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THE BANKRUPTCY CODE, THE COPYRIGHT ACT, AND TRANSACTIONS IN COMPUTER SOFTWARE†

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The Copyright Act of 1976 (the Copyright Act)[1] is an imperfect hybrid of new rights and old assumptions. The Copyright Act creates a radically new system of rights in which copyright is infinitely divisible and arises whenever pen is set to paper.[2] As a result, copyright inheres in a great many "works"—including the vast agglomeration of letters, memos, notes, proposals, computer programs, print-outs, reports and what-not generated by our paper-intensive economy—that will never have titles and will never be registered with the Copyright Office. At the same time, section 205 of the Copyright Act assumes that any work in which copyright is transferred will have a title and a registration number.[3] Thus, subsequent transferees who take in good faith, without

1. 17 U.S.C. §§ 101-810 (1982). Unless otherwise stated, all Copyright Act of 1976 citations refer to Title 17 U.S.C. §§ 101-810, codifying Pub. L. No. 94-553 (1976) (Title I of the 1976 Copyright Act).

2. 17 U.S.C. § 102(a) ("Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.").

3. 17 U.S.C. § 205(c) (1982). Section 205(c) provides:

> Recordation of a document in the Copyright Office gives all persons constructive notice of the facts stated in the recorded document, but only if—
>
> (1) the document, or material attached to it, specifically identifies the work to which it pertains so that, after the document is indexed by the Register of Copyrights, it would be revealed by a reasonable search under the title or registration number of the work; and
>
> (2) registration has been made for the work.

notice, and for valuable consideration prevail over prior transferees unless the work has been registered, the prior document of transfer recorded, and the work identified in the prior document by title or registration number.

Unfortunately, the requirements of section 205 are so little understood outside the traditional publishing and entertainment bar that many valuable copyright "transfers" are never recorded. Unrecorded transfers frequently include such fundamental commercial transactions as exclusive licenses, asset purchases, and security interests.

Thus far, few parties appear to have been harmed by a failure to record under section 205. Just as the first transferee may not realize that recording would be advisable, the next transferee may not realize that he or she could challenge the earlier unrecorded transferee's rights. Thus, a commonality of error has protected most commercial transactions in copyrighted works from the problems inherent in the transfer recording provisions of section 205.

It is, however, unrealistic to suppose that this conspiracy of ignorance can last forever. As copyright protection for computer software has expanded, attorneys have begun to scrutinize transactions such as asset purchases and exclusive software licenses for compliance with the Copyright Act. Scrutiny is likely to be most acute whenever a software vendor has filed for bankruptcy. In bankruptcy proceedings, many parties are strongly motivated to maximize the estate of the debtor by challenging any transfer of valuable rights executed by the debtor prior to the filing of bankruptcy proceedings. In this climate, a failure to record under section 205 can have disastrous consequences for the software licensee.

This Article will explore the impact of the bankruptcy of a computer software vendor on transactions such as software licenses and asset purchases. Part I of this Article will show that the vendor's trustee can set aside many such transactions by combining the section 205 transfer recording provisions of the Copyright Act with the trustee's status as a lien creditor under the Bankruptcy Code's "strong arm clause" or by asserting the trustee's power to reject executory contracts under section 365 of the Bankruptcy Code.[4] Part II of this Article will address the means available for reducing the risks identified in Part I, including source code escrows, and security interests. Part III of this Article will address problems in the registration of copyright in com-

4. 11 U.S.C. §§ 365, 544(a)(1) (1982). Unless otherwise stated, all Bankruptcy Code citations refer to Title 11 U.S.C. §§ 101-151326, codifying Pub. L. No. 95-598 (1978) (Title I of the Bankruptcy Reform Act of 1978), *as amended by* Pub. L. No. 98-353 (1984) (Bankruptcy Amendments and Federal Judgeship Act of 1984) [hereinafter *1984 Amendments*].

puter programs and propose statutory and regulatory reforms for providing more satisfactory long-term solutions.

This Article assumes that computer programs are intangible assets, which vendors protect both as trade secrets[5] and as copyrighted works.[6] Additionally, computer programs have a variety of forms which may be divided into two broad classifications. The first classification is source code, which is easily understood by humans and is indispensable in debugging and modifying programs. The second classification is object code, which cannot be understood by humans without difficulty and is not commonly used in debugging and modifying the programs.[7]

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5. To date, most courts and commentators have permitted programs to be protected by trade secret law, despite their wide distribution. 2 R. CALLMAN, THE LAW OF UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 14.16 (4th ed. 1982); *see, e.g.*, Data General Corp. v. Digital Controls, 357 A.2d 105 (Del. 1975) (six thousand people with access to drawings that disclosed plaintiff's trade secrets); Management Science America, Inc. v. Cyborg Systems, Inc., 6 Computer L. Serv. Rep. 921 (N.D. Ill. 1978) (computer software licensed to more than six hundred customers and disclosure of system's documentation to potential customers).

