[2] Suitability and Performance

Page 6-23:

Add at end of subsection.

Even where express warranties are in the written contract or are otherwise accepted as being enforceable, interpretation issues may arise regarding the character of the undertaking between the parties. In *Solitron Devices, Inc. v. Veeco Instruments, Inc.*,[53.1] for example, the purchaser of an ion implanter to be used to imbed minerals into silicon chips sued for breach of warranty when the machines produced a 5 percent wafer breakage rate. The contract specified that the delivered product would "if selected or specified for Buyer's purposes . . . be fit for such purposes." Although no express representations were made about breakage and there was no specific industry standard, a breach of war-

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[53.1] 492 So. 2d 1357 (Fla. Dist. Ct. App. 1986).

most cases where a single vendor is involved and the transaction designs a customized system during a single, continuous time frame, the parties should be presumed to anticipate an integrated, rather than separable transaction. For example, in *Winterbotham v. Computer Corp., Inc.,*[40.3] in purchasing a system consisting of software and hardware for use in automating records on a horse farm, a failure of the software to perform justified a recission of the entire contract even though the hardware element was not defective. "The [buyer] did not buy a computer and software as separate entities. Rather, they essentially bought a solution to a business problem which consisted of various components. . . . Without the software to run the computer, the value of the package was substantially impaired. . . . "

A similar result occurred in *Atkinson v. Total Computer Systems, Inc.,*[40.4] in an action resulting from a contract to purchase a system to automate records at a hardware store and wholesale operation. Atkinson purchased an Eagle computer, an Okidata printer, and various items of software. The software and printer malfunctioned and the court permitted the buyer to rescind the entire contract, although aspects of the system were not defective.

> Plaintiff did not simply purchase a computer and then various software packages. Rather, each component was carefully chosen . . . to complement the other's particular attributes to form a system that would be tailored to best suit plaintiff's needs. It was the system that did not perform. . . . While the software problems alone may not have warranted rescission, when viewed in light of the defective printer, this determination is mandated.

[40.3] 490 So. 2d 1283 (Fla. Dist. Ct. App. 1986).

[40.4] 492 So. 2d 121 (La. App. 1986).

Page 6-19:

Add at end of subsection.

Where two or more separate vendors are involved in the transaction, a more complex analysis occurs and it may be more often the case that separate liability or flawed performance by one does not affect the contract of the other. In *Austin's of Monroe, Inc. v. Brown,*[41.1] for example, the court held the hardware supplier free of any defects in the software system regarding an inventory and accounting system. In

[41.1] 474 So. 2d 1383 (La. Ct. App. 1985).

ter 7, negligent misrepresentation may also have a role in defining the obligations of consulting sellers.[18.4]

Theories of negligent representation of false information reflect the importance placed on developing enforceable reliance on the information transmitted by third-party professionals. Of course, an action on this basis in an RFP procedure may leave the buyer with inadequate equipment or software and may establish a right of action against an individual against whom recovery cannot be obtained. In this latter regard, bonding or similar requirements are appropriate when consultants are used in major acquisitions.

18.2 Restatement (Second) of Torts § 552(1) (1966).

18.3 See generally Safeco Title Ins. Co. v. Attorneys' Title Servs., 460 So. 2d 518 (Fla. Ct. App. 1984) (title insurer may obtain indemnification for damages against abstractor of title for awards imposed against insurer in action by insured; action was based on undisclosed prior tax lien when insurer relied on the computer-furnished abstract information).

18.4 See ¶ 7.03A, this Supplement. See also United States Welding, Inc. v. Burroughs Corp., 615 F. Supp. 554 (D. Colo. 1985) (negligent misrepresentation theory applied to seller of computer system); Black, Jackson & Simmons Ins. Brokerage, Inc. v. IBM Corp., 109 Ill. App. 3d 132, 64 Ill. Dec. 730, 440 NE2d 282 (Ill. App. 1982) (advising seller (IBM) is not in business of supplying information to guide decisions of another and thus is not liable for negligent misrepresentation); Invacare Corp. v. Sperry Corp., 612 F. Supp. 448 (ND Ohio 1984) (allegations of negligent advice from seller as stating a claim in negligence are acceptable, but this is not a question of malpractice).

¶ 6.06 SOFTWARE AND HARDWARE INTERDEPENDENCE

Page 6-17:

Add note 33.1 at end of first sentence in first paragraph.

33.1 See Bancorp Leasing & Fin. Corp. v. Brunner, 672 P2d 357 (Or. Ct. App. 1983) (lease contract involving third-party financing could not be rescinded where independent software suppliers failed to deliver programs of promised kind and quality; lessor did not breach lease, even though it paid suppliers subject to reimbursement from "lessee," since arrangement implicitly allocated risk of supplier failure on lessee).

Add at end of note 35.

See also State Office Sys., Inc. v. Olivetti Corp., 762 F2d 843 (10th Cir. 1985). An issue of fact arose for the jury in *State Office Systems* in an action against a computer manufacturer by a dealer involved in marketing hardware and software packages used in grain elevator operations. Evidence cannot operate, have value that is to be considered an essential portion of computer hardware and are therefore taxable as tangible personal property in conjunction with hardware).

Add at end of note 10.

See also Detroit Auto. Interinsurance Exch. v. Department of Treasury, 361 NW2d 373 (Mich. Ct. App. 1984) (custom software designed specially to fit buyer's particular computer needs was not tangible personal property and was not subject to sales tax); Measurex Sys., Inc. v. State Tax Assessor, 490 A2d 1192 (Me. 1985) (canned software in computer systems leased from foreign corporation was tangible property subject to use tax, but custom software was exempt as a service). See In re Strayer, 239 Kan. 136, 716 P2d 588 (Kan. 1986). (Computer application programs, which are particularized instructions adopted for special programs, are intangible property not subject to personal property tax for tangible property. Computer tax program obtained under licensing agreement was an application program and thus was intangible property not subject to taxation.)

Add at end of note 11.

See Union Cent. Life Ins. Co. v. Lindley, 12 Ohio St. 3d 80, 465 NE2d 440 (1984) (basic charges for development of program and use of computer therefor are subject to use tax, but design modification and taps used for this were services; therefore, they were not subject to use tax); University Computing v. Olsen, 677 SW2d 445 (Tenn. 1984) (amendment redefining tangible personal property rendered computer software made by user exempt but continued taxation of its sale or use otherwise). See Creasy Sys. Consultants, Inc. v. Olsen, 716 SW2d 35 (Tenn. 1986) (company providing programming consultant services to clients was properly subject to sales tax since the fabrication or modification of clients' computer software by company was a "sale" within the statute defining activities subject to sales tax).

Add note 11.1 at end of first sentence in last paragraph.

11.1 See WN Dambach, Inc. v. Commonwealth, 488 A2d 96 (Pa. Commw. Ct. 1985) (computer used to set manufacturing production schedules was not part of production process and therefore was not exempt from use tax). See Creasy Sys. Consultants, Inc. v. Olsen, 716 SW2d 35 (Tenn. 1986) (company providing programming consultant services to clients was properly subject to sales tax since the fabrication or modification of clients' computer software by company was a "sale" within the statute defining activities subject to sales tax); Comptroller of Treasury v. Washington Nat'l Arena Ltd. Partnership, 66 Md. App. 416, 504 A2d 666 (1986) (the state properly imposed sales and use tax on transaction in which taxpayer leased a computer and ticket printing equipment, paying rent thereon); J.C. Penney Co. v. Limbach, 25 Ohio St. 3d 46, 495 NE2d 1 (1986) (teletype terminals used to transmit orders from retail store to catalog warehouse were used in retail sales and were exempt from sales tax).

bined into a single unit — the computer system — prior to sale. The . . . factual conclusion that the computer system is predominantly 'goods' is supported by substantial evidence."

Page 6-6:

Add at end of subsection.

The more difficult question remains in cases where the transaction involves no hardware delivery, but only a contract to deliver software. Here, courts should still employ a focus that questions whether the contract will be satisfied by mere provision of service activities, or whether, as is more often the case, the parties contracted for delivery of a product (e.g., completed software). Although this question must be debated on a case by case basis, an increasing number of courts have held software contracts to be transactions in goods.

For example, in *Photo Copy, Inc. v. Software, Inc.*,[5.1] the court held that a contract to provide a custom software package would be governed by the Louisiana law of sales. Similarly, in *Schroders, Inc. v. Hogan Systems, Inc.*,[5.2] the court held that a license of computer software system without any contract for hardware nevertheless came within UCC Article 2 warranty rules.

The issue of whether a custom software contract involved services or goods was addressed in *Data Processing Services, Inc. v. LH Smith Oil Corp.*[5.3] The appellate court held that the Uniform Commercial Code did not apply to a software development contract involving the creation of custom software for the defendant's computer. According to the court, in this case the transaction did not involve a contract for delivery of goods in the form of the custom software. Data Processing was retained to "design, develop and implement an electronic data processing system. . . ." The key element of the contract was Data Processing's skill and effort. "Although the end result was to be preserved by means of some physical manifestation such as magnetic tape [or] disks . . . it was [Data Processing's] knowledge, skill and ability for which Smith bargained."

5.1 510 So. 2d 1337 (La. Ct. App. 1987). Compare Hartford Mut. Ins. Co. v. Seibels, Bruce & Co., 579 F. Supp. 135 (D. Md. 1984) (factual issue existed about whether license agreement involved a sale and whether software would be treated as goods or services in this particular case for purposes of applying UCC limitations rules).

5.2 137 Misc. 2d 738, 522 NYS2d 404 (NY Sup. Ct. 1987).

5.3 492 NE2d 1329, 1 UCC Rep. 2d 29 (Ind. Ct. App. 1986).

PART B. DISPUTES AND REMEDIES

PART C. COMPUTER LEASING

PART D. MASS-MARKET CONTRACTS

PART E. DEVELOPMENT CONTRACTS

In *Vault Corp. v. Quaid Software Ltd.*,[193] the district court held that decompilation of a copyrighted software product is not an infringement and that the Louisiana shrink-wrap license law is preempted by the Copyrighht Act to the extent that it permits the creation of a perpetual bar against copying of the software for any purpose. The case involved Prolock software that is sold on blank disks to software producers. The intent of Prolock is to prevent copying of the disk. The alleged infringer was the developer of CopyWrite, a program designed to permit users to break the software barrier and reproduce programs that are otherwise copy protected. As regards Prolock, the defendant obtained the ability to program a method of breaking the copy barrier by reverse compiling the Prolock program from disks that were properly purchased.

The court rejected the claim that there was an infringement when the Prolock program was loaded into a computer by the employees of the defendant. Loading into memory is an essential step in the utilization of the Prolock program and is protected under Section 117. This same section permitted the court to find that the CopyWrite program is not a contributory infringement since it has a noninfringing use in permitting others to make archival copies as allowed under Section 117. Furthermore, the CopyWrite program was not an infringing derivative work since there was no substantial similarity between it and Prolock.

These holdings left the plaintiff with claims under both the license contract and trade secrecy laws. Here, in compliance with Louisiana law, the shrink-wrap format had been used and purported to prevent the licensee from transferring, decompiling, disassembling, or translating the Prolock program without consent.

The court first concluded that, absent the Software License Act, this "contract" would not be enforceable because it is a contract of adhesion. The Software License Enforcement Act, however, was preempted by copyright law. The Act inappropriately gives a perpetual right to prevent copying for any purpose. This exceeds the protection under the Copyright Act, which has an exemption in Section 117 for some copying and permits control of the right to make copies for a statutorily limited period of time. Similarly, according to the court, the Act "prohibits" decompiling and preparation of derivative works. This latter right is regulated by the Copyright Act and state law cannot create "equivalent rights." The Act "has invaded the exclusive province of the federal Copyright Act, and has gone beyond trade secrets law by outlawing reverse engineering."

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[193] 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

As a consequence, the Illinois listing of potential license terms represents the maximum scope of the agreement from the perspective of the licensor. The listed terms in Illinois include:

1. Retention of title by the licensor;
2. If title is retained:
   a. Prohibition of copying or restrictions of the purpose or number of copies that can be made by the licensee;
   b. Limitations on the right to modify or adapt the copy, including prohibitions of reverse engineering, decompiling, disassembling, or any manner of converting the software to a form that is more readily understandable by human beings;
   c. Restrictions on rental, assignment, sale, or any transfer of the copy or copies made from it;
   d. Networking restrictions prohibiting use on more than one computer at a time or by more than one user at a time;
3. Automatic termination without notice if the license is breached; and
4. Provisions for award of attorney fees in actions enforcing the license terms in connection with any alleged breach.[188]

If they are enforceable, the enforcement statutes bend contract theory to grant the software publisher the full spectrum of rights desired in a mass-market transaction. The agreements purport to close off any secondary lending or "used" software market if the licensor desires to make that exclusion in its agreement. Furthermore, they preclude actions ordinarily associated with the "proper" means of discovering the content of a trade secret, organization, or technology contained in the delivered product through reverse engineering.[189]

There are many problematic features of the new statutes. They offend traditional contract theory and the new statutes are not invalid, although they may conflict with federal copyright law. Federal law creates a right on the part of any owner of a copy to make an archival copy, to convey its copies to another, and to make personal use adaptations.[190] There may also be an implicit right to decompile (reverse engineer) the owned copy. The enforcement statutes create what may be a fictional contract in order to circumvent these rights; the content of the fictional contract purports to preclude ownership in the buyer and to permit an agreement that effectively waives the statutory rights.

[188] Illinois LEA § 4.

[189] Uniform Trade Secrets Act § 1, Commissioners' Commentary.

[190] 17 USC § 117.

Page 5-68:

Add the following new subsection after last paragraph.

[4] Special Legislation on Licenses [New]

The ongoing controversy about the enforceability of mass-market "license" agreements has shifted to legislative contexts. Special legislation was recently adopted in Illinois and Louisiana that enacts the proposition that, as a matter of state contract law, the typical included software license is enforceable, at least with reference to specific aspects of the contract.[185]

The two statutes are analogous, but not identical in content. The License Enforcement Act (LEA) in both states consists of two distinct features. First, LEA establishes procedural or presentational features that must be followed by an included license contract in order to qualify for a statutory, conclusive presumption that a license contract was accepted by the purchaser. Second, LEA specifies a list of "contractual" terms. The statutes differ in the list provided and, apparently, the effect of the listing itself. In Illinois, the listed terms define the extent to which the conclusive presumption of enforceability covers terms of the contract.

In both states, LEA carves out an exception from traditional contract law of offer and acceptance. The exception establishes a conclusive presumption of the creation of a contract based on the act of opening a package. Both versions of LEA specify that a person acquiring software "shall be conclusively deemed to have accepted" the license agreement if:

1. A written legend is affixed to the software package in a conspicuous manner, visible on cursory inspection;
2. The legend is prominent, in all capital letters and in language "readily understandable" to a person of average literacy;
3. The legend clearly states that either use of the software, or opening a sealed container in which the software is contained constitutes acceptance of the accompanying license agreement;
4. The legend or notice states that the person who does not agree to the terms can return the unopened and unused software within a reasonable time for a full refund; and

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[185] La. Rev. Stat. Ann. § 51.1961–51.1966 (West 1986); Illinois Software License Enforcement Act of 1985 (hereinafter cited as Illinois LEA), Ill. Ann. Stat. ch. 29, paras. 801–808 (Smith-Hurd 1986).

on Copyright §§ 16.01–16.08. Commonly, publishers require execution of agreements disclaiming obligation on the part of the recipient publisher until a specific contract is executed. This, of course, places the submittor at risk of appropriation of the idea by the publisher if the contract is enforced. Compare Shanco Int'l, Ltd. v. Digital Controls, Inc., 169 Ga. App. 184, 312 SE2d 150 (1983) (restrictions placed under agreement on video game manufacturer were unreasonable restraints on trade where covenants not to sell to other purchasers were not limited in time; idea of translating well-known card games into video game media was not sufficiently novel or valuable to provide basis for restraints imposed on manufacturer); Burten v. Milton Bradley Co., 763 F2d 461 (1st Cir. 1985) (inventors of game revealed their secret innovation to defendant game manufacturer after signing agreement that disclaimed "any relationship" between parties and restricted defendant's obligations to written contract executed by parties; held, contract does not fully resolve whether there were confidentiality or contractual restrictions on game manufacturer's subsequent actions, allowing question of misappropriation to go to jury because contract did not expressly refer to disclaimers of confidential handling).

Add at end of subsection.

In dealing with third party submissions, important issues arise regarding the terms under which the third party is treated as having submitted an idea or copyrighted work for consideration by the potential publisher.[130.7]

The terms of the submission may result in liability even if the third party's copyright interests are not infringed by the publisher's use of the idea or the work. In *Landsberg v. Scrabble Crossword Game Players, Inc.,*[130.8] the court had previously held that a use of game instructions was not substantially similar to ideas and text submitted by Landsberg under copyright standards. The publisher, however, was bound by a contract implied in fact that it violated when it used material submitted by the author in a way that went beyond the limited purpose of the author's submission to it.

130.7 See supra note 130.6, this Supplement.

130.8 802 F2d 1193 (9th Cir. 1986).

[4] Publisher Obligations

Page 5-53:

Add at end of first complete paragraph.

The best efforts obligation may not be implied, even in an exclusive software license. This is especially true in cases where the issue was broached during negotiations, but not expressly carried forward into the

[2] Mail Order and Terminations

Page 5-46:

Insert after last paragraph.

Several factors are recurrently considered in distinguishing unilateral termination decisions from actions reflecting illegal joint action with the manufacturer and other dealers. These are (1) the volume and intensity of the complaints received; (2) the amount of time between the complaints and the action by the manufacturer; and (3) whether a valid business reason existed for the termination.[130.1]

Following the Supreme Court decision in *Monsanto* (see ¶ 5.12[2], main volume), a series of appellate decisions have confirmed the difficulty of establishing a price-fixing conspiracy based primarily on the fact that a mail-order discount dealer was terminated by the manufacturer based in part on complaints by other dealers.

The major case in this respect arose out of the Apple Computer litigation. In *OSC Corp. v. Apple Computer Co.*,[130.2] the circuit court affirmed a ruling below that rejected antitrust price-fixing allegations based on Apple's termination of various mail-order distributors. The court applied the Supreme Court decision in *Monsanto* to the effect that the mere existence of competitor's complaints before termination of a distributor does not create an inference of an unlawful conspiracy to set prices. Instead, there must be shown by direct or circumstantial evidence that the primary manufacturer and the other distributors had a conscious "commitment to a common scheme designed to achieve an unlawful objective."

Such evidence was lacking in this case. The only facts included

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[130.1] See generally Computer Place, Inc. v. Hewlett-Packard Co., 607 F. Supp. 822 (ND Cal. 1984) (mail-order seller did not establish that manufacturer's actions were not independent and thus did not establish concerted element of action for conspiracy to fix prices); OSC Corp. v. Apple Computer, Inc., 601 F. Supp. 1274 (CD Cal. 1985) (computer manufacturer's proposed policy against authorizing mail-order sales of its computer products by dealers did not constitute concerted action in violation of Sherman Act); Computer Connection, Inc. v. Apple Computer Corp., 621 F. Supp. 569 (ED La. 1985) (termination of computer dealership by manufacturer did not constitute conspiracy to fix prices or enforce standard terms in violation of antitrust laws even if facts established that complaints by competing dealers preceded action to terminate, since there were provable, independent business reasons to terminate dealer); Advisory Information & Management Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984).

[130.2] 792 F2d 1464 (9th Cir. 1986).

607 F. Supp. 822 (ND Cal. 1984) (under dealer agreement, manufacturer had right not to provide dealer with new models of personal computers, and refusal to do so did not constitute tortious interference with contract); Advisory Information & Management Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984) (manufacturer did not breach dealership contract by refusing to supply line of compatible equipment or particular line of computers, since computers to which dealer had access were not obsolete and dealer was not treated differently than other dealers; however, material issue of fact remained concerning breach of contract in denying dealer access to application software to be sold in connection with computer systems); Hawes Office Sys., Inc. v. Wang Laboratories, Inc., 580 F. Supp. 812 (EDNY 1984) (computer manufacturer violated distributorship agreement with vendor by failing to timely process its orders and by not properly crediting dealer with sales actually made; letter sent by manufacturer also represented an anticipatory repudiation of agreement not justified by dealer's actions); Computec Sys. Corp. v. General Automation, Inc., 599 F. Supp. 819 (DPR 1984) (action assessing damages under Puerto Rico Dealers' Act for termination of computer dealership agreement).

Page 5-45:

Add at end of subsection.

Properly understood, the existence of intellectual property rights should not, in itself, invalidate an otherwise acceptable exclusive license or distributorship agreement. This result was suggested in *Instructional Systems Development Corp. v. Aetna Casualty & Surety Co.*[126.1] In this case, the circuit court reversed a summary judgment granted to the defendant on issues including an agreement to divide the market for driving simulator software. Aetna and Doron entered into a joint venture in which Doron had exclusive rights to build, service, and market the systems under the Aetna tradename and in return would acquire training films from Aetna for the system. The court noted that the exclusive licensing of tradenames or other intellectual property does not violate antitrust law and that a joint venture involving such licensing is not a per se violation. The key factor is whether the agreement extends beyond what is reasonably necessary to effectuate the intellectual property license. Here, however, the agreement between Doron and Aetna "appears to contain an agreement to divide the market for simulator software by providing that Aetna would be the sole producer of simulator films. . . ." In this case, there was reason to suspect that Aetna was "economically motivated to help Doron achieve a hardware monopoly

[126.1] 817 F2d 664 (10th Cir. 1986).

sive patent license cannot be assigned without the consent of the licensor. This result, the court held, brings the patent license under language in the Bankruptcy Code precluding assumption or assignment of contracts where nonbankruptcy law excuses that other party from accepting or rendering performance to someone other than the debtor.

The court in *Alltech* held that this language controlled, rather than other language in Section 365(f) indicating that a contract can be assumed and assigned notwithstanding state law that prohibits assignment.

Depending on the character of the technology involved, several devices exist that may provide the licensee a right to retain the technology despite rejection of the agreement. One approach that has been extensively discussed in the literature as to software licensing entails use of software escrows.[107.15] If the escrow agreement totally removes the licensor's rights in the escrowed code, that code may not become property of the estate and thus would be immediately available for the licensee. A second approach entails the use of security interests in the technology to secure performance of the license.[107.16] If enforceable under state law, a security interest is ordinarily enforceable in bankruptcy. Importantly, however, the secured creditor cannot proceed immediately to "take" the collateral, but must obtain relief from the automatic stay to do so. There is no reported litigation concerning this process as applied to technology securing performance of a license.

107.16 See generally Choney, "A Practical Guide for Implementing the Software Escrow Concept," 3 CLR 341 (1984).

107.17 See, e.g., In re Talmage, 758 F2d 162 (6th Cir. 1985).

PART D. VERTICAL RESTRICTIONS AND DISTRIBUTORS

¶ 5.10 RESALE PRICE

Page 5-41:

Add at end of note 108.

See Business Electronics Corp. v. Sharp Electronics Corp., 780 F2d 1212 (5th Cir. 1986). (Although the manufacturer terminated the distributor on request of a competing distributor because of pricing policy complaints, there was inadequate proof to establish a per se price fixing violation. Proof that there was a price maintenance agreement between Sharp and the other distributor was lacking. The agreement, however, may be proven inferentially and, as a result, this case was remanded for further trial.)

tinue performance. Alternatively, the debtor can assign the contract to a third party.[107.6] The right to assign the executory license cannot be restricted or excluded by the contract.[107.7] The assignment must convey adequate assurance that the contract will be performed, but the non-bankrupt party does not have the right to refuse an assignee.

These rights apply if the license is executory at the time of bankruptcy. If the license was terminated prior to filing, no right to cure or assign arises.[107.8] However, termination cannot be based on formerly standard clauses that purport to terminate a license based on the debtor's insolvency or a bankruptcy filing itself. These provisions are expressly invalidated by Section 365 of the Bankruptcy Code.[107.9]

Case law supports that the decision to assume an executory contract, other than a labor agreement, is delegated principally to the debtor (or trustee) based on the exercise of business judgment.[107.10] Only a very limited judicial review applies to prevent abuse of this discretion.

A similar standard applies to the decision to reject an executory license. Rejection represents a breach of contract by the debtor. The other party obtains a right of action against the debtor, but in a bankruptcy environment this converts to a claim against the estate. No right to specific performance of the contract is recognized, since the Bankruptcy Code expressly permits a decision to refuse to perform in the decision to reject.[107.11]

This situation creates severe risks that a bankruptcy of one party will deny the other continued access to important technology. The risk is avoided if an intellectual property or other technology license is not considered an executory contract. The argument for this result, in essence, is that the license is a completed conveyance of rights rather than an ongoing contract with incomplete performance on both sides.

[107.6] 11 USC § 365(f).

[107.7] 11 USC § 365(c)(f).

[107.8] See Nimmer, "Executory Contracts in Bankruptcy: Protecting the Fundamental Terms of the Bargain," 54 Colo. L. Rev. 507, 541 (1983); In re Mimi's of Atlanta, Inc., 5 Bankr. 623 (Bankr. ND Ga. 1980).

[107.9] See Nimmer, "Executory Contracts in Bankruptcy: Protecting the Fundamental Terms of the Bargain," 54 Colo. L. Rev. 507, 541 (1983).

[107.10] See generally 2 L. King, *Collier on Bankruptcy* ¶¶ 365.01–365.2. (15th ed. 1979).

[107.11] See Nimmer, "Executory Contracts in Bankruptcy: Protecting the Fundamental Terms of the Bargain," 54 Colo. L. Rev. 507 (1983). See also Lubrizol Enters., Inc. v. Richmond Metal Finishers, Inc., 756 F2d 1043 (4th Cir. 1985); Fenix Cattle Co. v. Silver, 625 F2d 290 (9th Cir. 1980).

contract law. For example, in the case of the "'993 patent [which is] a means-plus function patent under Section 112 [of the Patent Act], the license conveyed . . . the right to practice the claims of the '993 patent *by using the structure shown or the equivalent of that structure . . .*" Alternatively,

> the second theory of implied license is based on patent law. Under patent law, if one has an express license to practice one patent, he gets an implied license to practice any other patent owned by the licensor that is necessary to enable the licensee to practice the patent that is expressly licensed to him.

PART C. LICENSE DURATION AND ROYALTIES

¶ 5.08 ROYALTY DURATION

[1] Post-Expiration Royalties

Page 5-36:

Add note 90.1 at end of first sentence in first paragraph.

[90.1] See Management Sys. Assocs. v. McDonnell Douglas Corp., 762 F2d 1161 (4th Cir. 1985) (appropriate interpretation of agreement with reference to computation of royalties in software and lease agreement was that royalty obligation did not continue beyond period of lease).

Add at end of note 91.

See also Boggild v. Kenner Prods., Inc., 776 F2d 1315 (6th Cir. 1985) (license providing for royalty payments beyond the life of the underlying patent is unenforceable even though the license agreement was entered into before the patent was issued); Meehan v. PPG Indus., 802 F2d 881, Trade Reg. Rep. (CCH) ¶ 67,301 (7th Cir. 1986) (in a case not involving the computer industry, court refuses to enforce royalty agreement providing for royalties that continue beyond the expiration of the U.S. patent for the technology: "Because the terms of the agreement demonstrate that [Meehan] used his right to obtain a patent to project his monopoly power beyond the patent period, the agreement is per se unlawful").

Page 5-41:

Add the following new section.

¶ 5.09A BANKRUPTCY AND TECHNOLOGY LICENSES [NEW]

Technology licenses and their performance can be affected by the bankruptcy of either the licensor or licensee in the transaction. While

Add note 64.1 at end of second paragraph.

[64.1] Given a definition of a market, issues remain about the degree of dominance necessary to support a tying arrangement in that market and the characteristics of the market itself that are adequate to suggest barriers sufficient for the forcing prohibited by tying law. See generally U.S. Department of Justice, Vertical Restraint Guidelines ¶ 5.3 (1985) (based in part on facts of Supreme Court ruling in *Jefferson Parish,* less than 30 percent market share not adequate). See also Will v. Comprehensive Accounting Corp., 776 F2d 665 (7th Cir. 1985) (inadequate proof of market power over franchise accounting services to support alleged tying of data processing).

Add at end of subsection.

If a court rejects an analysis of market position focused exclusively on intellectual property rights, consideration of available replacement and general market share often leads to a conclusion in the computer industry that, especially among smaller systems, no tying arrangement exists. For example, in *AI Root Co. v. Computer/Dynamics,*[64.2] the court rejected an alleged tying of computer equipment and operating system software. In holding that there was no antitrust violation, the court upheld a lower court decision that the manufacturer lacked sufficient economic power. Their market share was only 2 to 4 percent of the small computer market and this was, as a matter of law, inadequate to infer such power for purposes of tying allegations. The court rejected the argument that the relevant market should be restricted to computers using the MAI operating system itself. Although the software was copyrighted, various competitors could produce equivalent software products.

The finding of economic power, however, can be connected to matters other than simple market share. This was emphasized in *Microbyte Corp. v. New Jersey State Golf Association.*[64.3] In this case, the alleged tying involved a linkage by the NJSGA conditioning full access by country clubs and members in the state golf tournaments to use by the club of a USGA computerized handicapping system (GHIN). This allegedly forced Microbyte out of business since it had previously marketed a computerized system of golf handicapping. The court held that market or economic power for purposes of antitrust violation is a question of fact. While the NJSGA had only an 11 percent share of amateur tournaments in the area, market or economic power can be shown by facts related to the uniqueness of the product, perhaps because of the tradition and prestige of the sponsor.

In *TIX-X-Press, Inc. v. Omni Promotions Co.,*[64.4] the circuit court

[64.2] 806 F2d 673 (6th Cir. 1987).

[64.3] 1986-2 Trade Cas. ¶ 67,228 (DNJ 1986).

[64.4] 815 F2d 1407 (11th Cir. 1987).

view was explicitly adopted by district courts in two cases dealing expressly with exploitation of copyrighted software.[60.3]

Under this approach to antitrust restraints on licensing, there is an express, symbiotic relationship between copyright law decisions regarding the scope of protection given to the original software proprietor, and the degree of risk involved in linked or "tied" transactions. As discussed previously, copyright case law has begun to build the premise that copyright protects against reproduction of the organization and functions of complex software.[60.4] This broadens protection under copyright, but enhances the argument that the rival firms in a market cannot replicate even similar or equivalent software for purposes of examining tying claims.

The conclusion of the Seventh Circuit in the *Digidyne* case that intellectual property rights are sufficient, in themselves, to establish economic power sufficient for antitrust tying violations was also expressly rejected by the Sixth Circuit Court of Appeals in *AI Root Co. v. Computer/Dynamics*.[60.5] This case rejected a tying allegation. Management Assistance, Inc. (MAI), codefendant with Computer/Dynamics, manufactured computer equipment and operating system software. MAI and one of its dealers were sued by Root. Root had purchased a used MAI computer, but was dissatisfied with the software performance. It asked the dealer to restructure the software. The dealer refused unless Root agreed to pay a transfer fee and sign a license for the older software.

In holding that there was no antitrust violation, the court upheld a lower court finding that MAI lacked sufficient economic power. Their market share was 2 to 4 percent of the small computer market and this was, as a matter of law, inadequate to infer such power for purposes of tying allegations. The court rejected the argument that the relevant market should be restricted to computers using the MAI operating system itself. Although the software was copyrighted, various competitors could produce equivalent software products.

[60.3] See generally AI Root Co. v. Computer Dynamics, 615 F. Supp. 727 (ND Ohio 1985) (tying arrangement not present based on uniqueness of BOSS software where it is not shown that equivalent software could not be produced); 3 PM, Inc. v. Basic Four Corp., 591 F. Supp. 1350 (ED Mich. 1984) In *3 P.M., Inc.*, a manufacturer of interactive minicomputer computer systems was shown to have insufficient market power for a per se tying arrangement and the fact that the software was unique and copyrighted did not create tying arrangement. The court held that it was not sufficient to show that competitors did not produce a similar product; it must be shown that the competitors could not do so because the primary entity has some particular advantage.

[60.4] See ¶ 1.09A, this Supplement.

[60.5] 806 F2d 673 (6th Cir. 1987).

Co.,[32.1] to conclude that even though Western Union might be found to be a monopolist, its actions in implementing an ordered unbundling of telex terminals leasing from telex services could not constitute an antitrust violation. When unbundling occurred pursuant to a 1971 order, Olympia entered the terminal market, purchasing its equipment from the same entity that manufactured Western Union terminals. Olympia relied on referrals of customers from Western Union, which supplied its customers with lists of independent terminal suppliers. When Western Union discontinued this practice, Olympia sued. The court acknowledged that a jury could find that Western Union had a monopoly, but held that the actions involved here did not violate antitrust law. The court noted: "since Western Union had no duty to encourage entry of new firms into the equipment market, the law would be perverse if it made Western Union's encouraging gestures the fulcrum of an antitrust violation. Then no firm would dare to attempt a graceful exit from a market in which it was a major seller."

32.1 797 F2d 370 (7th Cir. 1986), reh'g denied 802 F2d 217 (1986).

[1] Product Differentiation

Add note 32.2 at end of first sentence in second paragraph.

32.2 The issue of market separation arises for other forms of antitrust violation. See generally CE Servs. v. Control Data Corp., 759 F2d 1241 (5th Cir. 1985) (in an action alleging attempted monopolization, court accepted existence of maintenance service market and found that allegation of submarket of third-party service providers is plausible).

Add note 32.3 at end of second sentence in second paragraph.

32.3 The existence of a separable market for particular items does not prohibit technology changes that integrate two previous products into a single, technologically related product. See Innovation Data Processing, Inc. v. IBM Corp., 603 F. Supp. 646 (DNJ 1984) (product integrating numerous software subroutines constituted a permitted inclusion of technologically interrelated elements).

Page 5-19:

Replace dissenting *in second line of note 39 with* concurring.

Add 466 US 2 *to citation to Jefferson Parish in notes 39 and 40.*

[2] Economic Power and Bundling

Page 5-20:

Change typing *to* tying *in second sentence of first paragraph.*

PART A. GENERAL ISSUES

¶ 5.02 NATURE OF THE TRANSACTION

[1] Assignment, License, and Lease

Page 5-4:

Add note 2.1 after common *in fourth sentence in second paragraph.*

[2.1] See generally SKK, Inc. v. Cambridge Sys. Group, Inc., 723 F2d 553 (7th Cir. 1983) (licensing agreement conveyed exclusive marketing rights for software product to licensee, and licensee was properly granted an injunction against owner of software prohibiting any action that might be construed as marketing activity in United States or in Canada).

¶ 5.03 ANTITRUST AND RELATED RESTRICTIONS

[1] Antitrust Policy

Page 5-7:

Add note 6.1 at end of first sentence in first paragraph.

[6.1] Acts of monopolization or attempts to monopolize are prohibited by Section 2 of the Sherman Act. 15 USC § 2. Allegations of such conduct are common in the computer industry. See Advisory *Information & Management*

US 370 (1983). *Hillsboro National Bank* clarified that the recapture rule is not intended merely to tax cost recoveries, but applies only when the later event about which a tax is claimed is fundamentally inconsistent with the premise on which the original deduction was based.

Page 4-63:

Add at end of note 210.

In a private ruling, the IRS ruled that payments made under a contract to develop a computer software system constituted costs of purchasing the software for the taxpayer to the extent that the risks of developing the new software were borne by the developer, rather than by the purchaser. In contrast, costs associated with converting existing software, at the risk of the payor, for use with newly purchased hardware were deductible business expenses. CCH Tax Reporter Service, Rewrite Bulletin ¶ 8595 (1986).

¶ 4.12 RESEARCH AND DEVELOPMENT PARTNERSHIPS

Page 4-66:

Add at end of note 219.

Compare Levin v. Commissioner, 87 TC No. 43 (Sept. 29, 1986) (in a noncomputer case, expenditures by limited partnerships formed to develop and manufacture food packing machinery were not paid in connection with a trade or business for purposes of deductibility under research and development (R&D) rules).

Add at end of subsection.

Structuring of the research partnership requires attention to potential bankruptcy risks and disputes regarding ownership rights. In *In re Bedford Computer Corp.*,[225] a limited partnership formed to fund software research and development at Bedford sought to recover the technology developed with its funds when Bedford filed for bankruptcy. The court denied the partnership's claims because it could not identify the property that it owned separately from other property of the debtor. The agreements provided that the partnership owned the new software, but the ownership claim was invalid in bankruptcy. The "key problem is that neither party attempted to establish any 'baseline' to define the existing technology as of the closing date on the research and development contracts. . . ." Without this, the contract language giving owner-

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[225] 62 BR 555 (Bankr. DNH 1986).

bers of the multiple listing association did by providing information on residential housing in order to sell houses and this use affected the market for the copyrighted work.

In a related situation, in *Microbyte Corp v. New Jersey State Golf Association,*[194.3] antitrust tying allegations were raised against an arrangement in which the NJSGA allegedly tied full access by country clubs and members in the state golf tournaments to use by the club of a USGA computerized handicapping system (GHIN). This allegedly forced Microbyte out of business since it had previously marketed a computerized system of golf handicapping.

The court granted summary judgment on issues relating to the existence of the tie and that the tie affected a substantial amount of commerce. A failure of a club to use the USGA system put a limit on the number of teams that could be entered by the club into any tournament and this demonstrated the tie-in to "full" access rights. The court held, however, that market or economic power for purposes of antitrust violation is a question of fact. While the NJSGA had approximately only an 11 percent share of amateur tournaments in the area, market or economic power can be shown by facts related to the uniqueness of the product, perhaps because of the tradition and prestige of the sponsor.

In *TIC-X-Press, Inc. v. Omni Promotions Co.,*[194.4] the defendant was found to have used its control over the largest local arena in a tying arrangement for use of a related computerized ticketing system. It was no defense that some users of the stadium would have used the system anyway, nor that the arena lease agreements did not require the use of a computer system permitting replacement subject to the defendant's approval because the company did not develop criteria for an alternative system, and the long-standing loan practice was to use this one.

> In addition, we note that the characteristics of the tied market in this case make the tying arrangement challenged here particularly destructive to competition. . . . [The] evidence at trial indicated that computerized ticketing appears to have no special advantage over hard-ticketing in smaller arenas, and is in many cases more expensive to use. Given the fact that the Omni is the only arena in Atlanta of a size and configuration to warrant a computerized ticketing system, a prospective competitor has no incentive to develop a computerized system at all unless he knows that he will provide at least some ticketing services for events at the Omni . . .

[194.3] 1986-2 Trade Cas. (CCH) ¶ 67,228 (DNJ 1986).

[194.4] 815 F2d 1407 (11th Cir. 1987).

Avantec (50 Fed. Reg. 26849-02) (high-speed integrated circuits); Bell Communications Research, Inc. (50 Fed. Reg. 4280-03) (computer science and software); Computer Aided Mfg. Int'l (50 Fed. Reg. 3425-02) (robotics, geometric modeling); Semiconductor Research Corp. (50 Fed. Reg. 52568-03).

[4] Rule of Reason Standards

[a] Research and Other Relevant Markets

Page 4-55:

Add at end of subsection.

The analysis of market or competitive effect has particular application in the computer industry to joint industry efforts to develop technical standards. Ordinarily, to the extent that there are no preclusionary effects or secondary restrictions, development of industry standards is not objectionable under antitrust law, but actually promotes competition.

A recent application of this principle occurred with respect to efforts by the Association of Data Processing Service Organizations (ADPSO) to develop standards relating to copy protection systems. In January 1986, the Justice Department issued a business review letter indicating that it would not challenge the proposed project.

> The fact that certain members of the group that will develop the standards are competitors in the marketplace does not necessarily mean that the proposal raises any significant problems under the antitrust laws. The antitrust laws do not prohibit the promulgation of industry standards unless the standards have the effect of unreasonably restricting competition. [Here, it] would appear to be in the interest of the vast majority of ADPSO members to ensure that the standards ultimately developed will promote rather than impair competition.

Department of Justice, Business Review Letter, Jan. 6, 1986, reprinted in part at 31 PTCJ (BNA) 188 (1986).

[c] Access and Participation

Page 4-57:

Add at end of note 189.

See also Supermarket of Homes, Inc. v. San Fernando Valley Bd. of Realtors, 786 F2d 1400 (9th Cir. 1986) (real estate multiple listing service did not violate monopolization rules by adopting various exclusionary rules pre-

Add note 117.1 at end of third sentence in last paragraph.

117.1 Antitrust consideration of issues about product superiority must be distinguished from analyses under contract provisions requiring that the manufacturer provide current rather than obsolete technology. Such provisions are customary in dealership agreements, and a failure to provide appropriately updated equipment to a dealer may breach the underlying contract. The issue of failing to maintain adequately updated material often arises in context of other claims against the manufacturer, possibly including claims under antitrust or unfair competition laws. See Computer Place, Inc. v. Hewlett-Packard Co., 607 F. Supp. 822 (ND Cal. 1984) (dealer agreement permitted manufacturer right to deny mail-order seller access to new models of personal computer line and, as a result, denial of such access could not constitute tortious interference with prospective or existing business relationships); Advisory Information & Management Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984) (manufacturer did not breach dealership contract by refusing to supply dealer with entire line of compatible equipment or with particular line of computers, since line of computers that dealer had access to was not obsolete and dealer was not being treated differently in significant respects than were other dealers). However, there remained an issue of fact in *Advisory Information Management Systems* concerning breach of contract in denying dealer access to application software to be sold in connection with computer systems.

¶ 4.09 INTEGRATED SYSTEMS INNOVATION

[2] Ancillary Restraints and Market Power

Page 4-40:

Add note 133.1 at end of second paragraph.

133.1 See Innovation Data Processing, Inc. v. IBM Corp., 603 F. Supp. 646 (DNJ 1984). The court in *Innovation* refused to reconsider a summary judgment order, holding that the plaintiff could not prove that the defendant's practices of marketing a new software product violated antitrust laws. Inclusion of a particular program in an integrated installation program did not constitute a per se antitrust violation in light of the fact that the customers were not required to take the sofware and systems program jointly, but could elect to take the programs separately and, while the systems program involved several subroutines, it was a lawful package of technologically interrelated elements. Id. See also Innovation Data Processing, Inc. v. IBM Corp., 585 F. Supp. 1470 (DNJ 1984).