6. Presently, it appears settled that copyright subsists in all computer programs that have been set down in any tangible medium of expression. *See* Apple Computer, Inc. v. Formula Int'l Inc., 725 F.2d 521 (9th Cir. 1984); Apple Computer, Inc. v. Franklin Computer Corp., 545 F. Supp. 812 (E.D. Pa. 1982), 714 F.2d 1240 (3d Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984). For a thoughtful questioning of this holding, see Samuelson, *CONTU Revisited: The Case Against Copyright Protection for Computer Programs in Machine-Readable Form*, 1984 DUKE L.J. 663. *See also* Davidson, *Protecting Computer Software: A Comprehensive Analysis*, 1983 ARIZ. ST. L.J. 611, 675-93. The foregoing commentators distinguish software in its human and machine readable manifestations, arguing that only the former should be copyrightable. Judge Newcomer took a different approach in *Apple*, 545 F. Supp. at 821, 824, where he reasoned that operating system programs (which primarily govern internal computer functions) are not copyrightable, although application programs (which primarily generate useful output) may be. In this Article, unless otherwise indicated, it will be assumed that the vendor has not patented any process or apparatus which utilizes the licensed programs. For discussions of the patentability of such processes and apparatuses, see Kline, *Requiring an Election of Protection for Patentable/Copyrightable Computer Programs*, 1985 J. PAT. OFF. SOC'Y 280 (Part I), 339 (Part II); Davidson, *supra*, at 647-51; Rondau, *Protecting Computer Software: After* Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983); *Does Copyright Provide the Best Protection?*, 57 TEMP. L.Q. 527, 529-32 (1984). Rondau finds patent law a questionable means of protecting computer software because the costly and time-consuming application procedure is unsuited to the pace of software development and because it is difficult to predict whether a particular program is patentable.

7. The paradigmatic example of source code is the listing of instructions to be read by the computer's compiler or interpreter in a standard programming language such as BASIC. Source code may also include more generalized descriptions of the program's architecture such as flow charts and documentation that explain in detail the program's functions and logic. The paradigmatic example of object code is what comes out of the compiler: a series of 0's and 1's that directly represent the electrical charges or magnetic pulses that are manipulated to make a computer function. It is also commonly understood to include hexadecimal and other non-binary numerical expressions of the program.

I. EFFECT OF BANKRUPTCY PROCEEDINGS ON TRANSACTIONS IN COMPUTER SOFTWARE

The filing of bankruptcy proceedings creates a new entity, the estate of the debtor.[8] The estate includes "all legal or equitable interests of the debtor in property as of the commencement of the case," "wherever located and by whomever held."[9] This includes tangible and intangible property, causes of action, and property recovered during the course of bankruptcy proceedings.[10] The estate undoubtedly includes copyrights and trade secrets.[11]

The estate of the debtor is administered by the bankruptcy trustee.[12] In the case of liquidation under Chapter 7, the trustee's central role is to marshal the debtor's assets in a way that will maximize the total value of the debtor's estate and permit its equitable distribution among the debtor's creditors.[13] In a Chapter 11 case, the trustee attempts to maximize the creditors' recovery by preserving the debtor's revenue-generating power as an on-going business.[14] The trustee has unusual powers. Under Bankruptcy Code section 544(a), known as the "strong arm clause," the trustee may recover property transferred to others prior to bankruptcy. Under Bankruptcy Code section 365, the trustee may reject executory contracts, leaving the other party to the rejected contract with only an unsecured claim for any damages caused by the rejection. Both of these powers have serious implications for software transactions. We will consider the strong arm clause first.

But see Davidson, *supra* note 6, at 620-21 (distinguishing object and binary versions of a program, which are in this Article both classed as "object code").

8. 11 U.S.C.A. § 541 (West Supp. 1986).

9. *Id.* § 541(a)(1).

10. H.R. REP. NO. 595, 95th Cong., 2d Sess. 368, *reprinted in* 1978 U.S. CODE CONG. & ADMIN. NEWS 5963, 6323; S. Rep. No. 989, 95th Cong., 2d Sess. 82-83, *reprinted in* 1978 U.S. CODE CONG. & ADMIN. NEWS 5787, 5868-69. *See also In re* Golden Plan of California, Inc., 37 Bankr. 167, 169 (Bankr. E.D. Cal. 1984) (corporate name is "property of the estate").

11. *See, e.g., In re* Howley-Dresser Co., 132 F. 1002 (S.D.N.Y. 1904) (property of the estate includes copyright).

12. In Chapter 11 cases, the trustee may be the debtor itself in the guise of the "debtor in possession" (a veritable sheep in wolf's clothing), an independent person appointed by the court or, in certain jurisdictions, by the United States Trustee. *See* 11 U.S.C. §§ 1101(a), 1104, 1501, 15103(a) (1982). The debtor in possession has the same powers as an independent trustee under both §§ 544(a)(1) and 365. Both will be referred to in this Article as the "trustee."

13. *See* Jackson, *Bankruptcy, Non-Bankruptcy Entitlements, and the Creditor's Bargain*, 91 YALE L.J. 857 (1982).

14. *See* 6 HERZOG AND KING, COLLIER ON BANKRUPTCY ¶ 8.05 (14th ed. 1981).

A. BANKRUPTCY CODE SECTION 544(a)(1) AS IT AFFECTS COPYRIGHT IN COMPUTER PROGRAMS

1. *Effect of the Strong Arm Clause on Exclusive Licenses and Other Copyright Transfers*[15]

> Bankruptcy Code section 544(a)(1) provides that the trustee may avoid any transfer of property of the debtor . . . that is voidable by—(1) a creditor that extends credit to the debtor at the time of the commencement of the case, and that obtains, at such time and with respect to such credit, a judicial lien on all property on which a creditor on a simple contract could have obtained such a judicial lien. . . .[16]

Section 101 of the Copyright Act of 1976 defines "transfer of copyright ownership" as including "an assignment, mortgage, exclusive license, or any other conveyance, alienation, hypothecation of a copyright or of any of the exclusive rights comprised in a copyright, whether or not it is limited in time or place of effect, but not including a nonexclusive license."[17] The meaning of "transfer" for purposes of Bankruptcy Code section 544(a)(1) should be at least as broad as the Copyright Act's definition.[18] Accordingly, a wide variety of software transactions are "transfers" voidable by the trustee under Bankruptcy Code section 544(a)(1). These certainly include sales of rights in computer programs, such as the sales that occur when one company purchases another's software assets. They also include grants of security interests in software. Finally, and perhaps most surprisingly, they include exclusive software licenses.

The sale of an asset and the taking of a security interest are easily recognized transactions. An exclusive copyright license, on the other

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15. The discussion in Part I assumes that both the source and object code versions of the subject programs are transferred. The discussion in Part II addresses the effect in the more typical transaction where the vendee is given only object code, but has a contingent right to source code.

16. Under § 544, the trustee has other avoiding powers not immediately relevant. *See* 11 U.S.C. § 544(a)-(b) (1982).

17. 17 U.S.C. § 101. This definition reflects the divisibility of a copyright under the Copyright Act. Under the Copyright Act of 1909, copyright was not divisible; under the new Copyright Act, it is infinitely divisible. H.R. REP. NO. 1476, 94th Cong., 2d Sess. 123, *reprinted in* 1976 U.S. CODE CONG. & ADMIN. NEWS 5659, 5738-39 [hereinafter *House Report*]; 3 M. NIMMER, NIMMER ON COPYRIGHT §§ 10.01-10.02 (1985). Note that the trustee, considered as hypothetical lien creditor, is a "transferee" because the trustee takes the debtor's copyright in the licensed software by "alienation or hypothecation."

18. An exclusive license of one of the exclusive rights comprised in a copyright is traditionally treated as "property." Goldsmith v. Commissioner, 143 F.2d 466, 467 (2nd Cir. 1944), *cert. denied*, 323 U.S. 774 (1945). As such, it falls squarely within the Bankruptcy Code definition of "transfer," "every mode, direct or indirect, absolute or conditional, voluntary or involuntary, of disposing of or parting with property or with an interest in property." 11 U.S.C. § 101(48). *See* 4 KING, COLLIER ON BANKRUPTCY ¶ 544.02 (15th ed. 1985).

hand, is a broader concept than one might suppose. The Copyright Act provides no test for distinguishing between exclusive and non-exclusive licenses. The *House Report* indicates that a license limited to a particular time, place, or type of use is an "exclusive license" for purposes of the Act.[19] As one court put it, "[t]here appears to be no limit on how narrow the scope of exclusive rights can be yet still constitute a 'transfer of ownership,' provided the licensed rights are exclusive."[20] For this reason, many software licenses are likely to be considered "exclusive" licenses for purposes of the Copyright Act. If, for example, a software vendor granted to a bank a license to use its database management system, and agreed with the bank that it would not license any other bank to use the same system during the period of the license, such an agreement would fall within the purview of "exclusive licenses" for purposes of the Copyright Act. Similarly, if the same software vendor modified its database management system for a particular customer and agreed with the customer that it would not provide the modified version to any other customer, that too would be considered an exclusive license for purposes of the Copyright Act. In contrast, "shrink-wrap" licenses of mass market software seem clearly nonexclusive for purposes of the Copyright Act's definition.

Assuming that many software transactions transfer a part of the copyright in the subject programs, may a bankruptcy trustee for the vendor set aside such transfers? Bankruptcy Code section 544(a)(1) permits the trustee to avoid any transfer that is avoidable by a creditor who obtains a judicial lien. This leaves two questions: (1) could a creditor obtain a judicial lien on the copyright in the transferred programs; and (2) would such a lien enable the creditor to avoid the transfer?

The first question—whether, and to what extent, copyright can be obtained by "judicial lien"—raises complex issues involving both federal and state law. The basic rule is that a trustee's rights and powers as a hypothetical lien creditor under section 544(a)(1) are determined by the state in which the property in issue is located.[21] For intangible property, which has no "location," the law of the state in which the debtor is domiciled or has its principal place of business determines the issue.[22]

19. *See House Report, supra* note 17, at 123; *see also* 3 M. NIMMER, NIMMER ON COPYRIGHT § 10.02[A] (1982).

20. Library Publications, Inc. v. Medical Economics Co., 548 F. Supp. 1231, 1233 (E.D. Pa. 1982), *aff'd mem.*, 714 F.2d 123 (3d Cir. 1983).

21. *In re* Ireland, 14 Bankr. 849, 850 (Bankr. M.D. La. 1981); *see* Restatement (Second) of Conflict of Law §§ 6, 222 comment b (importance of situs to determination of law governing interests in property).

22. Gordon v. Holly Woods Acres, Inc., 328 F.2d 253, 255 (6th Cir. 1964); *see* ABKCO Industries, Inc. v. Apple Films, Inc., 39 N.Y.2d 670, 675 (1976) (situs of intangible property for attachment purposes is place of business of party whose performance is required by contract that creates the intangible property). Similarly, consensual liens on general in-

While the authors have found no case expressly so holding, it seems likely that copyright falls within the purview of state laws permitting attachment of intangible property.[23] Furthermore, even if copyright does not fall within the scope of a particular state's judicial attachment provisions, the Bankruptcy Code defines "judicial lien" as including any "legal or equitable process or proceeding."[24] An author's ownership of copyright is undoubtedly subject to the powers of coercion of the state's courts in equity.[25] Thus, under the laws of most states, copyright is likely to be subject to taking by "judicial lien" within the meaning of the Bankruptcy Code, if not by legal attachment, then by equitable coercion. This conclusion appears to be supported by the Copyright Act of 1976 itself, which expressly recognizes that copyright is subject to transfers by operation of law,[26] and is consistent with the broad equitable

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tangibles are governed by the law of the state in which the debtor is located, U.C.C. § 9-103(3)(b) (1972), which is in turn defined by the Uniform Commercial Code as the debtor's place of business. *Id.* § 9-103(3)(d).