Add at end of note 136.

See also Advisory Information & Management Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984) (no monopolization claim was sustainable based on evidence that manufacturer had share of market for 32-bit systems that did not exceed 25 percent; market for add-on and upgrade

Add note 102.3 at end of first complete paragraph.

102.3 See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985) (licensee that used program code to develop its own program violated copyright and may also have violated trade secrecy restrictions by acting in manner inconsistent with its license agreement).

PART C. ANTITRUST AND INNOVATION

¶ 4.07 PRINCIPLES OF ANTITRUST LAW

Page 4-32:

Add at end of note 110.

See, e.g., Advisory Information & Management Sys., Inc. v. Prime Computer, Inc., 598 F. Supp. 76 (MD Tenn. 1984) (no monopolization claim was sustainable based on evidence that manufacturer had share of market for 32-bit systems that did not exceed 25 percent; market for add-on and upgrade equipment is not relevant market for purposes of monopolization or attempted monopolization).

Page 4-33:

Add at end of subsection.

An important consideration in implementing antitrust rules in computer technology, or any other industry, is the effects of particular decisions on competitive processes in the industry. This aspect of antitrust policy was emphasized in *Olympia Equipment Leasing Co. v. Western Union Telegraph Co.*[113.1] That case involved actions stemming from a 1971 order requiring that Western Union relinquish its position as sole supplier of telex terminals. In response to this order, Western Union unbundled telex leasing from telex services, thereby permitting customers to acquire terminals from whomever they desired. Olympia entered the terminal market, purchasing its equipment from the same entity that manufactured Western Union terminals. Olympia employed no sales staff and relied on referrals of customers from Western Union, which supplied its customers with lists of independent terminal suppliers. When Western Union discontinued this practice, Olympia sued. The court acknowledged that a jury could find that Western Union had a monopoly, but held that the actions here did not violate antitrust law. The court observed that "since Western Union had no duty to encourage entry of new firms into the equipment market, the law would be perverse if it made Western Union's encouraging gestures the fulcrum of an antitrust violation. Then

113.1 797 F2d 370 (7th Cir. 1986), reh'g denied 802 F2d 217 (1986).

to the original transaction.[92.5] In such cases, whenever there is an ambiguity in the underlying contract, courts should interpret that underlying relationship in a manner that supports the copyright, rather than one that protects the infringing party.

Third party rights may also adversely affect the enforceability of ownership arrangements where the third parties are not infringers, but have an interest in the assets of one of the parties to the contractor relationship. This occurs most often in context of bankruptcy proceedings filed by one of the parties to the contract relationship. A bankruptcy filing creates a legal estate that is administered for the benefit of the debtor's creditors. The interests of these creditors are enforced through the bankruptcy trustee (or debtor in possession) and include the right to avoid alleged ownership interests that are not perfected or enforceable against third parties holding judgment liens against the debtor's assets.[92.6]

The issue is particularly significant in reference to trade secrecy rights. In some contexts, otherwise valid and explicit transfers of ownership may be invalidated. For example, in *In re Bedford Computer Corp.*,[92.7] a limited partnership, formed to fund softwar development, sought to recover the technology developed with its funds when Bedford filed bankruptcy. The court denied the partnership's claims because it could not identify the property that it "owned" separately from other property of the debtor and failed to establish that it had actually completed any purchase.

The contracts between the parties purported to give ownership to the partnership in new technology developed with its funds. However, the "key problem is that neither party attempted to establish any 'baseline' to define the existing technology as of the closing date on the research and development contracts. . . ." Absent such a segregation, contract language giving ownership to the partnership was no more than a contract to sell and the technology remained the property of the debtor.

[92.5] See Koontz v. Jaffarian, 787 F2d 906, 229 USPQ (BNA) 381, 1986 Copyr. L. Dec. (CCH) ¶ 25,919 (4th Cir. 1986). (Plaintiff had developed a complex system for estimating the cost of electrical work and, working with Hewlett-Packard, had transformed the manual system into computer form. When plaintiff sued a third party infringer, the Court of Appeals upheld the trial court finding that the contract executed between the parties did transfer ownership of the data compilation to Hewlett-Packard in the original working relationship. As a result, the plaintiff was the proper party to bring the infringement lawsuit). See also Evans Newton Inc. v. Chicago Sys. Software, 793 F2d 889 (7th Cir. 1986).

[92.6] 11 USC § 544(a)(b).

[92.7] 62 BR 555 (Bankr. DNH 1986).

ownership to it], CSS correctly asserts that the computer manual must fall within the employee [rather than the independent contractor category] if it is indeed a 'work for hire.'. . . Whether CSS was an employee of ENI for purposes of 17 USC 101 turns on whether Congress intended the term employee to encompass only regular employees as CSS contends, or whether Congress intended the 1976 Act to retain the somewhat more flexible definition of employee [used] under the 1909 Copyright Act."

Based on the Second Circuit analysis in *Aldon,* the court held that the more flexible standard was intended. The issue was not whether the defendant was an employee, but whether the contractor was "independent or . . . so controlled and supervised in the creation of the particular work by the employing party that an employer-employee relationship" existed. Here, the evidence supported that CS merely used its skill to produce a result according to the specifications of EN and under the supervision of EN. EN was the sole owner.

The *Aldon* interpretation of ownership and work for hire standards is not universally adopted and other courts place tighter restrictions on when an independent contractor can be held to have conveyed ownership to the employer. These tighter restrictions are more consistent with the apparent congressional intent involved in defining works for hire as limited to works done in the scope of employment and types of specially commissioned works.

In *Easter Seal Society for Crippled Children v. Playboy Enterprises,*[92.3] the Fifth Circuit rejected the expansive reading of the statute in *Aldon.* It held that work for hire status for purposes of copyright law cannot be met based on general concepts of an "employer's right to control, but exists only if the seller of the work (contractor) is an employee within the meaning of agency law. A relationship characterized as a contractor relationship would not, under this test, constitute a work for hire unless it met the specific categories of the statute."

[92.3] 815 F2d 323 (5th Cir. 1987).

Add the following new section.

¶ 4.05A SUBSEQUENTLY DEVELOPED WORK AND OWNERSHIP [NEW]

Issues regarding ownership rights can be resolved differently regarding the original works produced by the contractor (or employee) and subsequently developed works. In general terms, the courts are more reacting to the various general design issues that occur will not ordinarily establish coauthorship in the client. Absent an express contract provision creating a transfer, copyright presumes authorship in the programmer (contractor). This is buttressed by the assumption that a client-consultant relationship does not entail coauthorship. The general result is that the architect, program designer, and similar contractor retain the right to reuse and market the product.[91.1]

Problematic control issues in software development also occur in the relationship between the program designer or developer of an idea and a publisher, manufacturer, or similar entity to whom the idea or work product is submitted. Where the product is in final or at least relatively detailed form, copyright remains in the submittor. Where merely an idea or concept is submitted, significant difficulties arise in allocating subsequent ownership or control based largely on the contracts of the parties and the existence or absence of a confidential relationship.[91.2]

[91.1] See, e.g., Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985) (owner of dental lab who participated in creating software package being developed for its use did not make contributions of type or quantity to make it coauthor of software and did not obtain rights to market software); Engineered Mechanical Servs., Inc. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984) (absent contrary agreement, consultant who designed software for specific analysis task under contract with employer retained ownership of results).

[91.2] See generally Burten v. Milton Bradley Co., 763 F2d 461 (1st Cir. 1985) (inventors of game revealed their secret to defendant game manufacturer after signing disclosure agreement that disclaimed "any relationship" between parties and restricted defendant's obligations to written contract; nevertheless, jury question arose as to whether this waived confidentiality and precluded suit for misappropriation); Shanco Int'l Ltd. v. Digital Controls, Inc., 169 Ga. App. 184, 312 SE2d 150 (1983) (idea of converting card games into video games was too general and obvious to be basis for misappropriation of idea submitted to game manufacturer).

Page 4-27:

Add at end of subsection.

Although the Copyright Act requires the existence of a written conveyance of rights to transfer ownership to the employer in an independent contractor relationship, the reported cases involving both computer-related transactions and other copyright work transactions increasingly move away from this literal standard, giving ownership to the employer in many instances in which the relationship otherwise appears to entail indicia of contractor, rather than employment arrangements. The leading in this manner. It distinguished three separate elements of ownership or control.

First, there were questions about ownership of the material objects on which the program is embodied. Ownership of the material object (copy) is distinct from ownership of intellectual property rights. In the instant case, absent any agreement that the licensee would be required to return the property delivered to it under any circumstances, the court concluded that ownership of the copy was in the buyer or licensee.

Second, there were questions about ownership or right to use the ideas and concepts used in the program. Here, the court held that these were reserved to the software developer. This result stemmed from a confidentiality agreement that precluded either party from disclosing the ideas, concepts, or techniques delivered or developed in the course of the contract by either party.

Third, issues existed, and still exist, about ownership of rights to transfer the programs and to duplicate them. Here, the court held that the program designer had retained those rights, but that the conduct of the designer in permitting and participating in subsequent transfers raised a factual issue about whether there was an oral modification of this term of the agreement.

Page 4-26:

Add note 87.1 at end of first sentence of first complete paragraph.

87.1 Compare the situation with contracts involving governmental agencies. See Conax Fla. Corp. v. United States, 641 F. Supp. 408 (DDC 1986), where a government contractor sued to prevent federal agency disclosure of alleged trade secrets. The court granted summary judgment for the defendants based on a conclusion that the government was entitled to unlimited rights in documents that were revised subsequent to delivery of first phase of contract.

Add at end of note 90.

See generally Childers v. High Society Magazine, Inc., 561 F. Supp. 1374 (SDNY 1983) (photographer was entitled to summary judgment that magazine's unauthorized publication of his photographs infringed copyright, since under Copyright Act photographs were clearly not works for hire); Roth v. Pritikin, 710 F2d 934 (2d Cir. 1983) (freelance writer of recipes had no claim to royalties for sale of book in which recipes were incorporated); Meltzer v. Zoller, 520 F. Supp. 847 (DNJ 1981) (homeowner was not author of architectural plans developed for its home, even though homeowner prepared detailed sketches of features desired and hired architect). The contractor relationship, however, can rise to the level of creative control and direction sufficient either for a work for hire or, more importantly, direct ship received ownership of all new software developed with its funds. The partnership sought to recover the technology developed with its funds when Bedford filed for bankruptcy. The court denied the partnership's claims because it could not identify the property that it owned separately from other property of the debtor and failed to establish that it had actually completed the purchase or financing of any of the property.

The "key problem is that neither party attempted to establish any 'baseline' to define the existing technology as of the closing date on the research and development contracts. . . ." Absent such a segregation out, contract language giving ownership to the partnership must be read as no more than a contract to sell and thus the technology remains the property of the debtor. In the absence of segregation of assets prior to bankruptcy, the partnership's claims fail.

> In my judgment, a sale of computer software of the nature here involved, left in the possession of the seller without any separate identification or segregation is in no material aspect different from a trust of any other type of intangible property. Accordingly, the legal result when reclamation from a bankruptcy estate is demanded should be the same.

¶ 4.05 CONTRACTORS AND CONSULTANTS

Page 4-25:

Add at end of note 83.

See Boeing Co. v. Sierracin, 108 Wash2d 38, 738 P2d 665 (Wash. 1987) (supplier of completed aircraft windows to designer of the windows barred from later, unauthorized production of the windows).

Add after runover paragraph.

As discussed in the main volume, a presumption of confidentiality can be established with respect to a contractor relationship, but this will ordinarily not protect against subsequent use of general knowledge of insight by the contractor. For this reason, the better practice involves the development of explicit contract provisions regarding confidentiality and subsequent competitive activity. If the terms of such clauses are reasonably related to protected interests of the employer and are not excessive and overbroad, they are enforceable in most states.

In *Business Intelligence Services v. Hudson,*[84.1] for example, the

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[84.1] 580 F. Supp. 1068 (SDNY 1984).

dren v. Playboy Enterprises,[62.3] the Fifth Circuit held that work-for-hire status for purposes of copyright law cannot be met based on general concepts of an "employer's right to control, but exists only if the seller of the work (contractor) is an employee within the meaning of agency law. A relationship characterized as a contractor relationship is not, under this test, a work for hire unless it meets the specific categories of the statute."

Add at end of note 62.

See Stratford Group, Ltd., DPF v. Interstate Bakeries Corp., 590 F. Supp. 859 (SDNY 1984) (a contract for sale of computer division did not create joint venture relationship between buyer and seller).

[62.3] 815 F2d 323 (5th Cir. 1987).

[b] Collateral Research and Development

Page 4-20:

Add at end of subsection.

Allocation of ownership rights in the primary product of a joint venture or other multiparty development does not necessarily determine all rights with reference to subsequent development or modification of the original product. In cases involving copyrighted products, subsequent developments based on the original work product of the joint effort represent derivative works to the extent that they entail use of the expression, rather than merely the ideas inherent in the original. In the ordinary course, control over the right to prepare derivative works is held by the copyright owner. Others, however, may be expressly or implicitly authorized to engage in their own independent development work.

In *Dynamic Solutions, Inc. v. Planning & Control, Inc.,*[66.1] Dynamic Systems (DS) had previously sold rights in several programs to the defendant, Planning & Control (PC). DS had developed the original programs for PC. The programs used game simulation techniques for purposes of business training and ran on mainframe computers on a time-share basis. A contract established that PC owned the programs sold to it. Subsequently, DS developed new programs for use in micro computers. It permitted PC to use these programs in seminars, distributing limited-run copies to it on disk. When DS withdrew from this arrangement, it sued PC to prevent continued use of the new programs.

[66.1] 646 F. Supp. 1329 (SDNY 1986).

indicated that charges were for the use of the program; it was not a fixed sale price. The designer did not draft any user's manual and never provided the contractor with a copy of the program.

[2] Joint Venture Relationships

Page 4-17:

Add the following at end of subsection.

The arrangement of ownership within a joint venture should be determined by contract as interpreted under state law principles. When the ownership issues involve copyrighted works, however, questions about the scope of copyright law preemption may affect the outcome. This is especially the case where the claimants attempt to rely on implied contractual terms.

For example, in *Del Madera Properties v. Rhodes and Gardner, Inc.*[59.1] the court held that copyright law preempted state law claims of unjust enrichment and unfair competition. The action arose where one party to a terminated joint venture subsequently used a subdivision map developed during the venture. The court held that the creative and other effort involved in developing the map were within the scope of copyright. Given this holding, it concluded that the argument that the defendant misappropriated the map "is constructed upon the premise that the documents and information . . . furnished to defendants belonged to [plaintiff]. Ownership of this material, and the alleged misappropriation by the defendants are part and parcel of the copyright claim."

[59.1] 820 F2d 973 (9th Cir. 1987).

[a] Joint Ownership

Page 4-18:

Add the following at end of subsection.

The character of the relationship and the consequent allocation of ownership and control rights regarding software developed during the joint undertaking should be clearly spelled out in the contract between the parties. If this does not occur, it is increasingly difficult to distinguish employment, joint venture, and contractor relationships for purposes of allocating ownership of the eventual work product under developing copyright standards about preparation of works for hire.

The Copyright Act indicates that a written conveyance of ownership is ordinarily needed to vest copyright in the employer in an indemay be resolved by analogy to the treatment of noncompetition clauses in bankruptcy that when attached to ongoing obligations of the other party, are increasingly made subject to rejection by the debtor.[44.14] Significantly, rejection of the contract converts the claim to a claim for monetary damages by operation of bankruptcy law and thus presumably creates a dischargeable debt.

[44.14] See In re Cooper, 47 BR 842 (Bankr. 1985); In re Rovine Corp., 6 BR 661 (Bankr. WD Tenn. 1980); In re Norquist, 43 BR 224 (Bankr. ED Wash. 1984); In re Allain, 59 BR 107 (Bankr. WD La. 1986); In re Sapse, 31 BR 914 (Bankr. SD Fla. 1983).

PART B. JOINT AND SEQUENTIAL OWNERSHIP

¶ 4.04 STANDARDS OF JOINT OWNERSHIP

[1] Coauthorship and Joint Invention

[b] Software Coauthorship

Page 4-14:

Add after second complete paragraph.

In determining the intent of the parties to coauthor (joint author) a work, the amount of the respective contributions made to the final product is not determinative, but does have a bearing on the factual issues.[50.2]

[50.2] See Eckert v. Hurley Chicago Co., 638 F. Supp. 699 (ND Ill. 1986) (compiler of sales brochure was sole owner of copyright where alleged joint author's only contribution used in brochure was picture of a water filter and where alleged infringer could not establish collaborative intent in support of claim that work was jointly created).

Add at end of note 50.

Creative control in this regard refers to the "expression," that is, the code of the program, rather than the general functions to be performed. See Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985) (owner of dental lab who participated in creating software package being developed for its use did not make contributions of type or quantity to make it coauthor of software).

Add note 50.1 at end of second complete paragraph.

[50.1] See Meltzer v. Zoller, 520 F. Supp. 847 (DNJ 1981) (homeowner was not author of architectural plans for its home, even though homeowner

Relief from or modification of the stay can be obtained for "cause."[44.7] While there is no appellate authority applying this concept to enforcement actions relating to the use or disclosure of trade secret information, the general, equitable character of the concept of cause should cover relief for purposes of protecting potentially valuable rights in confidential material. Note, however, that an underlying theme in bankruptcy is to benefit the debtor's estate and there may be a greater willingness for a bankruptcy court to permit continued use of allegedly confidential material by the debtor in cases of doubt; the court would, in such cases, presumably be willing to impose restrictions on disclosure to other parties.

A more basic issue is whether the employer can retain the right to enforce the contractual provision at all for the remainder of its term in cases where the employee files bankruptcy before the expiration of any assignment provision. This issue exists even if the contract provision is enforceable under applicable state law.

A two-tiered analysis reveals the character of the problem. In cases where a former employee who is subject to an invention assignment clause, files bankruptcy under Chapter 7 of the Code the employer's ability to enforce the contract depends on two questions. First, can the contractual restriction and executory contract be rejected by the debtor and, thus, converted into a monetary claim against the estate? Second, are the rights of the employer under the contract a claim against the debtor that is discharged under bankruptcy law?

Executory contract law involves the right of a debtor in bankruptcy to reject any contract in which substantial performance remains pending on both sides at the time of bankruptcy.[44.8] In the case of invention clauses, the terms of the agreement often entail future performance by the employee (the assignment or assistance of the employer in perfecting rights in the invention). These obligations affect only the employee and thus the contract cannot be rejected unless there is reciprocal performance owing by the employer.[44.9] Where the agreement does place continuing obligations (e.g., post termination payments) on the former employer it may be rejected and converted into a mere monetary claim against the bankruptcy estate.

The remaining questions involving individual former employees deal with the enforceability of the contractual restriction after bankruptcy. A successful Chapter 7 (or Chapter 13) bankruptcy results in discharge

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[44.7] 11 USC § 362(d)(1).

[44.8] 11 USC § 365.

[44.9] See In re Cooper, 47 BR 842 (Bankr. WD Mo. 1985).

¶ 4.03 CONTRACTUAL MODIFICATION

Page 4-12:

Add at end of subsection.

The relationship between the employer's support or supervision of the work and the creation of ownership rights in it permeates work for hire law. As discussed in the main text of this section, it affects decisions regarding shop rights questions and issues pertaining to the enforcement of contractual transfers of ownership rights. For example, in *Cubic Corp. v. Marty,*[44.1] despite California Labor Code provisions restricting the enforceability of employee invention assignment agreements, the particular invention assignment contract was enforceable to convey ownership of an invention consisting of a electronic warfare simulator. The agreement applied specifically to any invention, idea, or process developed within the scope of employment or as a result of work specifically assigned to the employee.

> [We] do not think the Labor Code provisions were intended to award an invention to an employee who presents an invention to an employer, represents the invention is for the employer's benefit, actively seeks and obtains company funding to refine his invention, uses company time [to develop it] while secretly intending to take out a patent on the invention for himself.

As this implies, enforcement of invention assignment agreements entails a balancing process. When the clause purports to assign post employment inventions, the balancing bears a close relationship to that involved with covenants to not compete.

In determining whether the particular clause is reasonable and, thus, enforceable, the appropriate test focuses on the degree of harm to the employee's future earning capability, the length of the agreement, and the potential for harm to the employer if enforcement is denied. In *Ingersoll-Rand v. Ciavatta,*[44.2] the court held that a one-year term was not reasonable since it would cause undue hardship to employee by, in effect, prohibiting his employment in the industry in which he worked, and this harm outweighed the legitimate interests of the employer. Importantly, in this case the former employee developed his inventions only after termination of his employment and used no trade secrets or confidential information of the employer in so doing.

[44.1] 229 Cal. Rptr. 828 (Cal. Ct. App. 1986).

[44.2] 216 NJ Super. 667, 524 A2d 866 3 USPQ2d 1120 (App. Div. 1987).

squarely within ordinary job assignments. This analysis applied in *Marshall v. Miles Laboratories, Inc.*[12.1] to give the employer a copyright in scientific articles written by an employee outside of the business premises and at his own initiative. The articles were works made for hire where the subject matter and the article itself directly flowed from work activity and the employer maintained a policy requiring all employees to submit all articles for review prior to publication by the employer. "In this case, the job description clearly indicates that at Miles insistence, the plaintiff initiated research and reported information about advances in technologies in various areas [including the subject of the article.]"