23. For example, New York statutes provide for levy by order of attachment of any property, tangible or intangible, that could be assigned or transferred. N.Y. CIV. PRAC. L. & R. §§ 5201(b), 6202, 6214(b) (McKinney 1978); *see ABKCO Industries*, 39 N.Y.2d at 673-74 (licensor's interest in license to promote and distribute film is attachable intangible property because it is assignable by licensor); *cf.* Marshak v. Green, 746 F.2d 927, 929 (2d Cir. 1984) (trademark divorced from its goodwill is not assignable and therefore not attachable property within the meaning of § 5201(b)).

24. 11 U.S.C. § 101(27) (1982) (" 'judicial lien' means lien obtained by judgment, levy, sequestration, or other legal or equitable proceeding."); *see In re* H. & S. Transportation Co., 42 Bankr. 164 (Bankr. M.D. Tenn. 1984) (maritime lien created pursuant to federal statute is not avoidance by trustee under § 544(a)(1) because it is obtained automatically and not by legal or equitable process or proceeding).

25. Ager v. Murray, 105 U.S. 126 (1882). In several early cases the Court suggested that copyright was not subject to seizure or sale by writ of execution because it is an incorporeal right "resting altogether in grant," Stephens v. Cady, 55 U.S. (14 How.) 528, 531 (1852); *see also* Stevens v. Gladding, 58 U.S. (17 How.) 447, 451 (1855), but might be reached and applied pursuant to a creditor's bill if transfer was compelled in conformity with the then Copyright Act requirement of a writing signed by the proprietor of the copyright. *Stephens*, 55 U.S. (14 How.) at 531-32. *Stephens* and *Stevens*, however, concerned executions at law; whereas equity works *in personam*. A debtor's interest in patent or copyright, which cannot be taken at law, is assignable by the debtor and may be ordered sold or assigned by a court of equity in satisfaction of a judgment debt of the owner-debtor. *Ager*, 105 U.S. at 131-32. Copyright is reached not through seizure of property, but by exercise of equitable powers of coercion; the order to sell or assign is enforceable by contempt or by execution by an appointee of the court in the name of the debtor-owner. D. DOBBS, LAW OF REMEDIES § 1.3 (1973). The merger of law and equity is reflected in the definition of "judicial liens" subject to the trustee's strong arm powers, which is quoted in the preceeding note.

26. 17 U.S.C. § 201(d)(1) (1982) ("the ownership of copyright may be transferred . . . by operation of law"). However, the conclusion that copyright is subject to "judicial liens" is complicated by § 201(e), which protects authors against involuntary loss of rights in their works. Section 201(e) provides for involuntary transfers as follows:

When an individual's ownership of a copyright, or of any of the exclusive rights

powers conferred upon the Bankruptcy Court.[27]

If a judicial lien on copyright can be obtained within the meaning of section 544(a)(1), under the laws of the state in which a particular bankrupt vendor is domiciled, the question remains whether such a lien would prevail over an exclusive license or other software transfer. Priority between conflicting copyright transfers is governed by section 205(e) of the Copyright Act. Under section 205(e) the prior transfer prevails if it is recorded in the manner required to give constructive notice under section 205(c) within one month of its execution[28] or prior to

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under a copyright, has not previously been transferred voluntarily by that individual author, no action by any governmental body or other official organization purporting to seize, expropriate, transfer, or exercise rights of ownership with respect to the copyright, or any of the exclusive rights under a copyright, shall be given effect under this title except as provided under Title 11.

However, § 201(e) probably does not prevent the trustee in bankruptcy form obtaining the status of a hypothetical lien creditor with respect to the typical software vendor/debtor's copyrights, for several reasons. First, § 201(e) protects only "individual" authors. "Individual author" is not defined by the Copyright Act. However, the House Report explains the exemption as follows:

> The purpose of [§ 201(e)] is to reaffirm the basic principle that the United States copyright of an individual author shall be secured to that author, and can not be taken away by any involuntary transfer. . . . Traditional legal actions that may involve transfer of ownership, such as bankruptcy proceedings and mortgage foreclosures, are not within the scope of this subsection; the authors in such cases have voluntarily consented to these legal processes by their overt actions—for example, by filing in bankruptcy or by hypothecating a copyright.

House Report, supra note 17, at 124. The legislative history and purpose of § 201(e) strongly suggest that the section would not apply to works made for hire, if the employer/author is a corporation or business entity. Nothing in the statutory provisions for "work made for hire" suggest otherwise. *See* 17 U.S.C. §§ 101 (definition), 201(b) (employer for whom work is made is considered the author).

Second, § 201(e) does not apply when any of the exclusive rights under a copyright have been transferred voluntarily prior to the filing of bankruptcy. Thus, the section would be unavailing in the common situation where an independent programmer has assigned rights in the program to the vendor prior to the initiation of bankruptcy proceedings.

Third, and most importantly, § 201(e) states an exception "as provided under Title 11." *See supra.* The quoted language was inserted by amendment pursuant to the Bankruptcy Reform Act of 1978. *See* Pub. L. No. 95-598, Title III § 313 (1978). This reference to the Bankruptcy Code strongly suggests that a trustee's rights in the debtor's copyrights, under § 544(a)(1) or otherwise, are not intended to be affected by § 201(e). For all these reasons, § 201(e) should not prevent a trustee from asserting rights under § 544(a)(1) in a bankrupt software vendor's copyrights if the relevant state law permits a lien creditor to do so.