One area of controversy with respect to software development and employees involves the status of software developed by university faculty in the fields of their research and teaching responsibilities. Historically, university faculty have considered themselves owners of the copyright to books and articles they write, while standards pertaining to patents developed at university facilities and with their support generally place at least partial ownership in the university. Software development falls somewhere between the technology and literary subject matter.

In the absence of enforceable contract terms, the copyright issue turns on whether the particular work can be said to have been within the scope of the faculty member's employment. Clearly, university appointments carry an expectation of ongoing research and writing, but the employer exercises no control over subject matter, timing or any other facet of the work. The better view, then, is that copyrightable work products written by a faculty member are not works for hire unless they are made pursuant to a specially developed and controlled study by the university.[12.2]

The relationship between the employer's support or supervision of the work and the creation of ownership rights in it permeates work for hire law. As discussed in the main text at ¶ 4.02[1], it affects decisions regarding shop rights questions and issues pertaining to the enforcement of contractual transfers of ownership rights. For example, in *Cubic Corp. v. Marty*,[12.3] despite California labor code provisions restricting the enforceability of employee invention assignment agreements, the particular invention assignment contract was enforceable to convey ownership of an invention consisting of an electronic warfare simulator. The agreement applied specifically to any invention, idea, or process developed

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12.1 647 F. Supp. 1326 (ND Ind. 1986).

12.2 See Weinstein v. University of Ill., 811 F2d 1091 (7th Cir. 1987) (article written by faculty member was not a work for hire).

12.3 229 Cal. Rptr. 828 (Cal. Ct. App. 1986).

PART A. EMPLOYEE OWNERSHIP

¶ 4.02 EMPLOYEE DEVELOPERS

Page 4-3:

Add at end of note 2.

See generally Mister B Textiles, Inc. v. Woodcrest Fabrics, Inc., 523 F. Supp. 21 (SDNY 1981) (textile company owned copyright to fabric design developed by two of its employees). Compare Chelsea Indus. v. Gaffney, 449 NE2d 320 (Mass. 1983) (employees violated obligations to employer by engaging in competing work while continuing to work for employer).

Add note 2.1 at end of first sentence in second complete paragraph.

2.1 Aetna-Standard Eng'g Co. v. Rowland, 493 A2d 1375 (Pa. Super. Ct. 1985) (employee was owner of invention and was not required to assign rights to former employer where invention was developed in normal scope of employee's work, but employee received no compensation for invention, and employer initially made no claim to it); FMC Corp. v. Spurlin, 596 F. Supp. 609 (WD Pa. 1984) (former employee built new vibrating feeder in competition with plaintiff; summary judgment denied because material issue existed about whether use of plaintiff's design manual led to creation of a new or superior product, which would not be a violation of secrecy); Engineered Mechanical Servs. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984) (processes, procedures, and information that employer used in dealing with steam turbine repairs and bushing used by engineering firm were not trade secrets because they merely involved well-known technologies applied to its particular activities).

of an executory franchise contract. The debtor (licensee) rejected the franchise contract and was allowed to open a competing business since the competition agreement was not separable from the overall contract.

A noncompetition clause was also properly rejected by the debtor in *In re Norquist*.[228] There a medical partnership agreement constituted an executory contract that can be assumed or rejected by one of the doctors. In the rejection of the partnership, the entire agreement is rejected and the doctor is no longer bound by the terms of the noncompetition clause in the partnership contract.[229]

In re Allain[230] reached a similar result regarding an agreement executed among three dentists. The agreement contained a covenant against competition within a specified geographic area. The dentists had formed a corporation and the agreement was in an employment contract each signed with the corporation. The court held that the employment contract was executory at the time of bankruptcy, apparently because of the mutual expectations of joint work. After filing, the debtor set up practice in competition with the corporate entity and rejected the contract. The court held that this also rejected the non-competition provision.

"We agree that the fact that a transaction is set forth in only one instrument does not alone preclude the existence of several separate contracts. A single document may contain many distinct contracts." The issue of severing elements of an overall transaction is resolved by a determination about the intentions of the parties. The issue is whether the parties extended all elements to be integral to the agreement or whether one separate enforcement is possible. "The Court believes that the parties contemplated that all aspects of the agreement had to be fulfilled as a condition to enforcing each provision. None of the provisions can be enforced or examined in isolation. . . . There is no separate consideration for any of the provisions."

It is an accepted bankruptcy rule that a contract must be accepted or rejected in its entirety, but the standards for determining when elements of a single transaction are severable contracts are simply not clear.[231]

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[228] 43 BR 224 (Bankr. ED Wash. 1984).

[229] See also In re Sapse, 31 BR 914 (Bankr. SD Fla. 1983).

[230] 59 BR 107 (Bankr. WD La. 1986).

[231] See In re Monsour Medical Center, 11 BR 1014 (Bankr. WD Pa. 1981); In re Rovine Corp., 6 BR 661 (Bankr. WD Tenn. 1980); In re Gardinier, Inc., 50 BR 491 (Bankr. MD Fla. 1985).

mination payments) on the former employer it may be subject to rejection and converted into a mere monetary claim against the bankruptcy estate.

The remaining questions involving the individual former employer as opposed to the present group employer deal with the enforceability of the contractual restriction after bankruptcy. A successful Chapter 7 (or Chapter 13) bankruptcy results in discharge of all debts (with several specified exceptions) that arose before the commencement of the case.[220] The discharge imposes a permanent injunction against the commencement or continuation of any action or act to collect, recover, or offset the debt as a personal liability of the debtor.[221]

In this framework, the pertinent question is whether the obligation on the nondisclosure or noncompetition contract against the individual is a "debt" arising before filing and, if so, whether discharge prevents subsequent actions for injunctive relief or merely any later claim for damages. The case law and statutory authority provide only limited guidance.

A debt is defined in bankruptcy as liability on a claim. In turn, a "claim" is a "right to payment, whether or not reduced to judgment. . . ; or [a] right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is reduced to judgment, fixed, contingent, matured, unmatured, disputed. . . ." [222] This language encompasses any claim for breach of the restrictive contract arising before bankruptcy filing in any case where the contractual claim gives or might give rise to a claim for monetary damages.

One court dealing with the effect of discharge on such a claim indicates that, even if a money award were a potential outcome of contract violation, the equitable remedy not reducible to money damages might not be discharged. In *In re Cooper*,[223] the court dealt with a noncompetition clause and commented:

> Here equitable relief would be a requirement that debtor not do something, i.e., not work for a competitor and [not] call upon Carstens' customers for a limited period of time. . . . What follows is that from this there may be, if the state court were to conclude that the non-competition agreement was enforceable, an equitable remedy not reduceable to damages and therefore, not a claim.

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[220] 11 USC § 727(b).

[221] 11 USC § 524(a)(2).

[222] 11 USC § 101(4).

[223] 47 BR 842 (Bankr. WD Mo. 1985).

The debtor in bankrupty has full power to pursue enforcement of these rights by action against third parties. The substantive law applied here essentially adopts the law that would have applied in the absence of the bankruptcy filing.[213] Unlike in other respects, the status of bankruptcy does not enhance the debtor's substantive rights against third parties.

If the debtor had turned over secret material to a third party prior to bankruptcy, the right to recoup possession of this material passes to the bankruptcy estate under the same terms as provided for by the contract of delivery. In bankruptcy, the right to retake possession can be enforced through a turnover order from the court pursuant to a third party's obligation in the Code to hand over the property of the estate that is not of inconsequential value to the estate.[214]

The second context involving enforcement occurs when a third party seeks to enforce confidentiality restraints against an individual or entity who has filed bankruptcy. There are two stages to the question involving, respectively, interim and permanent relief.

"The filing of a bankruptcy petition places a stay against the commencement or continuation . . . of a judicial, administrative or other action or proceeding against the debtor that was or could have been commenced before" filing of bankruptcy.[215] The immediate effect of this stay is to channel anticipated or pending actions into the control of the bankruptcy court. It applies to any action to enforce trade secrecy rights and force the claimant to seek relief from the stay from the bankruptcy court before continuing any enforcement action.

The stay applies only to actions against the debtor in bankruptcy and does not affect actions against affiliates or other related parties. In limited circumstances, however, a court may, on request of the debtor, extend the protection implicit in this stay to preclude actions against entities or persons essential to the bankruptcy case. This occurs under general equitable powers granted to the court. For example, in *In re Polytop Corp.*[216] the court held that continuation of a lawsuit against

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[213] See generally In re Bettinger Corp., 197 F. Supp. 273 (D. Mass. 1961); In re Telesport, Inc. (Telesport, Inc. v. Vestal), 22 BR 527 (Bankr. ED Ark. 1982).

[214] 11 USC § 542. See In re Belize Airways Ltd. (Seidle v. Air Transp. Leasing Co.), 6 BR 157 (Bankr. SD Fla. 1980) (printouts relating to aircraft parts and maintenance were property of the estate subject to obligation of turnover by third parties in possession since the printouts were not of insubstantial value to the bankruptcy estate).

[215] 11 USC § 362(a)(1).

[216] 31 BR 225 (Bankr. DRI 1983).

> statute or regulation. If an order is entered under this rule without notice, any entity affected thereby may move to vacate or modify. . . .[203]

This Rule derives from Code Section 107(b).[204] As the language indicates, the potential scope of protective orders in this form of proceeding is relatively broad.[205] Furthermore, in appropriate cases, the protective order can be obtained on an ex parte basis, subject to a subsequent motion for review or modification by an affected party.[206]

As in other types of judicial proceedings, however, the issuance of a protective order in bankruptcy as to all or part of a file represents the exception, rather than the rule.[207] Protective orders are available only if other methods of protecting confidentiality are inadequate and there is a clearly established interest in nondisclosure.[208]

One difference between ordinary litigation and bankruptcy proceedings regarding confidential material involves the multiparty character of bankruptcy. As indicated previously, the essential nature of the process involves an effort to reconcile conflicting claims to the debtor's limited assets and to permit, in a Chapter 11 case at least, a restructuring of the debtor's business in a manner that deals fairly and fully with numerous parties. Because of this, bankruptcy entails the active involvement of a large number of diverse interests and their representatives, as indicated in the appointment of various representative creditors and other interest committees. There is also a statutory emphasis on disclosure of economic information and public discussion in court about business operations as a means of informing and protecting the interested parties.

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[203] Bankr. Rule 9018.

[204] 11 USC § 107(b).

[205] See, e.g., In re Southern Indus. Banking Corp., 49 BR 760 (Bankr. ED Tenn. 1985) (in discovery activities relating to an action to avoid a preferential transfer, the court entered a protective order to preserve proprietary information and the privacy rights of nonparties); In re Sentinel Energy Control Sys., Inc. (MPM Worldwide Corp. v. Sentinel Telecommunications), 27 BR 795 (Bankr. D. Mass. 1983) (reaffirms court's general authority to grant protective orders concerning property within its control).

[206] Compare In re Inslaw, 51 BR 298 (Bankr. DC 1985) (motion to treat tendered issue as confidential would not be considered by the court until moving party complied with established procedural standards for confidentiality requests). Vaughn v. Rosen, 484 F2d 820 (DC Cir. 1973).

[207] See In re Nunn, 49 BR 963 (Bankr. Va. 1985).

[208] See, e.g., In re DeLorean Motor Co., 8 CBC2d 1089 (Bankr. ED Mich. 1983) (protective order will not be granted when release of the pertinent information would not be unduly prejudicial, a protective order is not the least obtrusive method of protecting claimed interests, the material is already available in public records).

failed to follow proper procedures in issuing a preliminary injunction, by not (1) requiring a hearing, (2) making express findings of fact, and (3) making a statement of the reasons for issuing the injunction. Because the evidence indicated substantial issues and conflicts regarding the validity of the charge of misappropriation, the preliminary injunction was vacated.

Add note 189.2 at end of second sentence in second complete paragraph.

189.2 See Caparo v. Lanier Business Prods., 466 So. 2d 212 (Fla. 1985) (injunction is proper remedy for cases involving breach of covenant not to compete; in cases where breach of covenant is established, irreparable injury is presumed for purposes of granting injunction); Sigma Chem. Co. v. Harris, 586 F. Supp. 704 (ED Mo. 1984) (covenant not to compete provided adequate basis, on these facts, for preliminary injunction).

Page 3-59:

Add at end of subsection.

The competing view grants injunctive relief on an extended, if not permanent basis, not tied to expiration of the proven lead time benefits of the secret. The rationale for this approach lies, at least in part, in concepts of punishment and deterrence. Under this view, for example, it is often said that the wrongdoer should not benefit, even indirectly, from its wrongdoing. Beyond punishment theories, however, a permanent injunction may also be justified as the only means of achieving complete protection for the proprietor of the former secret. Quite simply, proof of any accuracy regarding the lost lead time will be uncertain and difficult to assess. Under these circumstances, permanent injunctions provide an especially appropriate remedy where the character of the secret justified the expectation of substantial, albeit uncertain, lead time benefits.[202]

The UTSA adopts an intermediate position, but one that generally leans toward limiting injunctive relief to the period over which discovery by proper means (including reverse engineering) would have been likely. It provides that an injunction shall be terminated when the trade secret has ceased to exist, but the injunction may be continued for an additional reasonable period of time in order to eliminate commercial advantage that otherwise would be derived from the misappropriation."[203]

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202 For an extended discussion of the two competing approaches, see Hyde Corp. v. Huffines, 314 SW2d 763 (Tex. 1958).

203 UTSA § 2(a), 14 ULA 537, 539 (1979). See Wolfe v. Tuthill Corp., FillRite Div., 516 NE2d 1074 (Ind. Ct. App. 1987) (permanent

¶ 3.17 DAMAGES

Page 3-56:

Add at end of note 182.

See Aries Information Sys., Inc. v. Pacific Management Sys. Corp., 366 NW2d 366 (Minn. App. 1985) (compensatory damages, exemplary damages, and injunctive relief are all appropriate awards for misappropriation of trade secret). The UTSA expressly recognizes the desirability of including damage recovery from several vantages in a single case. It states: "[A] complainant may recover damages for the actual loss caused by misappropriation. A complainant also may recover for the unjust enrichment caused by misappropriation that is not taken into account in computing damages for actual loss." UTSA § 3(a), 14 ULA 537, 539 (1979).

Add at end of subsection.

In many cases, courts are apparently willing to accept proof of either form of damages, sustaining awards based either on loss to the injured plaintiff or on gain to the misappropriator. Ordinarily, proof of harm in cases with products being marketed in competition with each other entails a drop in sales of the original product reflected in increased sales for the misappropriator. In some instances, however, the two measures can not be clearly established or connected to each other. This occurred in *Continental Data Systems, Inc. v. Exxon Corp.*[185.1] In that case, the defendant had allegedly misappropriated material about software related to a law office market. It developed its own program based on this material, but the new program did not achieve any substantial level of sale. The court noted:

> The . . . issue is whether Exxon used the information contained in the sales manual to the detriment of Continental. During the twelve-month period following Exxon's introduction of its personal injury [program,] Continental experienced a significant decline in sales. [The Exxon program was marketed] but only one customer agreed to purchase [and this system] was never delivered. Continental argues that sales by Exxon of its personal injury application were not necessary to harm Continental. Rather, merely marketing [the] software [allegedly] 'increased (Exxon's) credibility with customers in the legal marketplace and decreased Continental's credibility as the sole supplier of the product.' While I foresee substantial difficulties in proving the contention, I believe that plaintiff is entitled to present its evidence on causation.

Where damages are provable, it is increasingly common that allegations in ordinary trade secrecy cases are being recast into a form in which

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185.1 638 F. Supp. 432 (ED Pa. 1986).

> patent and copyright law, the provisions of the Prolock licensing agreement are unenforceable to the extent they are contrary to the policies of the federal Copyright Act. . . Since the license agreement is unenforceable, it cannot buttress Vault's claim that Quaid has used 'improper means' to discover the alleged trade secret. . . . Decompiling, disassembly, and reverse engineering are all proper means of discovering any trade secret which may be contained in Prolock.

PART D. REMEDIES AND MISAPPROPRIATION

¶ 3.15 MISAPPROPRIATION AND PROOF

Page 3-52:

Add at end of first full paragraph.

In some cases, however, courts may conclude that the only use that can constitute misappropriation is actual copying. This was apparently the case in *Plains Cotton Cooperative Association v. Goodpasture Computer Service, Inc.*[167.1] In that case, the Fifth Circuit held that the district court's failure to separately discuss trade secret claims raised by the plaintiff was justified in this context because the misappropriation of a trade secret claim is coextensive with the claimed copyright infringement.

> The critical point is that the misuse of these implementations can occur only through copying the particular software designs on a sufficiently specific level. These are not alleged marketing or mode of doing business trade secrets. They are matters of design, where the issue of misuse boils down to evidence of copying. If no copying occurred on any level, [plaintiff] cannot demonstrate that [defendants] misused the trade secrets they allegedly possessed.

[167.1] 807 F2d 1256 (5th Cir. 1987).

Add at end of note 168.

See Dickerman Assocs. v. Tiverton Bottled Gas Co., 594 F. Supp. 30 (1984) (computer program designer is entitled to protection against and damages for misappropriation of trade secrets in "Jobber Management System" program).

Page 3-53:

Add at end of note 171.

Compare FMC Corp. v. Spurlin, 596 F. Supp. 609 (WD Pa. 1984) (in an action against a former employee who built a new vibrating feeder sold in claim, a plaintiff must allege rights qualitatively different from the rights of reproduction, performance, distribution, or display. [A] claim that a defendant made unauthorized use of copyrightable material falls squarely within Section 301 and thus is preempted." Here, however, the contract claims for unauthorized use were not preempted since the contract claims involved an additional element consisting of a promise to pay for use of the program.

The willingness of the court in *Brignoli* to permit state law claims to stand was not matched by the court in *Del Madera Properties v. Rhodes and Gardner, Inc.*[147.5] This court overextended copyright preemption analyses by cutting off state law claims based on misappropriation of effort, rather than mere copying of a work.

In *Del Madera,* the allegedly improper actions involved the use of a tentative subdivision map initially developed by the plaintiff in conjunction with the defendant under joint venture. The state law claims were based on alleged unfair competition and unjust enrichment. The court held that "effort expended to create the tentative map and supporting documents is effort expended to create tangible works of authorship. As such this effort is within the scope of copyright protection." [147.6] This effort was distinguishable from effort made to obtain governmental approval of the subdivision, which was not in any way connected with copyright law claims.

Given this broad conception of copyright coverage, the court concluded that a claim that the map materials were misappropriated from a confidential relationship did not add the extra element needed to avoid preemption. In essence, the court viewed this argument as based on a dispute over ownership of the map (a copyright issue). Similarly, it rejected any claim based on an alleged implied promise to not use the map. "An implied promise not to use or copy materials within the subject matter of copyright is equivalent to the protection provided by Section 106 of the Copyright Act [and] is also preempted."

In contrast, in *Boeing Co. v. Sierracin Corp.,* a case involving the alleged misappropriation of the design of aircraft windows,[147.7] a copyright preemption argument was rejected by the Washington Supreme Court. The plaintiff was an aircraft window designer who alleged that the aircraft window supplier had misappropriated its trade secrets concerning design of replacement airplane cockpit windows. Boeing had developed the design and underlying blueprints at substantial cost. It

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[147.5] 820 F2d 973 (9th Cir. 1987).

[147.6] See Mayer v. Josiah Wedgwood & Sons, Ltd., 601 F. Supp. 1523, 225 USPQ (BNA) 776 (SDNY 1985).

[147.7] 108 Wash2d 38, 738 P2d 665 (1987).

of program and type of alleged secret involved. For example, in *Plains Cotton Cooperative Association v. Goodpasture Computer Service, Inc.*,[147.1] the Fifth Circuit held that a copyright and a trade secrecy misappropriation claim were coextensive. The case involved alleged misappropriation of a program designed to provide information about cotton prices and to provide accounting services for members of an agricultural cooperative. The defendant took a copy of this software when he left plaintiff's employ and developed a competing version of the program for operation on personal computers. The court noted that, due to the market-oriented character of the program and the relatively limited amount of data needed or transferred to the user, many similarities in the two programs were due to idea, rather than expression. In this context, the district court's failure to separately discuss trade secret claims raised by the plaintiff was justified because "misuse of these implementations can occur only through copying the particular software designs on a sufficiently specific level. These are not alleged marketing or mode of doing business trade secrets. They are matters of design, where the issue of misuse boils down to evidence of copying."

Preemption is not dependent on the fact that copyright law actually protects the underlying work, it depends rather on the mere fact that the claim stated under state law covers an area of protection dealt with under copyright provisions. For example, in *Quincy Cablesystems, Inc. v. Sully's Bar, Inc.*,[147.2] the plaintiff, Quincy, operated a cable television system that retransmits sports programming provided by New England Sports. The defendant used a satellite dish to intercept the New England programming for display in its tavern. Even though the copyright claims were barred by a failure to establish copyright registration, any state-law claims of conversion are preempted by the Copyright Act to the extent that they relate to unauthorized distribution, display, or performance. "These rights are already guarded by the Copyright Act. The elements in plaintiff's action for conversion involve elements that would not establish qualitatively different conduct by the defendants than the elements for an action under the Copyright Act." This establishes an equivalence between the two actions.