27. 11 U.S.C. § 105(a) ("the court may issue any order, process or judgment that is necessary or appropriate to carry out the provisions of [the Bankruptcy Code]"); *see, e.g., In re* Virginia Block Co., 6 Bankr. 670 (Bankr. W.D. Va. 1980) (court exercises equitable powers under § 105(a) to compel senior lienholder's marshaling of assets and foreclosure so as to satisfy its claim, if possible, without proceeding against jointly secured property).

28. The one month period is extended to two months if the execution of the transfer is outside of the United States. 17 U.S.C. § 205(e) (1982).

the subsequent transfer. A transferee is thus protected against the trustee's claim under section 544(a)(1) if the transfer is recorded prior to the filing of bankruptcy proceedings.[29]

If the transfer is not recorded, the trustee will prevail under section 205(e) as a subsequent transferee if certain conditions are met.[30] The subsequent transfer to the trustee must be recorded, and it must be taken in good faith, for valuable consideration, and without notice of the exclusive license. A brief discussion of each of these requirements follows.

First consider the recording requirement. The Copyright Act requires the prior transfer to be unrecorded and the later transfer to be recorded in order for the later transfer to prevail over the prior transfer. Read literally, this would require the trustee to race unrecorded transferees to file in the Copyright Office.

A strong argument can be made that this requirement cannot be applied literally to the bankruptcy trustee. First, there is no document to record. The "transfer" in bankruptcy proceedings is a statutory construct: the vesting in the trustee of the rights of a hypothetical lien creditor under section 544(a)(1). Second, requiring the bankruptcy trustee to file something in the Copyright Office (for example, a certified copy of the bankruptcy petition) is not necessary to give notice of the trustee's rights. Filing the bankruptcy petition creates nationwide notice of the existence of bankruptcy proceedings.[31] Third, requiring such recording would be inconsistent with the policy of giving the debtor (and its trustee) a "breathing spell from [its] creditors."[32] Finally, licensees are probably stayed from making their own filings after the bankruptcy proceedings are initiated.[33] For these reasons, the

29. For a discussion of the problems associated with copyright registration and recordation of software licenses, *see infra* text accompanying notes 153-63.

30. The Copyright Act does not specify which party prevails if the prior transfer has not been recorded, but the subsequent transferee fails to satisfy the criteria of § 205(e).

31. H.R. REP. NO. 595, *supra* note 10, at 331-32; S. REP. NO. 989, *supra* note 10, at 49-51. Most bankruptcy judges would not be sympathetic with an interpretation that required trustees to make pro forma filings in the Copyright Office that served no substantive purpose at a time when they are very busy taking care of concrete details like payrolls, leases, utilities, and the other pressing concerns in the early stages of bankruptcy proceedings.

32. S. REP. NO. 989, *supra* note 10, at 54.

33. The filing of bankruptcy proceedings acts as an automatic stay against "any act to obtain possession of property of the estate or of property from the estate . . . [and] any act to create, perfect, or enforce any lien against property of the estate." 11 U.S.C. § 362(a)(3)-(a)(4) (1982). Many other acts are also stayed. *See generally id.* § 362(a). Whether the automatic stay applies to recording in the Copyright Office of an asset purchase agreement or exclusive software license will depend on whether the purchased or licensed software is considered "property of the estate" at a time subsequent to execution of the purchase or licensing agreement and prior to Copyright Office filing. "Prop-

trustee should be deemed to have recorded its hypothetical lien for purposes of section 205(e) of the Copyright Act.[34]

The second requirement under section 205(e) of the Copyright Act is that the subsequent transferee must take "in good faith." Clearly, the Bankruptcy Code's hypothetical lien creditor is assumed to act in good faith.[35] A contrary assumption would eliminate much of the power of the "strong arm clause."

The third requirement under section 205(e) of the Copyright Act is that the subsequent transferee must take "for valuable consideration."

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erty of the estate" is defined by the Bankruptcy Code as including "all legal or equitable interests of the debtor in property as of the commencement of the case." *Id.* § 541(a)(1); *see also* United States v. Whiting Pools, Inc., 462 U.S. 198, 204 n.8 (1983) ("Congress intended to exclude from the estate property of others in which the debtor had some minor interest such as a lien or bare legal title . . . [but] not limit the ability of a trustee to regain possession of property in which the debtor had equitable as well as legal title."). The definition of "property of the estate" would appear to exclude an interest in copyright transferred by the debtor before the commencement of the case, if the transfer was valid under the Copyright Act. *See* Butner v. United States, 440 U.S. 48, 55 (1979) (state law determines a debtor's legal or equitable interest in property for purposes of § 541(a)(1) unless some federal interest requires a different result); 17 U.S.C. § 301 (1982) (federal preemption of matters within the scope of the Copyright Act). Transfer of copyright ownership is valid if it is evidenced by a written instrument, signed by the owner of the rights conveyed—regardless of whether or not the instrument is filed in the Copyright Office. *See id.* § 204(a). All of which suggests that the automatic stay should not apply to the recording in the Copyright Office of an asset purchase or exclusive software license, so long as the purchase agreement has been validly executed and the purchaser or licensee has possession of the licensed programs as of the filing of bankruptcy proceedings, unless recording is for the purpose of perfecting a security interest in the licensed programs. *See infra* text accompanying notes 154-63. On the other hand, § 362(a) is interpreted very broadly as prohibiting any act that would dismember the estate or inhibit the orderly, equitable distribution of assets among creditors. *In re* R.S. Pinellas Motel, 2 Bankr. 113, 117-18 (Bankr. M.D. Fla. 1979). For example, a notice of termination of a licensing agreement, an act designed to obtain possession of intangible property of the licensee-debtor's estate, is within the scope of the automatic stay and thus has no force or effect after the commencement of the case. *Id.* at 118-19. The automatic stay meshes with Bankruptcy Code § 547, under which the trustee may avoid transfers of property which improve the position of a creditor and are made within ninety days prior to filing, or one year prior to filing in the case of transfers to insiders. Both sections favor the equitable distribution of assets among creditors. H.R. REP. NO. 595, *supra* note 10, at 340-42; S. REP. NO. 989, *supra* note 10, at 49-51. For these reasons, one can argue that the automatic stay of § 362 should be held to prevent the recording of software purchases and licenses following the filing of bankruptcy proceedings.

34. Sampsel v. Straub, 194 F.2d 228, 231 (9th Cir. 1951), *cert. denied*, 343 U.S. 927 (1952) (If state law requires a creditor asserting a judicial lien to file notice of the lien, under § 544(a) the trustee is deemed to have so filed); *See* 4 KING, COLLIER ON BANKRUPTCY ¶ 544.02 (15th ed. 1985) (discussion of trustee's "ideal creditor" status under § 544(a)(1)).

35. *In re* Waynesboro Motor Co., 60 F.2d 668, 669 (S.D. Miss. 1933); *See* 4 KING, *supra* note 34, at ¶ 544.02.

Bankruptcy Code section 544(a)(1) postulates that the hypothetical creditor "extends credit to the debtor at the time of the commencement of the case and . . . obtains, at such time and with respect to such credit, a judicial lien." This means there is valuable consideration for the creditor's claim against the debtor, but does it also mean that there is consideration for the lien (*i.e.*, for the transfer)? Although no case directly supports this proposition and the Bankruptcy Code is ambiguous, a fair reading of section 544(a)(1) is that the hypothetical lien creditor status is intended to eliminate any defenses to the trustee's rights that might be available to any creditor that could be hypothesized,[36] including defenses based on a lack of consideration. For this reason, the hypothetical lien creditor should be considered to have given valuable consideration for the transfer.

Section 205(e) of the Copyright Act finally requires the subsequent transferee to act "without notice of the earlier transfer." Bankruptcy Code section 544(a)(1) gives the trustee the avoiding power of a hypothetical lien creditor "without regard to any knowledge of the trustee or of any creditor."[37] Section 544(a)(1) is silent on the question whether knowledge of the debtor should affect the trustee's rights. Our software transferor clearly had knowledge and notice of transactions it entered into prior to the filing of bankruptcy proceedings. If the transferor's knowledge were imputed to the Bankruptcy Code's hypothetical lien creditor, then the rights of the lien creditor might not prevail under section 205(e) of the Copyright Act because the hypothetical creditor had "notice of the earlier transfer."

The better view is that the debtor's knowledge cannot be imputed to the trustee in his or her capacity as hypothetical lien creditor under Bankruptcy Code section 544(a)(1). The trustee has an "ideal" creditor's status; his status is derived from the Bankruptcy Code and not from actual creditors of the debtor. Accordingly, when faced with challenges to unperfected security interests, the trustee has the status of a lien creditor without notice for purposes of section 544(a) of the Bankruptcy Code, even if a particular creditor or the debtor had notice of a transfer.[38] Properly understood, the bankruptcy trustee is not a repre-

36. *See id.* at ¶ 544.01-.02.

37. The strong arm clause gives the trustee in bankruptcy the rights of a creditor who has complied with all legal and equitable requirements of a lien creditor. *In re* Waynesboro Motor Co., 60 F.2d at 669.

38. When the predecessor to § 544(a) was first enacted in 1910, courts occasionally focused on the general principle that a trustee represents the (actual) creditors and failed to recognize the change created by the artificial status accorded the trustee under the strong arm clause. *See, e.g.*, Walton Land & Timber Co. v. Runyan, 269 F. 128, 129 (5th Cir. 1920) (failure to accord trustee status of creditor without notice). It was difficult to dispel the former notion that a trustee was bound by the rights of actual creditors or to accept the possibility that distributees of the proceeds of a recovery by the trustee should include

sentative of the debtor, but is instead a representative of the debtor's creditors.[39] If the debtor's knowledge were imputed to the trustee, then the trustee could not assert some rights, including the avoidance powers of a transferee without knowledge under section 205(e) of the Copyright Act, which could be asserted by a creditor who did not have notice of the earlier transfer. This would put such a creditor in a worse position as a result of bankruptcy proceedings than the creditor would be in in the absence of the proceedings and damage the central function of bankruptcy proceedings: to provide an efficient and equitable clearing house for the creditors' claims.

For the foregoing reasons, the statutes, the legislative history, and precedent all support bankruptcy trustees for software vendors as having the power to avoid an unrecorded transfer of copyright in computer programs. It must be acknowledged, however, that strong equities favor the transferee. If the transfer occurred as part of a business acquisition, the purchaser may have made a substantial investment in the acquisition of an "asset." If the transfer is an exclusive license, the exclusive licensee may be heavily dependent on the licensed software. In either case, the transferee may have had no idea that the Copyright Act required recordation of the copyright "transfer" when he or she entered into the transaction. Confronted with such a sympathetic case, courts sometimes strain to soften the harsh impact of the strong arm clause.[40] A court could resolve any of the doubtful points (*i.e.*, constructive recording by the trustee, consideration for the lien, or the trustee's insulation from the debtor's knowledge) against the bankruptcy trustee as a

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creditors who could not have recovered under non-bankruptcy law. *See* 4B MOORE, COLLIER ON BANKRUPTCY ¶ 70.53 (14th ed. 1978) (discussion of early problems arising with respect to actual notice under the strong arm clause).

39. *See generally* Jackson, *Bankruptcy, Non-Bankruptcy Entitlements, and the Creditor's Bargain*, 91 YALE L.J. 857 (1982).