In dealing with preemption claims, a recurrent issue concerns the extent to which specific elements of immorality or other improper conduct must be included in a claim in order to avoid preemption effects from federal law. The Second Circuit Court of Appeals recently indicated that protection of business morality will be given relatively limited

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[147.1] 807 F2d 1256 (5th Cir. 1987).

[147.2] 650 F. Supp. 838 (D. Mass. 1986).

example, in a case where a company has been acquired by another company, it has been held that the trial court erred in issuing an instruction that tended to indicate that officers of the acquired company breached their fiduciary duty by encouraging or failing to discourage departures by key employees.[135.1] The lacking critical element, distinguishing this case from the others discussed in the main text, is that there was no effort to induce departures for purposes of forming a new company that held the secrets of the old.

The distinction is significant because to produce an actionable event the conduct of the employee and other parties working in concert must amount to a civil wrong. This is true even in cases in which the alleged misconduct is phrased for purposes of court action as a civil conspiracy. In *Dozier & Gay Paint Co., Inc. v. Dilley,*[135.2] for example, the court held that the investor in a start-up company staffed by former employees of the plaintiff may be liable for civil conspiracy where there were sufficient facts to infer that the departing employees wrongfully took assets and tortiously interfered with the employer's customers. The court noted, however, that while civil conspiracy may be a separate cause of action and grounds for liability the "gist of the action for civil conspiracy is not the conspiracy itself, but the civil wrong done pursuant to the conspiracy which results in damage to the plaintiff."

While some new businesses begin without endorsement by the former employer, an increasing number of businesses in the computer industry have initiated internal programs to assist those employees interested in undertaking start-up ventures in fields related to the main business of the employer. These are justified in business terms by the positive impact on employees in general and as providing the employer a method of establishing new ventures and entrepreneurial activities in which it holds some beneficial interest.

Assisting employees in new ventures, however, does not come without legal risk for the employer. This was illustrated in *Nguyen v. Control Data Corp.*[135.3] Control Data Corp. (CDC) maintained a program to provide general advisory and marketing services for employee start-ups and also some financing for minority-owned business. Nguyen and an-

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[135.1] Pros v. Mid-American Computer Corp., 142 Ill. App. 3d 453, 491 NE2d 851, 96 Ill. Dec. 572 (Ill. App. Ct. 1986). Nationwide Advertising Serv., Inc. v. Thompson Recruitment Advertising,, Inc., 183 Ga. App. 678, 359 SE2d 737 (Ga. Ct. App. 1987) (former employee did not breach fiduciary duties by accepting employment with competitor, where employee did not attempt to influence co-workers to join the competitor and did not give competitor any confidential information).

[135.2] 518 So. 2d 946 (Fla. Dist. Ct. App. 1988).

[135.3] 401 NW2d 101 (Minn. Ct. App. 1987).

There will also be, in most cases at least, a direct relationship between a court's willingness to enforce geographic scope and the extent to which other provisions of the covenant are narrowly focused on the proveable interests of the employer. This was illustrated in *Micro Plus, Inc. v. Forte Data Systems,*[109.7] where a six month national covenant was enforced based on the narrow term, the fact that the employer competed nationally, and the fact that the technology involved often takes substantial time to develop and market.

[109.7] 484 So. 2d 1340 (Fla. 1986).

Page 3-37:

Add after runover paragraph.

Where a court refuses to apply blue pencil or other methods to reduce the scope of an otherwise overly broad covenant, the effect is to obviate all protection for the former employer. For example, in *Jarrett v. Hamilton,*[111.1] the Georgia Appeals Court refused to apply the blue pencil approach and simply denied enforcement to a clause that, the court felt, was too broad geographically and too imprecise in defining what competitive activity was barred. The lack of any limit on the type of activity was particularly a problem in this case since the contract clause prohibited a former employee generally from engaging in direct or indirect competition with the employer and its business affiliates as an individual, partner, joint venturer, employee, or agent for any person or entity involved in competition with the employer.

[111.1] 179 Ga. App. 422, 346 SE2d 875 (Ga. Ct. App. 1986).

¶ 3.11 NEW COMPANIES AND COMPETITIVE HIRING

[1] Third Parties: Enticement

Page 3-39:

Add at end of subsection.

In most cases, the defendant in an action involving the enticement of employees from their current employer will be a business competitor. Theories of civil conspiracy, however, may also extend liability risk to investors in a new competing company. The mere fact of an agreement to set up the competing company, however, does not create liation whose law governs the contract terms and on the nature of the employee's work. This is clearly a balancing issue, even if particular courts do not always express it in those terms. The goal of the analysis centers on achieving an accommodation between the valid interests of the employer and the interests of the employee in practicing a trade or profession from which he or she derives livelihood.

In making this accommodation, one pertinent factor on which courts in the computer field focus deals with defining the nature of the employer's interest, most often as a prelude to measuring the validity of the restrictions imposed when matched against this legitimate interest.

This variable affects what can be described as the protectable interest of the employer. In dealing with software designers and programmers, the most obvious interests of the employer will often be confined to enacting a prohibition on competition in fields in which the programmer worked while at the original employer and to business activities in which the employer actually engages. Whatever the more particularized character of the asserted business interest, it is difficult to argue on behalf of a former employer that the employee ought to be barred from fields in which the employer had, and currently has, no realistic economic interest. Restrictions on the employee that go beyond the business scope of the employer often appear as gratuitous, unjustified restraints.

This attitude was applied by a Florida court in invalidating a no competition clause in *Marshall v. Gore*.[109.1] In the *Marshall* case, the court concluded that a national scope for the covenant to not compete was appropriate, but that the covenant impermissibly included a bar against participating in any software business. "Since [the employer] is not engaged in the general business of developing and marketing computer software, the injunction protects more than [its] legitimate business interests." [109.2]

The analyses requiring narrowed terms of a covenant go beyond this simple premise of requiring some connection to the actual business of the employer. Many reported decisions reflect a relatively specific analysis of the actual and legitimate interests of the employer and a matching of the terms of the agreement to the nature of that interest. This results in narrowed focuses, especially in those cases where the perceived interest does not include protection of trade secret technology.

[109.1] 506 So. 2d 91 (Fla. Dist. Ct. App. 1987).

[109.2] See also Power Distribution, Inc. v. Emergency Power Eng'g, Inc., 569 F. Supp. 54 (ED Va. 1983) (covenant by former sale representation of power supply equipment unenforceable because not limited in terms of type or scope of activity).

irreparable harm exists that is adequate enough to support injunctive relief.[97.1] Preliminary injunction relief is also often justified and should not be refused without at least some hearing and inquiry into the nature of the employer's claim.[97.2]

[97.1] See Caparo v. Lanier Business Prods., Inc., 466 So. 2d 212 (Fla. 1985).

[97.2] See Beck Computing Serv., Inc. v. Anderson, 362 Pa Super. 505, 524 A2d 990 (Pa. Super. 1987) (request for preliminary injunction against former employee should not be denied without a hearing). Compare Franke v. Honeywell, Inc., 516 NE2d 1090 (Ind. App. 1987) (preliminary injunction enforcing noncompetition agreement with former employer was overbroad).

Page 3-34:

Add at end of note 99.

See Comshare, Inc. v. Execucom Sys. Corp., 593 F. Supp. 981 (ED Mich. 1984) (in dealing with choice-of-law issue, court noted that noncompetition clause does not violate Michigan policy insofar as it may be connected to violation of trade secrets of former employee).

Add at end of first paragraph.

A number of states have, by statute, barred the use of noncompetition clauses in employee contracts, with the most frequently permitted exception to the absolute bar being for cases where the noncompetition provision is tied to the protection of trade secrets.[99.1]

In addition to statutory bars, some states by common law preclude enforcement of at least some no competition provisions. Most often, this explicit prohibitory approach will be used only where the clause at issue does not involve protection of the employer's proprietary rights. The rationale of barring the application of some such clauses to employees stems from the goal of protecting the employee's interest in earning a living.[99.2] This employee interest will frequently lead to invalidation of competition clauses that involve so-called common callings,

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[99.1] See also Colo. Rev. Stat. § 8-2-113 (Supp. 1984); Hawaii Rev. Stat. § 480-4 (1976); La. Rev. Stat. Ann. 23:921 (1983) (West 1964); Mich. Comp. Law Ann. § 445.761 (1975); Mont. Code Ann. 28-2-703 (1983); Nev. Rev. Stat. § 598A.030 (1973); ND Cent. Code § 9-08-06 (1975); Okla. Stat. Ann. tit. 15, § 217 (West 1960).

[99.2] Chavers v. Copy Prods. Co. Inc., 519 So. 2d 942 (Ala. 1988) (in a noncomputer case, the court holds that a noncompetition clause is unenforceable against a former employee because, although the employeé was court noted, in the absence of protection for such form of disclosure, "the owners of new and unpatented products would hesitate before transmitting the information and making the disclosures essential to bring about meaningful negotiations." [61.1]

[61.1] Biodynamic Technologies, Inc. v. Cattangooga Corp., 644 F. Supp. 607 (SD Fla. 1986) (in a case not involving the computer industry, the court found that a confidential relationship was established when information about nonpatented technology and products was revealed for purposes of considering a potential license agreement; the confidence was breached when the recipient of the material used it in competition with the originator).

Page 3-25:

Add after runover paragraph.

Placing restrictions on disclosures made during negotiations may be essential to developing and retaining a program of trade secrecy protection for the technology itself. The existence of consistent and comprehensive efforts to restrict the third party from unauthorized use of the technology tends to support that it is in fact a trade secret. For example, in *Continental Data Systems, Inc. v. Exxon Corp.*,[63.1] the court at least preliminarily sustained a claim of trade secrecy in material contained in a sales brochure describing software being marketed to attorneys for use in connection with managing 'no fault' liability caseloads. It noted that

> Continental took significant precautions to limit the distribution and use of information contained in its sales manuals and the information disclosed to purchasers of its software. Company rules required sales people to obtain approval from Continental's vice president and assurances of confidential treatment from prospective purchasers before portions of the sale manual were lent to the prospective purchaser. As part of the transaction, the buyer agreed to prevent unauthorized use or dissemination of the software and its manuals.

[63.1] 638 F. Supp. 432 (ED Pa. 1986).

¶ 3.10 EMPLOYEES AND CONFIDENTIALITY

[1] General Knowledge and Trade Secrets

Page 3-29:

Add at end of note 78.

See also FMC Corp. v. Spurlin, 596 F. Supp. 609 (WD Pa. 1984) (in action against former employee who left company and, after retirement, built a

These provisions of UTSA thus make explicit what has long been considered the law under common law interpretation of trade secrecy issues. The individual who acts without a breach of confidence can discover and use the secret information. The individual's rights protected here extend, however, only to the extent to which it actually did use proper means to discern the information it uses. The mere fact that the end user could have discovered the information by reverse engineering does not, in itself, excuse a breach of confidence or permit use of confidentially disclosed information.[47.3]

As a result of this, in at least some trade secrecy actions, courts will impose liability even though the defendant could have avoided claims of breach of confidence had it actually conducted the reverse engineering activity it was capable of. The anomoly of avoidable liability indicates that, when available to it, the potential competitor should actually conduct reverse engineering activities and, perhaps equally important, should structure them so as to provide documentation that the end product of the reverse processing was not induced or assisted by confidential disclosures. Thus, it is important that the persons performing the reverse processing are insulated from any exposure to information obtained under confidential terms. This type of insulation is referred to as clean room operation.

F. Supp. 1485 (D. Minn. 1985) (reverse engineered, but subsequent program was an infringement of copyright).

[47.3] See Boeing Co. v. Sierracin Corp., 738 P2d 665 (Wash. 1987).

Page 3-20:

Add after last paragraph of subsection.

Acquisition of the product for reverse engineering must be lawful and the eventual new product must not violate other proprietary rights of the software developer. With reference to computer software, this additional restriction commonly involves copyright protection of the coding of the original program. Even if lawfully reverse engineered, the code cannot be copied, nor can there be literal replication of the complex organization of a program.[49.1] For other products, of course, similar restrictions may derive from patent law.

[49.1] See S&H Computer Sys., Inc. v. SAS Inst., Inc., 568 F. Supp. 416 (MD Tenn. 1983) (there was a genuine issue of material fact precluding summary judgment on question of whether licensee breached confidentiality imposed under license agreement pertaining to statistics software that it acquired with purpose of reproducing organization and functions of program;

lock, the defendant obtained the ability to program a method of breaking the copy barrier by reverse compiling the Prolock program from disks that were properly purchased, but were purchased subject to a shrink-wrap license that purported to prevent the licensee from transferring, decompiling, disassembling, or translating the Prolock program without consent.

The court held that there was no infringement when the Prolock program was loaded into a computer by the employees of the defendant. Loading into memory is an essential step in the utilization of the Prolock program and is protected under Section 117.

The court also concluded that, absent the Software License Enforcement Act, this "contract" would not be enforceable because it is a contract of adhesion. According to the court, however, the Software License Enforcement Act is preempted by copyright law. The Act inappropriately gives a perpetual right to prevent copying for any purpose. This exceeds the protection under the Copyright Act, which has an exemption in Section 117 for some copying and permits control of the right to make copies for a statutorily limited period of time. Similarly, according to the court, the Act "prohibits" decompiling and preparation of derivative works. This latter right is regulated by the Copyright Act and state law cannot create "equivalent rights." The Act "has invaded the exclusive province of the federal Copyright Act, and has gone beyond trade secrets law by outlawing reverse engineering."

> Since the [Act] has touched upon the area of federal patent and copyright law, the provisions of the Prolock licensing agreement are unenforceable to the extent they are contrary to the policies of the federal Copyright Act. . . . Since the license agreement is unenforceable, it cannot buttress Vault's claim that Quaid has used "improper means" to discover the alleged trade secret. . . . Decompiling, disassembly, and reverse engineering are all proper means of discovering any trade secret which may be contained in Prolock.

PART B. CONFIDENTIALITY

¶ 3.06 MISAPPROPRIATION AND PROTECTED RELATIONSHIPS

Page 3-18:

Add note 44.1 at end of first paragraph.

44.1 See Burten v. Milton Bradley Co., 563 F2d 461 (1st Cir. 1985) (inventors of game revealed their invention (secret) to defendant, a game

[b] Sale of a Product: Reverse Engineering

Page 3-17:

Add after last paragraph.

UTSA describes "reverse engineering" as a "proper" means of acquiring the secret. It describes the means of reverse engineering in the following language: "Discovery by 'reverse engineering' [means] starting with the known product and working backward to find the method by which it was developed. The acquisition of the known product, of course, must also be by a fair and honest means, such as purchase of the item on the open market for reverse engineering to be lawful." [42.1]

Viewed as a question affecting the underlying secrecy of the allegedly protected information, ease of reverse engineering relates to the question of the extent to which the mere dissemination of a product can be treated as public disclosure of the alleged secret. Readily reverse engineered secrets may, in fact, not be protectable secrets at all unless they are disseminated only under effective confidentiality restriction.[42.2]

This issue differs in form and in substance from the question of whether a person who uses or discloses the secret without authorization can be subject to damage or other claims because of this use. Basically, an entity that actually reverse engineers a product and discovers a secret can use that information so long as, in doing so, it does not violate copyright or patent rights in the technology.[42.3] This "individual" dimension of the reverse engineering issue protects third parties, but only if they actually discovered the secret by reverse engineering and not by a breach of confidence.[42.4]

The right of the purchaser to reverse engineer and the effect of dissemination as a form of disclosure coalesce in important respects regarding mass-market software. It is generally assumed that even with a large number of people, distribution of a secret under conditions of confidentiality retains secrecy. This premise arises by analogy to large corporations, in which the number of employees exposed to a secret

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[42.1] UTSA § 1, Commissioner's Comment.

[42.2] See J.A. Preston Corp. v. Fabrication Enters., Inc., 127 AD2d 981 513 NYS2d 51, (NY App. Div. 1987).

[42.3] See EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1485 (D. Minn. 1985) (reverse engineering may have been valid, but subsequently developed program infringed copyright).

[42.4] See S&H Computer Sys., Inc. v. SAS Inst., Inc., 568 F. Supp. 416 (MD Tenn. 1983) (alleged reverse-engineered product violated copyright and was apparently discovered in violation of confidentiality agreement); Boeing Co. v. Sierracin Corp., 738 P2d 665 (Wash. 1987) (aircraft window supplier misappropriated designer's trade secrets even though the secrets could have been reverse engineered).

Ordinarily, when investment cost is referred to by a court, it is coupled with reference to the efforts made by the developer to maintain secrecy over the work. This joint reference occurred, for example, in *Dickerman Associates v. Tiverton Bottled Gas Co.*[22.3] There, the court upheld trade secret protection for a computer program designer against misappropriation of a so-called "Jobber Management System." The large cost of development was followed by relatively extensive efforts to retain aspects of the system in secrecy.

[22.3] 594 F. Supp. 30 (1984).

¶ 3.05 SECRECY

[1] Internal Security Procedures

Page 3-11:

Add at end of note 23.

The standard of reasonable security precautions is expressly adopted in UTSA, which contains a definition of trade secret that concludes that the information "is the subject of efforts that are reasonable under the circumstances to maintain its secrecy." UTSA § 1(4)(ii).

Add at end of note 24.

Compare Engineered Mechanical Servs., Inc. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984) (clearly identified trade secrets will be protected against disclosure by former employee where confidential relationship existed, even though contract between parties did not include covenant prohibiting disclosure of secrets).

Add at end of note 25.

See Kozuch v. Cramar Video Center, 478 NE2d 110 (Ind. Ct. App. 1985) (computer customer list is secret under UTSA where strict instructions to programmers and instructions concerning maintaining security of disks by locking them up established reasonable efforts to maintain secrecy of list); Aries Information Sys., Inc. v. Pacific Management Sys. Corp., 366 NW2d 366 (Minn. App. 1985) (software system designed to accommodate accounting and reporting activities of school districts and governmental bodies was trade secret, since it had independent economic value from being unknown and available solely to proprietor of the secret and since adequate security measures were taken to protect secrecy); Sigma Chem. Co. v. Harris, 605 F. Supp. 1253 (ED Mo. 1985) (product data and vendor files are trade secrets where they are unknown outside of employer's business and compiled only through substantial effort, restricted to access by only a few select employees, and otherwise safeguarded by active security measures).

cur in connection with programming techniques or with the subject matter and thrust of the program development itself. The clearest illustration of such an eventuality occurs where the underlying effort and development that leads to the combination requires substantial work in bringing together diverse, albeit well-known, sources of information.

This occurred in *Continental Data Systems, Inc. v. Exxon Corp.*[15.1] In *Continental Data,* the developer of software designed to assist attorneys in managing caseloads of 'no fault' liability claims brought an action against the developer and distributor of a competing system. The court concluded that there was a genuine issue of material fact as to whether the program constituted a "trade secret" and whether the competitor improperly used information contained in the sales manual containing those secrets. This result held even though the design of the program had been obtained by research into and compilation of systems used nationally by attorneys for handling such cases. The court observed:

> [Defendant] argues that the ... forms and data ... are standard, common place and well-known to personal injury attorneys. Plaintiff's own employees admit that to be true. The information used to select or create the programs' output was obtained from interviews with lawyers who allowed plaintiff to copy their files, and from copying forms from books. ... Exxon [argues] that
>
> [m]atters of public knowledge or of general knowledge in an industry cannot be appropriated by one as his secret. [However, the] fact that individual forms and samples found in the sales materials were compilations of public information does not preclude a finding that the combination of the included elements affords a plaintiff competitive advantage and is not itself in the public domain. The combination of information contained in the sales materials reflected market research performed by plaintiff and decisions to include and exclude elements from a larger pool of data. It is this, rather than the data contained in the individual forms known generally among personal injury lawyers, which may contain a sufficient degree of novelty, however slight, to be excluded from general knowledge, and may qualify the sales manual as a trade secret.

[15.1] 638 F. Supp. 432 (ED Pa. 1986).

Add at end of note 15.

See also Engineered Mechanical Servs., Inc. v. Langlois, 464 So. 2d 329 (La. Ct. App. 1984) (court recognized that software was potentially a trade secret where 75 percent consisted of public domain elements, but it concluded that developer had no intention to transfer any rights in program to employer and, thus, program was not trade secret of employer).

In appropriate cases, the concept of relative secrecy permits retention of secrecy protection despite inadvertant disclosure of the secret to some third parties without any effort to retain secrecy.[9.2]

Whether made explicit as in the UTSA or as developed implicitly by the courts, the idea of relative secrecy balances the degree and character of effort used to protect the secret against the value and ease of discovery of the secret material. A combination of expensively developed materials and relatively explicit instructions about confidentiality to those who handle the secrets should lead to protection of trade secrecy status.[9.3]

[9.2] See B.C. Zeigler & Co. v. Ehren, 141 Wis. 2d 19, 414 NW2d 48 (Wis. Ct. App. 1987) (inadvertant disclosure of customer information in batches of discarded scrap paper does not relinquish trade secret status and injunction can be issued against purchaser of paper).