40. It has been held, for example, that the trustee cannot use his or her statutory lack of knowledge to avoid the rights of holders of equitable interests in the debtor's real property. McCannon v. Marston (*In re* Hotel Assocs., Inc.), 679 F.2d 13, 17 (3d Cir. 1982). The *McCannon* court reasoned that while the words "without regard to any knowledge" in § 544(a) address the concern that the trustee's personal knowledge should not affect the trustee's status as a hypothetical lien creditor under Article 9 of the U.C.C., the words should not be read to extinguish the rights of equitable owners in possession of real property nor the obligation of a potential subsequent purchaser (*i.e.*, the trustee) to inquire into the possessor's claimed rights, equitable or legal, in the property in a state where clear and open possession of real property constitutes constructive notice of the rights of the possessor. *Id.* at 16-17. The court's holding, however, may be limited to the trustee's bona fide purchaser status under § 544(a)(3) or to real estate transactions, for which the Bankruptcy Code makes special exceptions. *See* 11 U.S.C. § 544(a)(3); *In re* Hardway Restaurant, Inc., 31 Bankr. 322, 328 (Bankr. S.D.N.Y. 1983) (*McCannon* requires applying state law recognized constructive notice as a bar to the trustee's bona fide purchaser under § 544(a)(3)).

way of protecting the transferee against the harsh effects of avoidance under section 544(a)(1).[41]

Nevertheless, equally sympathetic unrecorded transferees have consistently failed to forestall loss of property under the strong arm clause. Examples include a lessor's interest in personal property subject to an unrecorded long term lease; a principal's claim to recover goodwill and customer information following termination of an unrecorded agency agreement; a purchaser's or creditor's interest in real estate subject to a deed; and a divorcee's interest in occupancy of property subject to a divorce decree that was not recorded in the Registry of Deeds.[42] These seemingly harsh decisions can be justified by the failure of the purchaser, secured creditor, or lessee to take steps readily available to it to protect its interest.[43] The software transferee's failure to record its purchase agreement or exclusive license can be similarly faulted.

For this reason, unrecorded software purchases and exclusive licenses should be voidable by a bankruptcy trustee under Bankruptcy Code section 544(a)(1), at least to the extent the transaction covers copyright in the subject programs. Following a section 544(a)(1) avoid-

41. Under the Bankruptcy Code, the court has the power to fashion equitable solutions for which there is no express provision if they are "necessary or appropriate." 11 U.S.C. § 105(a) (1982).

42. Westberry Office Machine v. Hovis, 35 Bankr. 8, 9 (Bankr. D. S.C. 1983) (fourteen month rental of photocopier did not fall within the "temporary use" exception to state law rental agreement recording requirement); Saint Paul Fire & Marine Insurance Co. v. Roy Dart Insurance Agency, Inc. (*In re* Roy Dart Insurance Agency, Inc.), 5 Bankr. 207, 214-216 (Bankr. D. Ma. 1980) (agency agreement providing for transfer of goodwill and customer information to principal upon termination of agency created a security interest in "general intangibles" subject to U.C.C. filing requirements for perfection); *In re* Anderson, 30 Bankr. 995, 1002-06 (Bankr. M.D. Tenn. 1983) (recorded deed, having technically defective acknowledgments, failed to satisfy state filing requirements despite trustee's notice and the later filing of corrected deeds); Lancaster v. Hurst (*In re* Hurst), 27 Bankr. 740, 743-44 (Bankr. E.D. Tenn. 1983) (divorcee's conditional right under divorce decree to occupy ex-husband's property rent-free falls within state law filing requirement for perfection of instruments conveying any right of occupancy). Despite the sympathetic circumstances of the cited cases, and other similar cases, each court upheld the trustee's exercise of strong arm powers on the behalf of creditors because the party or parties claiming an interest had failed to meet the formal requirements for providing notice to potential creditors. *See also infra* text accompanying notes 95-100 (discussing the Fourth Circuit's recent comments on the inappropriateness of equitable arguments in bankruptcy proceedings).

43. *In re* DG & Assocs., Inc., 9 Bankr. 94, 97 (Bankr. E.D. Tenn. 1981) is an example of a particularly harsh application of § 544(a)(1). A bank's perfected security interest in bankrupt's equipment, accounts receivable, and present and after acquired inventory was held to be rendered "unperfected" by the bank's failure to refile its financing statement upon learning of the debtor's pre-bankruptcy name change, despite the absence of an explicit statutory requirement of refiling when the debtor's name changes. The court was unconvinced by the bank's arguments in part because "[t]he bank could easily have filed and thereby given notice to subsequent parties." *Id.* at 97.

ance, the licensed copyright is recoverable by the trustee under the turnover provision of the Bankruptcy Code.[44]

2. *Effect of the Strong Arm Clause on Nonexclusive Licenses*

For two reasons, a bankruptcy trustee cannot avoid nonexclusive copyright licenses. First, such licenses are not "transfers of copyright ownership" within the meaning of the Copyright Act.[45] Second, the Copyright Act expressly protects the interests of non-exclusive licensees against subsequent transferees of copyright. Section 205(f) provides that "[a] nonexclusive license, whether recorded or not, prevails over a conflicting transfer of copyright ownership if the license is evidenced by a written instrument signed by the owner of the rights licensed or such owner's duly authorized agent, and if . . . the license was taken before execution of the transfer." The trustee has the rights of a creditor holding a judicial lien on the copyright under Bankruptcy Code section 544(a)(1) and is therefore a transferee of a copyright by alienation or hypothecation under Copyright Act section 101.[46]

Thus, the trustee is a conflicting transferee for purposes of Copyright Act section 205(f). Under section 205(f), the rights of a nonexclusive licensee should prevail if the copyright in the licensed program is owned by the vendor and the non-exclusive software license is signed by the vendor or its agent. There is no reason to suppose that this result would not be followed under section 544(a)(1) of the Bankruptcy Code. Hence, it appears that non-exclusive licenses of copyrights in computer programs are not voidable under section 544(a)(1).