[9.3] Dickerman Assocs. v. Tiverton Bottled Gas Co., 594 F. Supp. 30 (1984) (computer software involving management system program contained trade secrets because of large investment involved in developing program and substantial efforts to protect secrecy); Kozuch v. Cramar Video Center, 478 NE2d 110 (Ind. Ct. App. 1985) (computerized customer list with purchasers of video systems and participants in video rental club was "trade secret" under UTSA; strict instructions to programmers and maintaining security of disks by locking them up established reasonable efforts at secrecy); Sigma Chem. Co. v. Harris, 605 F. Supp. 1253 (ED Mo. 1985) (product data and vendor files are trade secrets where they are unknown outside of employer's business, compiled only through substantial effort, restricted to access by only a few, select employees, and safeguarded by active security measures); Electro-Craft Corp. v. Controlled Motion, Inc., 332 NW2d 890 (Minn. 1983) (trade secret status as to motors not appropriate because of inadequate security measures).

¶ 3.04 NOVELTY

Page 3-6:

Add after second paragraph.

The requirement of novelty provides a continuing focus of litigation in dealing with trade secret claims. While absolute, or even substantially unique innovation, is not required for trade secret status, the basic premise in this field is that in order to qualify for trade secret protection methods, products, and processes must actually not be already known among the relevant public to which the secret would be pertinent. This premise will often require a factual assessment of what is, and is not, known in the trade, but it will also often be reduced to a matter of policy judgment. Essentially, given the character of the claimed secret state law and that because of the "intangible nature of a trade secret, the extent of the property right therein is defined by the extent to which the owner of the secret protects his interest from disclosure to others." [2.2]

While it held that a property interest existed, the Court concluded that the disclosure procedure did not constitute a taking, at least in several of the statutory formats involved. Central to this result was the Court's view that no taking of property occurs unless the governmental action interferes with a "reasonable investment backed expectation." This did not exist except during a brief period in which confidentiality was expressly created under the regulatory statute. During other periods, even though the UTSA prohibits disclosure by governmental officials of secret data, this statute did not create a "guarantee of confidentiality." [2.3] This was especially true during the period in which the EPA provisions expressly contained elements of disclosure. Monsanto's expectations were defined in light of the character of the statute. Although there was a property interest in secrecy, it extended only insofar as the regulatory statute permitted.

In addition to the more common analyses that focus on the property characteristics of trade secrets and other confidential materials, courts may develop a concept of corporate or business entity privacy. An important illustration of this concept occurs in situations where a business has submitted data or analyses to a governmental agency and the claim is that of a third party seeking disclosure of this information to it.

[2.2] Id.

[2.3] See 18 USC § 1905. See generally Chrysler Corp. v. Brown, 441 US 281 (1979) (defining conditions under which disclosure of trade secret by federal agencies can be prevented; held, TSA does not convey private right to enjoin disclosure of secret, since this is a criminal statute). According to the decision in *Chrysler,* agency action must be challenged under the Administrative Procedure Act or agency policies themselves. Where the disclosure will occur under Freedom of Information Act procedures, that act is not usable to prevent disclosure by third-party action. Compare Management Science Am., Inc. v. Pierce, 598 F. Supp. 223 (ND Ga. 1984) (developer of software under contract with Department of Housing and Urban Development (HUD) did not establish basis for actionable concern that disclosure of its software by HUD was about to occur and was not entitled to an injunction). See also Hercules, Inc. v. Marsh, 659 F. Supp. 849 (WD Va. 1987) (company providing information to Army for compilation of directory could not bar disclosure of the information under FOIA and could not claim confidential material because it could show no threat of competitive injury by disclosure).

¶ 3.02 DEFINING PROTECTED INTERESTS

Page 3-3:

Add after first paragraph.

Although there is no true dispute about the primary characteristics of secrets able to be protected under tort concepts, definitions other than those promulgated in the Restatement are frequently used in the cases. The major competing definition of a trade secret was promulgated in the Uniform Trade Secrets Act (UTSA).[1.1] In describing the applicable cause of action, UTSA distinguishes between "misappropriation" and "trade secret." The definition of the latter reads:

> Trade secret means information, including a formula, pattern, compilation, program, device, method, technique or process, that:
>
> (i) Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure, and

[1.1] Uniform Trade Secrets Act (1980 Approved Draft), 14 ULA 537 (1979).

Although not directly dealing with this question, the court in *Sun Studs, Inc. v. ATA Equipment Leasing,*[165] held that the provision of unlicensed software maintenance services for a patented system infringes the patent on the system.

The invention in this case involved a computer-assisted technology used in sawmills. Systems supplied by the defendant to customers violated the patent. The court held that, "if use of a device constitutes infringement, then maintenance of the device is an infringement. Thus an injunction against infringement includes a prohibition of maintenance and service work."

The court granted the injunction against maintenance and against further installations because, in part, the injunction was necessary to protect the exclusive licensee. The court, however, made a limited modification of the injunction to allow completion of some systems and maintenance of completed systems in order to protect the third-party customers, subject to royalty payment to the patent owner.

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[165] 655 F. Supp. 1013 (D. Or. 1987).

isolates terminals that have failed in multi-terminal systems and quickly restores service to the working terminals.

The preamble describing an "automatic shunt system for bypassing a data terminal" did not create a limitation to a system where each terminal is supplied with a means of sensing data and switching into and out of the loop. The preamble "simply states that a system is being claimed and its purpose is to bypass a data terminal."

> [Testimony was that] a single sensor accompanied by the right switching mechanism is equivalent to a sensor at each terminal, that the interchangeability of the two was well known, and that the inventor himself used a multiplexor in commercializing the invention. [A] reasonable jury could have found that a single sensor with multiplex switching is the equivalent of multiple sensors and that these are within the scope of the limitation to "means for sensing" in claim 1.

Infringement questions in the computer field can also stem from activities relating to software used in connection with the primary system. Essentially, questions exist whether use of applications software to operate a patented computer system constitutes an infringement of the underlying patent even if the license permits such use. The issue, of course, concerns defining the extent to which the patent holder can restrict use of a patented device or process.

Following the controversial *Texas Instruments* decision, the Federal Circuit contained its review of infringement standards with a sharply divided decision in *Pennwalt Corp. v. Durand Wayland, Inc.*[164] In *Pennwalt,* the court held that a patent for a hard-wired fruit sorter was not infringed on by a computer-controlled sorter since the memory function in the computer-driven sorter was neither a literal infringement nor the equivalent of a position-detecting procedure in the patent.

As to the alleged literal infringement, the court concluded that the disclosed embodiment of the patented machine, the physical position detector, was a limitation on the "means" of the mean-plus-function patent.

> [S]ection 112, paragraph 6, rules out the possibility that any and every means which performs the function specified in the claim

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Jacquard card digitizer does not cover a system that digitizes pictorial information in a form so that Jacquard cards with the pictorial information can be created); In re Certain Dynamic Random Access Memories, Components Thereof, and Products Containing Same, ITC No. 337-TA-242 (June 1987) (one patent infringed by Samsung process of producing DRAMs, but other patent is not the same process literally or by equivalents).

164 833 F2d 931 (Fed. Cir. 1987).

allegedly infringing measuring machines or to what peripheral equipment and software it used, plaintiff was properly required to establish the character of use and failed to do so).

Add at end of note 149.

See also United Business Communications, Inc. v. Racal-Milgo, Inc., 591 F. Supp. 1172 (D. Kan. 1984) (based on theories of offensive estoppel, previously established misconduct on part of patent owner was usable in current action to absolve alleged infringer from liability). Recent decisions in the patent field generally have demonstrated an apparently enhanced willingness to impose substantial damage awards for patent infringement. See generally Cook, "Massive Damages and Other Tough Remedies for Patent Infringement: The Dawn of a New Era," 3 Computer Law. 22 (November, 1986). See also Indecor, Inc. v. Fox-Wells & Co., 642 F. Supp. 1473 (SDNY 1986) (treble damages and attorney's fees where infringement was wilful).

Replace first citation in note 151 with the following.

RCA Corp. v. Applied Digital Data Sys., Inc., 730 F2d 1440 (Fed. Cir. 1984);

Add at end of note 152.

See also Stewart-Warner Corp. v. City of Pontiac, 767 F2d 1563 (Fed. Cir. 1985) (patent for sports scoreboard involving display system capable of producing moving video image in more than eight shades of gray was valid and infringed by defendant's scoreboard); King Instrument Corp. v. Otari Corp., 767 F2d 853 (Fed. Cir. 1985) (patent for automated swing arm for loading tapes of cassettes was valid and infringed). See Fonar Corp. v. Johnson & Johnson, 630 F. Supp. 581 (D. Mass. 1986) (patent relating to method of detecting cancer through detection and analysis of electromagnetic waves was not infringed).

Page 2-42:

Add at end of note 155.

See Hughes Aircraft Co. v. United States, 717 F2d 1351 (Fed. Cir. 1983) (patent claim covering method of controlling velocity and orientation in a satellite stabilized by use of spin stabilization methods was not obvious in light of prior art; under doctrine of equivalents, patent was infringed by government's store-and-execute spacecraft).

Page 2-43:

Add after last paragraph.

In a controversial decision, the federal circuit court may have established a new standard that effectively limits the scope of equivalence

This development substantially expands the scope of patent protection but creates even more serious issues of conflict between patent and copyright law claims regarding screen displays.[97.2]

[97.2] See ¶ 1.08A, this Supplement.

PART C. NOVELTY, UTILITY, AND OBVIOUSNESS

¶ 2.11 ISSUES BEYOND SUBJECT MATTER

Page 2-28:

Add note 97.1 at end of first sentence in last paragraph of section.

[97.1] There are also significant issues concerning allocation of ownership for an invention developed by an employee and concerning definition of the scope of licensing flexibility allowed in the context of an underlying patent. As to licensing issues, see generally ¶¶ 5.03–5.09, main volume. Questions about ownership are discussed in Chapter 4. See ¶¶ 4.02–4.06, main volume. See also Aetna-Standard Eng'g Co. v. Rowland, 493 A2d 1375 (Pa. Super. Ct. 1985). In *Aetna Standard,* the employee was the owner of a patented invention and was not obligated to assign it to the former employer where the employee's work on the invention was within the normal scope of his employment as a general staff engineer, but his work did not receive extra compensation and the employer made no claim to the invention until after the employee was discharged. However, the employer received shop rights in the form of nonexclusive right to use the invention because it was developed with the employer's resources.

¶ 2.12 NOVELTY

[1] Prior Invention

Page 2-29:

Replace citation in notes 100 and 103 with the following.

RCA Corp. v. Applied Digital Data Sys., Inc., 730 F2d 1440 (Fed. Cir. 1984).

Add at end of note 102.

See Carlisle Corp. v. Hayes, 635 F. Supp. 962 (SD Cal. 1986) (patent covering computer control stick assembly is not invalid for anticipation).

PART A. CLAIMS AND SCOPE

¶ 2.02 PATENT SYSTEM OVERVIEW

Page 2-4:

Add note 4.1 at the end of runover sentence.

4.1 See AB Dick Co. v. Burroughs Corp., 798 F2d 1392 (Fed. Cir. 1986) (inequitable and improper disclosure of prior art rendered the patent unenforceable even though the flawed disclosure was discovered by the examiner and led to preliminary rejection of claims that were then cured by amendment).

¶ 2.03 CLAIMS

[1] Defined Scope

Page 2-5:

Add after last full paragraph.

Failure to disclose prior art in the original patent application may be a basis for subsequent invalidity of any patent issued. The standards for what must be disclosed can be severe. For example, in *In re Certain Dynamic Random Access Memories, Components Thereof, and Products Containing Same,*[11.1] in context of a wide-ranging importation law litigation, a patent claim was held invalid because a prior decoding device was not disclosed in the original patent application.

> The inventor's notebook clearly showed that the inventor thought that his binary decoder alone was not patentable. There was enough information . . . to indicate to the patent attorney that he should do some research on the GME . . . Decoder. It also contained enough information so that a reasonable person should have known that the GME decoder was *a material* prior art that should be disclosed to the Patent Office. The Texas Instruments attorney had a duty to disclose . . . and was negligent in failing to do so."

11.1 ITC No. 337-TA-242 (June 1987). See also Hemstreet v. Burroughs Corp., 666 F. Supp. 1096 (ND Ill. 1987) (patent for character recognition system unenforceable because of failure to call prior art to attention of Patent Office).

¶ 1.14 REMEDIES

Page 1-73:

Add at end of note 210.

See generally Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1325 (ED Pa. 1985) (plaintiff in infringement action is entitled to post-judgment interest; however, since infringement commenced from date of registration, award of attorney fees is barred by statute).

Page 1-74:

Add at end of note 212.

See Ritman Corp. v. Applied Concepts, Inc. 387 NW2d 619 (Iowa App. Ct. 1986) (despite admitted breach of an exclusive license, no damages were awarded where the cost of developing the program was fixed, and any claim of lost profits became speculative when inventory of the program was destroyed by fire).

Add note 213.1 at end of third sentence in first complete paragraph.

213.1 See Bly v. Banbury Books, 638 F. Supp. 983 (ED Pa. 1986) (defendant admitted infringement, but damages limited to statutory $250 as there was no evidence to sustain a claim of willful infringement where the defendant's acts merely involved loading a diskette containing plaintiff's program into a computer and using it to print correspondence and advertising copy in a certain typeface; it was not proven that the defendant knew this was a copyright infringement, although loading the program produced an infringing copy for some period of time).

Add after first full paragraph.

The copyright proprietor has a right to preliminary injunction to prevent harm under standards identical to those found in other fields. After the injunction is granted, the enforcement issue may require consideration of statutory exceptions that may restrict the scope of injunctive relief.[214.1]

214.1 See Apple Computer, Inc. v. Formula Int'l, Inc., 594 F. Supp. 617 (CD Cal. 1984) (held, actions of making ROM copies not justified by defendant's ownership of copies containing programs — Section 117 only allows copies for internal use; they are not to be provided to others). In *Apple Computer, Inc.*, after an injunction was granted against the defendant's distribution of products with copies of Apple's software, the defendant altered its computer and began sales of noninfringing machines. It also sold shell computers or kits and, along with them, ROM kits containing a copy of Apple's software. Formula International claimed that these ROM's were per-tion" rule because of the elements of the work (the program, data compilation, and manual) formed a single commercial unit. In this case, the court emphasized that the data in the program was derived from the manual and that the manual was essential to effective use of the program. The two were never sold separately.

The district court properly held that

> the average customer could not use the software without a manual. The manual was, for all intents and purposes, the instruction sheet for the use of the software. . . . [The] basic purpose of copyright notice is to protect innocent infringers, a concern not present in the instant controversy. Both Jaffarian and Labbie knew that the data compilation on the software was derived from Koontz's manual. Jaffarian, in fact, was sufficiently concerned to obtain legal advice, which was to the effect that he was free to use the data compilation on the software. Regardless, these defendants were 'not innocents misled by any omission of a copyright notice on the software.' The application of the unit publication doctrine under these circumstances is inherently fair . . . Koontz's data compilation contained in the software was entitled to copyright protection.

The adequacy of notice attached to supplemental material, rather than the program or its display, was also considered in *Lasercomb America, Inc. v. Holiday Steel Rule Die Corp.*[197.2] The court there held that a copyright notice on manuals accompanying a computer assisted design and manufacturing program adequately preserved the copyright in the program. It reached this conclusion without being required to determine whether the manual and program were a single commercial unit because the defendant "admitted . . . that he received a complete set of manuals along with the [program] disks." The evidence apparently indicated that this was a limited distribution program and caused the court to focus on the adequacy of notice to the defendant.

A related notice issue involves what portion of the program display must contain notice where a copyright is claimed in the displayed material, rather than in the underlying program. The issue is whether notice must be on the actual, protected display. The proper answer is that this is not required so long as the notice appears in a form that will be visible to the user whenever the program is started up. The court in *Digital Communications Associates, Inc. v. Softklone Distributing Corp.*,[197.3] concluded that:

[197.2] 656 F. Supp. 612 (MDNC 1987).

[197.3] 659 F. Supp. 449 (ND Ga. 1987).

One federal district court has interpreted this language to overturn prior circuit court decisions and bar a copyright action against a state university for violation of a computer program copyright. The court in *BV Engineering v. University of California,*[188.6] held that the Copyright Act fails to *expressly* subject state governments to copyright claims. The Copyright Act simply refers to a right of action against "anyone" who violates the exclusive rights in copyright. This, the court held, fails to make the "necessary unequivocal expression of congressional intent . . . which is a prerequisite to a finding that Congress has exercised its power to create a cause of action . . . against an unconsenting state. . . ."

Since federal copyright preempts all state copyright law, this effectively leaves the copyright owner without a remedy against state agencies. Even the court in *BV Engineering* expressed its view that this outcome is not appropriate, but the court felt bound by the Supreme Court's newly adopted approach to Eleventh Amendment analyses.

While federal law may preclude copyright actions against state agencies breaching rights in computer software, it does not necessarily preclude actions based on other grounds. The grounds that are most readily usable take the form of claims based on violation of trade secrecy. The enforceability of this claim depends on state law doctrines regarding sovereign immunity.

In *Lane v. Commonwealth,*[188.7] for example, Lane was in the business of collecting public financial information and statistics, compiling computer data bases, and selling computerized compilations of financial information. Lane alleged that she maintained these as trade secrets, but that employees of the State wrongfully and knowingly received the trade secret information that they subsequently used to create "an accounting system and a computerized data base" that they continued to use. The Massachusetts Supreme Court held that "if Lane proves that the Commonwealth, acting through one or more agents, wrongfully is using Lane's trade secrets, an injunction properly may be issued against the State officials and employees who are responsible for the misuse of her trade secrets. We see no need, however, for an injunction against the Commonwealth itself or the bureau or the department."

[188.6] 657 F. Supp. 1246 (CD Cal. 1987).

[188.7] 401 Mass. 549, 517 NE2d 1281 (Mass. 1988).

Page 1-69:

Add at end of subsection.

The relationship between fair use and commercial purposes or applications of copyrighted works was emphasized by the Supreme Court in *Harper & Row Publishers Inc. v. Nation Enterprises.*[188.1] In that case, a majority of the Court held that limited verbatim excerpts from unpublished presidential memoirs was not a fair use. It indicated that a commercial use of copyrighted material was "presumptively" unfair.

The key to understanding the commercial character of a use, however, may lie in examining the degree to which the allegedly infringing use preempts or appeals to the same commercial applications that the primary work would be used in. For example, in *Supermarket of Homes, Inc. v. San Fernando Valley Board of Realtors,*[188.2] the Ninth Circuit rejected an argument that reproduction of real estate multiple listing service materials constituted a fair use of the copyrighted listings. The use of the copyrighted materials by competitors was not a "fair use" where the competitors substantially duplicated the materials and made the same commercial use of the materials, as complying members of the multiple listing association did, by providing information on residential housing in order to sell houses and earn money. This use affected the market for the copyrighted work.

In contrast, an unauthorized computerization of factual information contained in a book that listed used car prices or values was a fair use of the underlying work in *NADA Services Corp. v. Business Data of Virginia.*[188.3] In that case, the defendant purchased a copy of the plaintiff's book listing prices for various used cars. It then entered the data from this book into a computer data base that it used to assess values of vehicles for purposes of various state revenue agencies. It did not sell the tapes, but only the appraisal services.

The court indicated that the transcription of the data into a computer format was not an infringement since the use made in the computerized form was essentially the same use that was intended for the copies of the books that had been properly purchased by the defendant. Even if there was an infringement, the court held that the use made by the defendant was a protected fair use.

> BDV's use of the information contained in the NADA Guides is clearly a commercial use, for BDV receives monetary compensa-

[188.1] 471 US 539 (1985).

[188.2] 786 F2d 1400 (9th Cir. 1986).

[188.3] 651 F. Supp. 44 (ED Va. 1986).

admitted an infringement, but the court limited damages to statutory damages of $250. The defendant's acts involved loading a diskette containing plaintiff's program into a computer and using it to print correspondence and advertising copy in a certain typeface. Although loading the program produced an infringing copy for some period of time, it was not proven that the defendant knew this was a copyright infringement. In contrast, the court in *Vault Corp. v. Quaid Software Ltd.*[173.2] held that loading a program into memory was essential to use of the program and thus protected under Section 117. In both cases, of course, courts reached the predictable results that merely loading the program into memory does not justify substantial sanctions against the computer user.

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into computer form from properly purchased book of data does not constitute infringement where the purpose of the data entry was identical to the use contemplated for the book itself).

[173.2] 655 F. Supp. 750 (ED La. 1987), reprinted at 33 PTCJ (BNA) 389 (1987).

Page 1-65:

Add at end of last full paragraph.

The limited nature of the Section 117 right to make copies was also underscored by the court in *Apple Computer, Inc. v. Formula International Inc.*[175.1] In this case, after an injunction was granted against Formula's distribution of products containing copies of the Apple Computer operating system software, Formula began marketing computers that did not infringe the Apple copyrights. It also sold "shell" computers or computer kits and, along with them, ROM kits containing a copy of the Apple software. In defense of the obvious claim of infringement and violation of injunction, Formula claimed that marketing these copies was permitted under Section 117.

The court properly rejected this claim as a subterfuge, holding that making ROM copies was not justified by Formula's ownership of a diskette with a copy of the ROM program contained on it. Section 117 only allows copies for personal or internal use; they cannot be marketed to others. The use attempted by Formula was not limited to internal functions and thus was not protected under Section 117.

In addition, Section 117 authorizes copies only to the extent they are essential to the owner's use. The court held that this only permits copying that is no more permanent than is reasonably necessary, and the copies for marketing purposes exceeded this limitation.

[175.1] Apple Computer, Inc. v. Formula Int'l, Inc., 594 F. Supp. 617 (CD Cal. 1984).

gram. In *Broderbund, Inc. v. Unison World, Inc.,*[165.33] the court held that the various menu screens, input formats, and sequences of operation in a printing program entitled the "Print Shop" were distinguishable from the underlying ideas and, consequently, protectable under copyright and were infringed by a competing program.

The defendant, Unison, was a company engaged primarily in converting existing programs to operate on additional software systems. The plaintiff and defendant held some discussions regarding conversion of "Print Shop" into format for IBM machines (the program was originally available for Apple computers). During the negotiations, Unison began to develop a look alike program, copying material from "Print Shop." When negotiations broke down, Unison completed work on an "enhanced" version of "Print Shop," using up to ten menus copied from the original and using the same, general user interface. It distributed this program as "Printmaster."

The court rejected a claim that the function of a printing program required similar operative menus and sequences on the screen, referring to another printing program distributed by the plaintiff. It noted:

> The functions . . . are . . . substantially the same [and so therefore are the ideas. But the] menu screens . . . sequence of screens [and] the entire structure and organization of the user interfaces are different. . . . [The] structure, sequence, and layout of the audiovisual displays in "Print Shop" were dictated primarily by artistic and aesthetic consideration and not by utilitarian or mechanical ones . . . any designer of any program that performed the same functions as "Print Shop" had available a wide range of expression. . . .

Protection of screen layout material was also granted in *Digital Communications Associates v. Softklone Distributing Corp.*[165.34] As in *Broderbund,* the display material in *Digital* was purely in the nature of forms and instructions that served, in this case, as a status screen indicating what commands were available and what was occurring in the program. The court held that it was a protected compilation of commands from the underlying program and that the second program infringed this compilation. As in *Broderbund,* there was also an express conclusion that the layout was not dictated by the functions of the underlying program and, indeed, that a large number of different layouts of

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[165.33] 648 F. Supp. 1127, 231 USPQ (BNA) 700 (ND Cal. 1986). See also M. Kramer Mfg. Co. v. Andrews, 783 F2d 421 (4th Cir. 1986) (holding that copyright of audiovisual displays also protects the underlying program code).

[165.34] 659 F. Supp. 449 (ND Ga. 1987).

only portions of the original are translated and added to in the new environment. Similarly, merely general or generic similarity is not prevented.

In *Plains Cotton Cooperative Association v. Goodpasture Computer Service, Inc.*,[165.30] the Fifth Circuit upheld a denial of a preliminary injunction for the owner of a computer program in what the court described as a rejection of *Whelan*. The software was designed to provide users with information about cotton prices and to provide accounting services for members of an agricultural cooperative. The defendant took a copy of this software when he left Plains' employ. Eventually, they developed a competing version of the cotton exchange program for operation on personal computers.

The court concluded that there was no error on the trial court's part in finding insufficient evidence of "organizational copying" in the transition from mainframe program to personal computer program. As testimony indicated, this translation required "enormous changes" in the program and this was sufficient to support at least a tentative conclusion that there was no copying.

The Fifth Circuit court acknowledged that the underlying issue required a determination of the extent of protection afforded under copyright. For this, the court referred to a district court analysis in *Synercom Technology* holding that input formats were ideas and not expression.

> [The court in Whelan] rejects the premise developed in Synercom that there is a difference between copyrightability of sequence and form in a computer context and any other context . . . holding that the structure, sequence and organization of computer programs are copyrightable. We decline to embrace Whelan for two reasons. First [the record here is incomplete.] Second, [defendant] presented evidence that many of the similarities between the . . . programs are dictated by the externalities of the cotton market. . . . To that extent, the facts of this case fit squarely within Synercom's powerful analogy to the hypothetical development of gear stick patterns. . . . The record supports the inference that market factors play a significant role in determining the sequence and organization of cotton marketing software, and we decline to hold that those patterns cannot constitute ideas in a computer context.

Among the factors the court referred to as dictating format was that the marketing programs are designed to communicate the same information as is contained on a cotton recap sheet and the similarities of the programs in part reflect an intent to convey the same standardized information.

[165.30] 807 F2d 1256 (5th Cir. 1987).

> program. Their order and organization can be more closely analogized to the concept of wheels for the car rather than the intricacies of a particular suspension system. Moreover, in contrast to. . . . SAS institute [where] the defendant had "slavishly copied" plaintiff's work, such copying is impossible here, given the difference between the hardware for the Atari and IBM computers.[165.27]

Q-Co. Industries suggests the effect of subtle distinctions in replication and the absence of "slavish" duplication resulting in reproduction of not only necessary organization, but unnecessary features. More important, *Q-Co. Industries* reflects the need to protect the second developer in addition to protecting the "original" author. Even where there is knowledge of the original work and similarity in design results, a case for infringement requires detailed repetition of the original in the face of abundant, unexercised options.

In *Whelan, SAS,* and *Uniden,* there is a clear policy choice allocating control of software translations to new computer environments. The defendants engaged in no new development except in translation itself. The conclusion was that a translation, although technically difficult and valuable, is not protected. The second party cannot literally trace the original. The original author controls commercial translations of its program.

In affirming the district court in a finding of infringement, the Third Circuit, in *Whelan Associates v. Jaslow Dental Laboratory, Inc.,*[165.28] expressly held that copyright protection for computer software goes beyond coding and extends to matters of structure, organization, and sequence. Even in the absence of substantial, literal similarity in the coding of the two programs, the court upheld a finding of substantial similarity based on organizational and structural similarities.

As previously noted, the two programs involved in this case were systems for operating a dental lab. The initial system was developed for Jaslow and, subsequently, rights in that system (Dentalab) were conveyed to Whelan. Later, Jaslow developed another program, in a different language, to perform similar functions on other computers. This was the Dentcom system. The case involved a finding that Dentcom infringed Dentalab.

The district court found an infringement in a single factual finding based on expert witness testimony. This contrasted to more traditional approaches that required first a finding of sufficient similarity based on expert testimony and second a judgment about whether the two works appear similar to the ordinary observer. The Third Circuit, however,

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165.27 Id.

165.28 797 F2d 1222 (3d Cir. 1986).

development. Uniden duplicated 38 of 44 identifiable subroutines of the original product. Many of the duplications were unnecessary.

The case deals with design choices that affect coding similarity. Throughout the development of the program, Uniden chose designs identical to Johnson choices. In one situation, the choice involved duplicating a data item or "word" described as "Barker code," which both sending and receiving units must identify for communication to be established. "In order to make its radios compatible, Uniden was required to and did copy this aspect of the EFJ program." Although the court concluded that compatibility does not justify comprehensive duplication of the original, it held that the central role of this seven-digit numerical word in the technology permitted duplication, even though Johnson did not merely use a word from published journals, but adapted known forms to its own program. Like scenes a'faire, this specific aspect of the program was too limited and central to the technology to be separately protected.

Nevertheless, the cumulation of other design choices created infringement. Uniden "decided" to use the same processing rate used by Johnson to sample incoming data and establish synchronization and detection in communications. This choice was made despite the fact that the original speed was based on limitations of the Intel chip not found in the Hitachi. Also, the higher speed possible in the Hitachi was preferable to eliminate error. The essence of the infringement, however, was not any particular choice but the cumulation of unnecessary replication. The terms and technology are esoteric, but the court's discussion suggests the theme:

> [An] LTR-compatible program could have been written without verbatim duplication. . . . The H-matrix . . . for example, can be configured in any of 32 different ways. . . . Exact duplication . . . was not the "only and essential" means of achieving compatibility. The Barker word was of necessity identical in both codes, but [duplication] of Barker word correlation techniques and sampling rates was not. [W]hile both plaintiff and defendant employed the "shifting correlator" scheme of Barker word detection, other ways of achieving the same task are recognized in the industry. . . . In addition, rather than duplicate EFJ's inverse H-matrix, the defendant could have accomplished the same task by inverting the check sum. . . . [D]efendant did not deny that more than one possible configuration of the sample error table could have been created. . . .[165.25]

In these and other respects, the recurrent decision was to duplicate, rather than to create. The design choices were not required by com-

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[165.25] Id.

The *SAS* court relied on *Meredith Corp. v. Harper & Row Publishers, Inc.*,[165.20] which involved an infringement of a textbook where the second author used a detailed outline of the original and created text within the outline. The court in *Meredith* concluded:

> I find . . . an extensive taking of the structure and topical sequence . . . in addition to the eleven percent admittedly plagiarized. . . . [While] the Meredith text contains *some* independent ideas . . . *some* independent research, *some* additional topics and some different structure, the topic selection and arrangement of the Meredith book are in substantial part the result of copying . . . not attributable to independent effort by Meredith or the necessary result of limited possibilities for organizing and presenting the material to be covered. . . .[165.21]

The analysis was proper in this case. Defining organization and structure as expression rather than as an unprotected idea is appropriate if the order and organization of material are essential attributes of the unique value of the first work. This was true in *Meredith*. In a textbook, organization and order of presentation are significant, perhaps even more so than textual expression. This importance defines the first author's interest in protecting the structure. In complex computer programs, such as SAS, the structure may be less obviously relevant to a user, but it is important to the work.

A conclusion that structure is expression is appropriate only if the duplicated structure encompasses the detail and entirety of the organization of a *complex* work. The organization infringed is not general structure, but the cumulated series of specific decisions made in organizing a complex mass of material. This is an important limitation essential to preserving flexibility for subsequent authors. The level of specificity at which structure becomes expression varies, but it cannot be set at a general level without significantly inhibiting subsequent work. A complex structure duplicated to a significant degree of detail represents infringement. As the court in *SAS* noted, a complex program presents a "virtually endless series of decisions as to how to carry out the assigned task." Duplication of some structural elements and organizational features is neither surprising nor actionable. Comprehensive duplication of virtually the entire organization, including unnecessary detail, infringes the complex structure.

The duplication of structure must not be based on independent effort or necessity arising from the subject matter and alternatives for

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165.20 378 F. Supp. 686 (SDNY), aff'd, 500 F2d 1221 (2d Cir. 1974).

165.21 378 F. Supp. at 686–687.

The defendant's activities did not clearly present socially valuable, value-added use unless translation itself was separately valuable. The defendant attempted to capitalize on the reputation of the original rather than construct a new product. It made no attempt to make substantive changes in the original. There was no proof or allegation that the ability to replicate the *entire structure* of the complex first program was essential to continued development in the field.

The court found an infringement of the original program based on a decision that the method of operation was the copyrighted expression: "The 'expression of the idea' in a software computer program is the manner in which the program operates, controls and regulates the computer in receiving, assembling, calculating, retaining, correlating, and producing useful information either on a screen, print-out or by audio communication."

The court's view of protected expression reflects a broad conception of the idea of the program. Apparently, the idea consisted simply of the notion of a computer program for "operating a dental laboratory." In the context of literature, the equivalent reasoning defines the idea of *War and Peace* as a "novel about society." The definition creates expansive protection of the original author and is unnecessary to the result.

Divorced of the strong factual case for the original author, the court's description of the protected expression as the manner in which the machine "operates," "calculates," and "receives" data defines the process itself. The error is similar to the error in *Arndt*. On balance, however, the result is best interpreted as judgment that the strength of the original author's claims outweighed constraints against protecting machine processes.

A similar but better-focused analysis occurred in *SAS Institute, Inc. v. S&H Computer Systems, Inc.*,[165.18] which involved an infringement of a multifaceted statistics program widely used in the social sciences. At the time of the alleged infringement, the program was available only for IBM computers, although SAS had begun development on versions to operate on Digital "VAX" and other computers.

The infringement involved unauthorized development by S&H of a statistical package for operation on a VAX computer. S&H obtained a license for the SAS program, receiving a source code for portions of the program. S&H violated the license contract. A source code was copied into a VAX computer, where it was viewed and modified by programmers developing the surrogate. The resulting "new" program was not

[165.18] 605 F. Supp. 816 (MD Tenn. 1985).

parent facts more closely supported the outcome, but the court's analysis dealt inadequately with analysis of expression.[165.15]

[2] Structure and Sequence: Adapting Programs

The application of the *Synercom* and *Arndt* decisions is demonstrated in a related form of computer program adaptation work. *Synercom* and *Arndt* deal with computerization of manual processes, while other cases deal with new programs based on existing software. This type of secondary development entails either of two distinct formats. In one situation, the second developer examines the first program and adapts some of its methods and techniques, but adds additional and different personalized functions and coding. Through this process, a new program with distinctive expressive and performance characteristics is created. The second common process attempts to recreate and reproduce the original program and operations, adapting them to a new computer language or hardware environment.[165.16]

Both methodologies create valuable products and entail complex, creative work. The two differ in the extent and character of reliance on the original work and in the manner in which the new product affects markets for the old. The developer who selectively uses proven approaches and aspects of the first while adding significant and nontrivial personal value merits greater protection than the literal transcriptionist.

Assessing the copyright status of either approach and the many interstitial variations that occur requires consideration of which elements of a program are protected and which elements are not. Copyright does not protect what the program does, how it conducts particular operations, or what analytical outcomes the calculations create. Copyright protects expression. Expression in a program includes the source and object code. Extending beyond that, arguably, the original programmer should control some adaptive works, even though literal reproduction of code does not occur. The mere fact that either type of adaptive computer work uses new and divergent coding does not insulate the second developer. However, protection not based on code similarity cannot be

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[165.15] Compare Rand McNally & Co. v. Fleet Management Sys., Inc., 600 F. Supp. 933 (ND Ill. 1984) (map publisher entitled to copyright protection against direct taking of mileage data into computer data base); United States Golf Ass'n v. St Andrews Sys., Data-Max, Inc., 749 F2d 1028 (3d Cir. 1984) (no protection under misappropriation theory against using plaintiff's methods of calculating amateur golf handicaps in computer program).

[165.16] See Davis, "IBM PC Software and Hardware Compatibility," 1 Computer Law. 11 (July 1984); Chertok, "Compatibility: Fair Use or Derivative Work," 2 CLR 1004 (1984).

decisions. The defendant created software that achieved the same analyses and produced similar results, but benefited from the speed of the computer and the fact that automatic calculations can more rapidly control trading decisions.

The defendant argued that the source code of the alleged infringing program was a "new and different expression of the idea of a market trading system." The court rejected this "novel" argument, treating the copyrighted manuals as a detailed flowchart used by the infringing programmer. The court's analysis accepted without close scrutiny the analogy between computer adaptation and translation from a foreign language. It assumed that the programmer's role was analogous to the medieval scribe, merely transcribing the work of another.

> [A] source code is not an entirely new, unique expression of ideas. . . . The computer programmer writes in computer language the commands necessary to implement the direction provided in the narrative. The computer language can be compared to any foreign language. . . . To a skilled programmer, the conversion of known input, the mathematical expressions needed and the methods of transferring those expressions into computer language is necessarily a mere clerical function. . . .[165.13]

It is probably correct to emphasize that mere transformation of expression into a source code does not create a distinct, new work any more than translation into French creates a new book. This leaves unaddressed the difficult issue of defining what constitutes expression and whether this right was taken in the instant case. In this regard, the court clearly confused processing capability and outcomes of calculations with protected expression. At most, the original copyright protects expression, but it cannot give the author control of analyses that create particular outcomes. Yet the court implied that this was exactly the character of the alleged infringement. It observed that one objectionable feature of the "translation" was that it enabled an experienced trader to reach a decision more rapidly than that provided by the manual procedure. Similarly, although "the skilled programmer can provide flexibility, neatness, and clarity in arranging the order of the system, the programmer . . . does not express creativity, imagination, independent thought and uniqueness."

If order and clarity of arrangement are not the expression, then what is? The court made it abundantly clear that the outcome and underlying analysis system was protected. In this regard it is clearly wrong.

165.13 Id.

Technology, Inc. v. University Computing Co.[165.9] In *Synercom,* the defendants marketed a structural analysis program with an input format innovated by Synercom. The Synercom format involved manual organization of data prior to entry in a computer. Since Synercom's computer analysis program was a commercial success, the defendants designed their analysis program to accept input identical to that used in the Synercom product. This was done with a preprocessor computer program. The FORTRAN statements in the preprocessor program were "derived directly and precisely from the copyrighted manual card formats." Synercom argued that this was an infringing translation of its copyrighted work.

The court characterized the issue as whether the "sequence and ordering" copied by the defendants was protected expression or an unprotected idea. It held that the sequence was an idea unable to be protected, analogous to an automobile manufacturer's selection of a figure-H format for manual transmissions. "The pattern . . . may be expressed in several different ways. . . . But the copyright protects copying of the particular expressions, and does not prohibit another manufacturer from marketing a car using the same pattern."[165.10] The allegations of infringement were an effort to control reproduction of a process for entering data into a program.

The court's alternative holding was that if the sequence was expression, the format was not copyrightable. There was, therefore, a distinction between idea and expression. The court's conception of the idea in the data formats encompassed the entire format.

In *Synercom,* the particular input format was not the only method available for entering data into a structural analysis program. The defendants sought "compatibility" because Synercom was a market leader. If denied the right to do so, their market entry would have been impeded, even though the processing program *core* of their product was not similar to the Synercom program. The court's decision embodies a judgment that this effect is not justified where the second author did not merely copy the first work, but authored a new work in a different technological environment as part of a much larger activity. This policy choice permits a new program in direct competition with the original. Protecting the Synercom format, however, would preempt a process for data entry and might distort future development. Based on the court's conclusion, the format can be freely replicated in any subsequent work.

Synercom involved a substantially new work. The preprocessor designed to accommodate particular data-entry procedures represented

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165.9 462 F. Supp. 1003 (ND Tex. 1978).

165.10 Id. at 1013.

examining earlier work. Subsequent workers need not operate in ignorance of the work of others, and copyright should be structured so as not to force them to do so. New technology develops with knowledge of prior work.

The copyright holder's interest must be offset by policies that maintain free use and access to aspects of a work that are or become central to the technology of the field. Such policies reduce protection in direct proportion to the increasing general importance of methods, style, or treatments, and are the result of an important distinction between copyright and patent protection. Patent, with its high entry threshold, protects basic methods. A second author should be free to selectively use portions of the original that are central to the field. Many program subroutines are or become "tools of the trade." A programmer who develops an effective method of performing a calculation does not obtain control over this method.

Einstein's discovery of the relationship between energy and matter did not create a copyright of the formula, even though the discovery was creatively significant and valuable. Limits are justified to avoid substantially restricting future scientific work. The analysis is not that no other ways exist to express the operation. The focus concerns the degree of distortion that protecting the first author would impose on future work. In many cases, the "secondary" works make equal or greater impact and entail significant creativity. Loss or inhibition of this field of development reflects a major social loss not always offset by commensurate gains in terms of "first" developer work.

The second party's interests do not justify comprehensive, literal copying of an original work, but rather, productive or developmental use. As a result, an additional factor pertains to the degree of direct copying. If an original is totally copied, doing so refutes any claim that the infringer used only important aspects of the technology and developed its own product. It increases the likelihood that unique parts of the original were duplicated and that there is a large market effect.[165.7]

There are no absolute guidelines for determining infringement; rather, a "degree of effect" analysis always applies. The issues are: How will denying protection affect the program's marketability and uniqueness? Will a decision to protect the first author preempt and distort future work in the field?

[165.7] See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1986); EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1483 (D. Minn. 1985); Q-Co. Indus. v. Hoffman, 625 F. Supp. 608 (SDNY 1985); Williams v. Arndt, 626 F. Supp. 571 (D. Mass. 1985).

Add the following new section.

¶ 1.09A VALUE-ADDED USE AND INFRINGEMENT [NEW]

"Value-added" use of a computer program occurs when a second author does more than literally duplicate a program and makes more than trivial changes in it. Instead, the second author engages in independently creative work. This type of allegedly infringing work is increasingly the focal point of copyright litigation concerning software.[165.2]

The fact that the second author engaged in independently creative work requires an analysis that balances the rights of the parties and the interests that each represents.[165.3] Some programs resemble fictional works and properly fall within an analogous analytical structure. In others, the character of the program and the technology involved requires an analysis and outcome more analogous to technical works.

The copyright proprietor desires to maintain and maximize statutory rights to control use of the original work and preparation of derivative works. This objective is supported by social policies that establish economic incentives for creative work. Two preliminary propositions arise from this basis. First, copyright infringement can occur if a conflicting work incorporates aspects of the original work that define its commercial, scientific, or creative value. Second, an infringement can occur if a conflicting work directly affects identified and realistically important markets for the original.[165.4]

The most valuable aspects of a program for a video game are different from those of a statistical analysis program. In one case, aesthetic impact is critical, whereas in the other speed and reliability of operations

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[165.2] See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1986); EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1483 (D. Minn. 1985); Q-Co. Indus. v. Hoffman, 625 F. Supp. 608 (SDNY 1985); Williams v. Arndt, 626 F. Supp. 521 (D. Mass. 1985). An infringement occurs where the two works cover essentially the same market and even though the infringer may have devoted substantial time and effort in making its own program, the code in the two programs is similar. See Lasercomb Am., Inc. v. Holiday Steel Rule Die Corp., 656 F. Supp. 612 (MDNC 1987) (infringement despite claim of substantial effort).

[165.3] See Davis, "IBM PC Software and Hardware Compatibility," 1 Computer Law. 11 (July 1984); Chertok, "Compatibility: Fair Use or Derivative Work," 2 CLR 1004 (1984).

[165.4] See infra ¶ 1.11[2], main volume. See also *Nimmer on Copyright* ¶ 13.03[b]; Sony Corp. v. Universal City Studios, Inc., 464 US 417 (1984).

of code occurs must be decided by examining that code directly. Similarity in screen displays, of course, can be used as evidentiary material in proving an infringement of the program copyright, but since they can be produced by numerous programs, mere identity in display does not prove substantial similarity in code.[151.8]

If the two aspects of the program are separately protectable, questions arise about what the nature of the work involved in the screen display is and whether it can be separately registered. As to the nature of the copyrightable work, some displays will be adequately treated as audiovisual works, a label especially appropriate for video game displays.[151.9] This label, however, seems inappropriate for displays that are textual in character or are mere forms. Ultimately, the characterization of what type of work is involved will depend on details about the display itself.

In one case, a court has held that a status screen which displayed various program commands was a copyrightable compilation of information.[151.10] The information compiled was the command and parameter terms of the underlying coded program. A compilation is copyrightable and protected as to the arrangement and selection of the information.

Regardless of the type of work involved, a separate issue exists about the extent to which computer display screens are separately registerable, a step necessary to their separate protection. Based on the foregoing analysis, it would seem that separate registration is both justified and essential in cases where the screen material has independent expressive content.

The Copyright Office is currently undertaking analysis of this issue and has held public hearings on it. In rejecting a registration for a screen display of a spreadsheet program, it commented that because "the displays are considered to be an integral part of the program, the authorship in the displays appears to be the same as that contained in the program. Moreover, the Copyright Office would not register a claim in the format or layout."[151.11] The objection to registering a simple form is proper, but as we have seen, separate registration for displays is appropriate if, on their own, they contain adequate expression.[151.12]

[151.8] Compare Whelan Assocs., Inc. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1986).

[151.9] See ¶ 1.07, main volume.

[151.10] Digital Communications Assocs., Inc. v. Softklone Distrib. Corp., 659 F. Supp. 449 (ND Ga. 1987).

[151.11] 33 Pat. Trademark & Copyright J. (BNA) 613 (1987).

[151.12] 34 Pat. Trademark & Copyright J. (BNA) 509 (1987).

Page 1-56:

Add the following new section.

¶ 1.08A SCREENS, DISPLAYS, AND CODES [NEW]

Separate issues can be raised about the copyrightability and infringement of audiovisual displays[151.1] on the one hand, and program code[151.2] on the other. While the basic ideas of requisite originality and substantial similarity are the same in the two contexts, the character of the works and how similarities are measured differs significantly.

In many programs, program code and program displays are independently important to the marketability of the program. In some cases, for example, the display screens that provide the visible contact between the user and the program are the unique and important features of the program, making it more usable by purchasers than its competition. In other cases, the screens are relatively unimportant or similar to other programs, but the major marketable benefits of the program come in its performance capabilities which are determined by the underlying code and structure.

As the fact that the two features of a program are potentially independent in value becomes more clear, the legal relationship between these two facets of the work under copyright law has become increasingly controversial and uncertain.

The question remains as to whether these are separately copyrightable works or whether the copyright on one feature extends to and protects the other. Alternatively, it must be decided whether the screen display is a derivative work from the underlying program.

In terms of the technology, two factual observations can be made. First, a particular arrangement of program code will always produce a particular screen display. That is, given the code and duplicating it, we will always reproduce the same display. In this sense, then, the code, when in a tangible form, is a copy of the display in the sense that it represents a tangible product from which the display can be reproduced.[151.3]

Second, and in contrast to the first point, various different pro-

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[151.1] ¶ 1.07, main volume and this Supplement.

[151.2] ¶ 1.08, main volume and this Supplement. See also ¶ 1.09A, this Supplement.

[151.3] Under 17 USC § 101 "copies" are "material objects . . . in which a work is fixed by any method now known or later developed and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."

garding unprotected similarity of idea with questions about the reaction of an observer to the similarity of the expression. On this latter point, substantial doubt exists about the usefulness of using an "ordinary observer" for the highly esoteric expression that exists in object or source code of computer programs.

This difficulty was recognized by the court in *Whelan Associates v. Jaslow Dental Laboratory.*[128.1] There, the court sustained a finding of substantial similarity based on the organization and structural similarities of two programs. "Ordinary observer" reactions to such similarity would have dubious relevance since the ordinary user of the program never deals with the code or structure and the observer who sees that code would need substantial expertise to determine whether any similarity of structure existed.

The Third Circuit in this context expressly approved a district court procedure of a single factual finding on substantial similarity based on expert witness testimony. It concluded that "the ordinary observer test . . . was developed in cases involving novels, plays and painting and . . . is of doubtful value in cases involving computer programs on account of the programs' complexities.

[128.1] 797 F2d 1222 (3d Cir. 1986).

¶ 1.07 AUDIOVISUAL COPIES

Page 1-48:

Add after second complete paragraph.

In *Broderbund, Inc. v. Unison World, Inc.,*[136.1] the court held that the various menu screens, input formats, and sequences of operation in a printing program entitled the "Print Shop" were distinguishable from the underlying ideas and, consequently, protectable under copyright, and were infringed by a competing program. The court rejected a claim that the function of a printing program required similar operative menus and sequences on the screen, referring to another printing program distributed by the plaintiff. It noted:

> The functions . . . are . . . substantially the same [and so therefore are the ideas. But the] menu screens . . . sequence of screens [and] the entire structure and organization of the user interfaces are different. . . . [The] structure, sequence, and layout of the audiovisual displays in 'Print Shop' were dictated primarily by artistic and aes-

[136.1] 648 F. Supp. 1127, 231 USPQ (BNA) 700 (ND Cal. 1986).

potential here, the court held that the use made by the defendant was a protected fair use.

> [The effect on the market factor] is the single most important element in determining whether there is fair use. A use which does not materially impair the marketability of the copyrighted work will be deemed fair. . . . The Court finds that defendants successfully established that BDV's use of the information contained in the NADA Guides has not, and will not, impair the market for such Guides.

Random numbering systems do not create copyright protection. In many cases, effort involved in discovering and reporting information is also treated as insufficient. In *Financial Information, Inc. v. Moody's Investors Service, Inc.*,[95.17] the Second Circuit held that bond price reporting card data was not copyrightable. It expressly rejected the view that copyright protection can be premised based on the amount of effort involved in making the compilation.

> The statute thus requires that copyrightability not be determined by the amount of effort the author expends, but rather by the nature of the final result. To grant copyright protection based merely on the 'sweat of the author's brow' would risk putting large areas of factual research material off limits and threaten the public's unrestrained access to information.

In this case, the bond cards contained only five fields of information and this was inadequate expressive material to form the basis of copyright. Furthermore, the evidence established that the effort involved in obtaining the information did not entail any substantial subjective judgment or substantial work.

The scope of coverage available under copyright law here is especially important in light of an increasing tendency of courts to conclude that copyright principles preempt competing state law claims. The court in *Moody's Investors*, for example, held that misappropriation claims were preempted by copyright, even though this left the work unprotected entirely.

> Nor do we believe that a possible exception to the general rule of preemption in the misappropriation area—for claims involving 'any form of commercial immorality'—should be applied here. We believe that no such exception exists and reject its use here. Whether or not reproduction of another's work is 'immoral' depends on

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[95.17] 808 F2d 204, 1 USPQ2d 1279 (2d Cir. 1986).

that the selections be creative in any artistic sense, only that there be selectivity exercised on other than very obvious bases.

A federal district court applied this principle to a data base, protecting significant aspects of organization. In *West Publishing Co. v. Mead Data Central, Inc.,*[95.12] West obtained preliminary relief against use of the page numbering from its case reporter system in the competing LEXIS system. The court's conclusion was that the pagination of the reporters reflected West's selection and arrangement of the cases, being an identifiable, independently valuable feature of the reporter system. Reproduction of the page numbers in a computer was infringement.

The district court ruling in *West Publishing* was upheld on appeal. The circuit court upheld the preliminary injunction against the use of the Lexis "star pagination" system, agreeing that there was a likelihood that the cross-reference system violated the West copyright in the organization and structure of its case reporters.[95.13] In finding that there was a sufficient probability for success on the merits of West's copyright claim, the court concluded that the reporter system arrangements were copyrightable in that they were the result of a substantial creative effort consisting of "labor, talent and judgment." The star pagination system would, in effect, allow the Lexis user to obtain the entire arrangement of the data in the West system. "Access to these particular numbers . . . would give users of Lexis a larger portion of what West has spent so much labor and industry in compiling." The important competitive injury that the system would have on the West publications was a major element in the decision.

This same court, however, invalidated a copyright claim for data in a parts numbering catalogue. In *Toro Co. v. R&R Products Co.,*[95.14] the Eighth Circuit denied copyright protection because the part numbers were randomly assigned by the manufacturer, holding that random assignment did not meet minimum standards of originality. As in *West*

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623 F. Supp. 1483 (D. Minn. 1985). Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 797 F2d 1222 (3d Cir. 1986) (affirming district court holding of organizational infringement). Compare Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F2d 1256 (5th Cir. 1987) (no infringement based on structure or organization of program output).

[95.12] West Publishing Co. v. Mead Data Cent., Inc., 616 F. Supp. 1571 (D. Minn. 1985).

[95.13] West Publishing Co. v. Mead Data Cent., Inc., 799 F2d 1219 (8th Cir. 1986). See also Koontz v. Jaffarian, 787 F2d 906, 229 USPQ (BNA) 381, 1986 Copyr. L. Dec. (CCH) ¶ 25,919 (4th Cir. 1986) (protection granted for complex system for estimating the cost of electrical work converted into a computer program format).

[95.14] 787 F2d 1208 (8th Cir. 1986).

Copyright does not extend to facts as such.[95.3] However, the Copyright Act does protect expression relating to facts. Copyright of written expression has some effect on the rights of data base providers or other information industries, but leaves open the reality of risk that information content can be appropriated by third parties through merely artificial changes of language.

Copyright law extends to some compilations of facts. Subject to the overriding proposition that there is no copyright in facts as such, the data base provider or other vendor of information may claim protection of the organization, selection, arrangement, and coordination of the facts it has collected and published.[95.4]

There is significant controversy about the character and scope of this protection, as well as about the underlying activity being protected. Under one view, the protection extends only to and when there is a creative exercise in selecting events, names, or facts from a larger range of possibilities.[95.5] The compiler cannot protect by copyright the specific items selected, but it can obtain protection of the overall selection and the organization or structure under which it is published. A contrasting view is that protection extends at least in part to effort; thus, large and comprehensive data bases created without selectivity should be protected.[95.6]

Other recent cases support a conclusion that *both* focuses of protection can be used by the information industry. One series of cases involves the copyrightability of telephone directories, a particularly lucrative data compilation following deregulation of the industry. The cases routinely support the conclusion that the compilation of names is copyrightable and protected, even though, at least for residence directories, the objective of the directory is to be comprehensive, avoiding selectivity.[95.7] Even though the language of some cases suggests the con-

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95.3 See generally *Nimmer on Copyright* 2-157; Denicola, "Copyright in Collections of Facts: A Theory for Protection of Nonfiction Literary Works," 81 Colum. L. Rev. 516 (1981); Gorman, "Copyright Protection for the Collection and Presentation of Facts," 76 Harv. L. Rev. 1569 (1963).

95.4 17 USC §§ 101, 103.

95.5 See also *Nimmer on Copyright* 2-41; Denicola, "Copyright in Collections of Facts: A Theory for Protection of Nonfiction Literary Works," 81 Colum. L. Rev. 516 (1981).

95.6 See Rockford Map Publishers, Inc. v. Directory Serv. Co. of Colo., 768 F2d 145 (7th Cir. 1985); Denicola, "Copyright in Collections of Facts: A Theory for Protection of Nonfiction Literary Works," 81 Colum. L. Rev. 516 (1981).

95.7 Hutchinson Tel. Co. v. Fonteer Directory Co. of Minn., 770 F2d 128 (8th Cir. 1985) (white pages telephone directory is a work of author-code represents adequate expressive content. This result is consistent not only with the infringement decisions but also with reported cases relating to data compilations.[89.5]

[89.5] See infra ¶ 1.04A, this Supplement.

[6] Machine Formats: Microcode [New]

Page 1-35:

Add the following new subsection.

Issues of copyrightability now extend to the most basic programming or software structure of computers: microcode. In the first case dealing with the copyrightability of microcode the district court in *NEC Corp. v. Intel Corp.*[89.6] ruled that microcode programs are copyrightable. The judge defined the microprograms as "a set of statements used, directly or indirectly to bring about the result of interpreting the INTEL 8086 instruction set." Copyrightability of these programs was supported, according to the court, by the fact that the "writing of microprograms is a creative endeavor" that is indistinguishable from that used in creating any form of computer program.

[89.6] 645 F. Supp. 590 (CD Cal. 1986).

¶ 1.04 COMPUTER-ASSISTED WORKS

Page 1-37:

Add at end of section.

Questions about the relative creative role of human operators and programmed computers in making copyrightable works arise in various technological contexts. The issue of attributing and measuring the creative role in such combinations has become one of the themes involved in the controversial process of "colorization" of black and white films.

Colorization involves close questions about creative or artistic control and integrity, with various parties arguing that only the original author of a work should have a right to alter its appearance by adding color to a black and white film. Even granted that such colorizing can be done, whether the new product constitutes a separate copyrightable work becomes an issue of determining whether the colorizing involved substantial new creativity.

> suits and symbols flashing rapidly in succession, and modifying the screen display, resulting in a split screen showing both the poker hand being played and the options available . . . were not trivial, they demonstrated more than a taint of originality.

As the court in *Kramer* emphasizes, protection of video games hinges on questions of copyrightability and permitted copying of ideas. Even if a work can be considered to be copyrightable, reproduction of the ideas of that work will not be barred. Thus, for example, the Ninth Circuit in *Frybarger v. IBM*,[57.3] held that a similarity in two games did not give rise to copyright liability because "[the] mere indispensable expression of [the] ideas based on the technical requirements of the video-game medium may be protected only against virtually identical copying."

[57.3] 812 F2d 525 (9th Cir. 1987).

[5] Machine Formats: Object Code

Page 1-23:

Add at end of runover paragraph.

An additional analysis protects the program code based on protection of the output through copyright principles. In this respect, the machine code is, in effect, a copy of the audiovisual work. One court noted, for example, that "[the] fact that the computer program could have been separately copyrighted does not mean that the audiovisual copyright may not protect the computer program which implements the audiovisuals any more than the issuance of a patent will not necessarily render a work noncopyrightable." [60.1]

[60.1] M. Kramer Mfg. Co. v. Andrews, 783 F2d 421 (4th Cir. 1986). See infra ¶ 1.08A, this Supplement.

[b] Operating Systems: Nonexpressive Programs

Page 1-35:

Add at end of subsection.

Following the decisions in the two *Apple* cases, it has become increasingly apparent that courts will ordinarily accept the copyrightability of object code independent of any reference to expressive output from the program.[89.1] This acceptance leads to decisions that do not closely

[89.1] See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985) (statistics program); EF Johnson Co. v. Uniden Corp.

dichotomy, the court indicated that the use of a screen to indicate the status of a program, the operation of the program by commands, and the use of two letter symbols to enter commands were "ideas" because they related the way the program received commands and reflected the results. Expression, however, existed in other aspects of the screen that had no relationship to the way the program operated, such as the arrangement of the command terms on the screen.

> [The] arrangement of the . . . commands on the status screen and the highlighting and capitalizing of two specific letters of each command have no relationship to the functioning of the status screen or of the computer program. . . . [The] status screen involves considerable stylistic creativity . . . [that could] have been expressed in a large variety of ways.

Furthermore, the court held that the screen was not merely a blank form, but that it "expresses and conveys information. . . . The arrangement of the commands under descriptive parameter headings aids the user in easier understanding of the availability, importance and functioning of the various commands. . . . The status screen clearly undertakes to express."

While courts appear willing to protect screen formats, a dispute exists about whether displays are separately registerable under Copyright Office regulations. The Office rejected a registration of screen material by Lotus Corporation relating to its 1-2-3 program. The Office noted: "[textual] screen displays embodied within the computer program that generates them are covered by the registration for the program without either the need of justification for separate registration for the displays. . . . Moreover, the Copyright Office will not register a claim in the format or layout." [50.4] A hearing was held on registration of computer displays, the results of which are pending at this time.[50.5]

[50.4] See Copyright Office letter quoted in 4 Comp. Law. 24 (April 1987).

[50.5] Registration and Deposit of Computer Screen Displays, Notice of Public Hearing, 52 Fed. Reg. 28,311 (1987). See generally Reback and Hayes, "A Modest Proposal for the Registration of Computer Screen Displays," 4 Comp. Law. 1 (Aug. 1987).

[b] Video Games: Interactive Output

Page 1-21:

Add at end of note 55.

See also United States v. Gallo, 599 F. Supp. 241 (WDNY 1984) (proper subject matter for prosecution for smuggling; defendants had adequate notice screen is copyrightable independently or as a copy of the underlying program. Assuming that copyright thresholds are met, courts must next consider whether a substantial duplication of the data screen constitutes an infringement.[30.8] Underlying these questions of technical copyright, of course, courts must face a basic interpretive issue concerning how far a copyright proprietor can establish control over a particular format for access of data systems, even if the underlying programs are widely divergent.[30.9]

[30.8] See ¶ 1.03[4][a], this Supplement.

[30.9] The issue of screen format protection may also arise under patent law principles. See Patent No. 4,646,250 (Feb. 24, 1987).

[4] Machine Formats: Output

[a] Computer Forms and Spreadsheets

Page 1-20:

Add at end of runover paragraph.

A simple spreadsheet layout of cross-hatched lines does not rise to a level of originality and expression necessary to establish copyright protection. As one moves away from simple forms devoid of special, expressive effects, more substantial economic and copyright issues exist.

In a data processing or data communications system, economic gain or marketability often hinges primarily on one of two aspects of the program. One aspect involves how the program causes the machine to perform (e.g., what computations, speed, and capability it achieves). The second aspect relates to the user interface of the program and how convenient, functional, and familiar the program features appear to the prospective or actual user of the system.

Especially because of the importance of this last feature, copyright protection of program output involving primarily structures and forms involves potentially significant economic issues for the original developer. The economic issues revolve around the extent to which competing developers are free to design competing spreadsheet or other data processing programs that do not infringe the program code but replicate the user interface and data entry processing that may have made the original highly marketable.

From a pure copyright law perspective, the issue involves traditional doctrinal prohibitions on protecting pure structure. For example, an economic data table with identical headings was held not to infringe a prior compilation because of the limited number of ways in which the particu-

PART A. COPYRIGHTABILITY

¶ 1.03 COMPUTER PROGRAMS

Page 1-10:

Add at end of subsection.

The need to balance scientific, artistic, and commercial interests discussed in the main text at ¶ 1.01, permeates all copyright litigation in this field. The character of the balancing attenuates as the cases move beyond preliminary issues of copyrightability and into "second generation" questions about the degree of protection afforded against third parties. Following the decisions of federal circuit courts in two Apple Computer cases,[30.1] the focus of reported litigation about computer programs shifted toward questions about the degree of similarity required before a second work constitutes an infringing copy.[30.2] This litigation involves

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[30.1] See infra ¶ 1.03[5][b], main volume.

[30.2] See SAS Inst., Inc. v. S&H Computer Sys., Inc., 605 F. Supp. 816 (MD Tenn. 1985); Whelan Assocs. v. Jaslow Dental Laboratory, Inc., 609 F. Supp. 1307 (ED Pa. 1985), aff'd, 797 F2d 1222 (3d Cir. 1986); EF Johnson Co. v. Uniden Corp. of Am., 623 F. Supp. 1483 (D. Minn. 1985). Compare Micro-Sparc, Inc. v. Amtype Corp., 592 F. Supp. 33 (D. Mass. 1984) (translation of computer programs published in magazine for resale on disks violated copyrights for programs). See also Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc., 807 F2d 1256 (5th Cir. 1987) (no infringement based on structure and organization); Broderbund, Inc. v. Unison World, Inc., 648 F. Supp. 1127, 231 USPQ (BNA) 700 (ND Cal. 1986) (program infringes the "look and feel" of original work). See also ¶ 1.09A[3], this Supplement.

10 The Electronic Transaction Environment

PART A. INDUSTRY STRUCTURE

PART B. TRANSACTION STRUCTURES

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PART A. COMMUNICATIONS REGULATION

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7 Computer-Related Torts

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