B. BANKRUPTCY CODE SECTION 544(a)(1) AS IT AFFECTS TRADE SECRETS CONTAINED IN COMPUTER PROGRAMS

The legal landscape changes dramatically when one considers the trade secret dimension of the licensed programs. Regardless of whether it is exclusive or nonexclusive, a trade secret license is a common law contract conferring on the licensee a right to use the secret under the terms of the license, highly analogous to a lease of personal property.[47]

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44. 11 U.S.C. § 542 (1982) ("Turnover of Property to the Estate"). *See infra* note 71.

45. *See* 17 U.S.C. § 101 (1983) (definition of "transfer of copyright ownership"); *see also supra* text accompanying note 17; *cf.* Harris v. Emus Records Corp., 734 F.2d 1329, 1334 (9th Cir. 1984) (debtor/licensee's rights under a non-exclusive compulsory license do not pass to bankruptcy trustee because the licensee has no proprietary right nor transferable interest in copyright).

46. *See supra* text accompanying notes 16-18.

47. *See* Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1001-05 (1984) (owner of trade secret has property rights therein, which are comparable to rights in other intangible interests and protected by the taking clause of the fifth amendment); 1 MILGRIM, MILGRIM ON TRADE SECRETS § 1.06 (1985) (licensor retains property right in licensed trade secret). A

Because such a contract does not "transfer" any property, the trustee cannot claim that the trade secret license is voidable under section 544(a)(1).[48] Many trade secret licenses, however, are executory contracts subject to the trustee's power of rejection.[49] The trustee's exercise of the power of rejection is discussed in the following section of this Article.

C. BANKRUPTCY CODE SECTION 365 AS IT AFFECTS SOFTWARE LICENSES

1. *Definition of Executory Contract:* Lubrizol Enterprises v. Richmond Metal Finishers

One of the trustee's most versatile tools is the power to accept or reject executory contracts. Section 365 of the Bankruptcy Code provides, with certain exceptions, that "the trustee, subject to the court's approval, may accept or reject any executory contract or unexpired lease of the debtor."[50] The court will approve either acceptance or rejection unless the trustee has failed to exercise "sound business judgment."[51] This standard gives the trustee very wide latitude. In practice, the trustee may pick and choose among the debtor's contractual obligations. The ones that burden the estate may be rejected, converting the debtor's executory obligations into unsecured indebtedness.[52] The ones

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trade secret that a debtor is entitled to protect as property under applicable state law passes to the debtor's trustee in bankruptcy. *In re* Uniservices, 517 F.2d 492, 496 (7th Cir. 1975).

48. By contrast, real property leases are often described as transfers of a limited property right creating an estate in the realty, and are voidable under § 544(a)(3). *See, e.g., In re* Belize Airways Ltd., 12 Bankr. 387 (Bankr. S.D. Fla. 1981) (unrecorded agreement of sublease is voidable under state recording statute); *see also* 2 KING, COLLIER ON BANKRUPTCY ¶ 365.09 and 365.10; *cf.* Library Publications, Inc. v. Medical Electronics Co., 548 F. Supp. 1231 (E.D. Pa. 1982), *aff'd mem.*, 714 F.2d 123 (3d Cir. 1983) (exclusive license of copyright transfers a limited property right to licensee).

49. Rejection of executory contracts is discussed in detail in the following two subsections of this Article. *See infra* text accompanying notes 50-102.

50. 11 U.S.C. § 365(a) (1982). Note that section 365 applies to Chapter 7 liquidation cases, and to Chapter 9, 11, and 13 reorganization cases. *See id.* §§ 103(a), 901(a) (1982).

51. NLRB v. Bildisco & Bildisco, 465 U.S. 513, 523 (1984). As applied, this standard "requires that the decision be accepted by the courts unless it is shown that the bankrupt's decision was one taken in bad faith or in gross abuse of the bankrupt's retained business discretion." Lubrizol v. Richmond Metal Finishers, 756 F.2d 1043, 1047 (4th Cir. 1985), *cert. denied*, 106 S. Ct. 1285 (1986).

52. Claims for damages caused by rejection of an executory contract are invariably treated as general unsecured claims, unless the contractual obligee has taken a security interest to secure the debtor's executory obligations. *See* 11 U.S.C. § 502(g) ("A claim arising from the rejection, under section 365 . . . of an executory contract . . . shall be determined . . . the same as if such claim had arisen before the date of the filing of the petition"); *see also* 3 KING, COLLIER ON BANKRUPTCY ¶ 502.07 (15th ed. 1985). The amount of such claim is determined by the court under § 502(b).

that benefit the estate may be accepted, and their benefits made available to all of the debtor's creditors.[53]

The Bankruptcy Code provides no definition of the term "executory contract."[54] Nevertheless legislative history and the policy of section 365 leave little doubt that many software licenses should be considered executory for purposes of section 365 and therefore subject to possible rejection.[55] The House Report on the Bankruptcy Reform Act of 1978 states that although

> there is no precise definition of what contracts are executory [the term] generally includes contracts on which performance remains due to some extent on both sides. A note is not usually an executory contract

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53. The trustee's option of assuming or rejecting executory contracts derives from a well-established principle of insolvency practice. Eighteenth century English courts permitted trustees to abandon property "worthless or onerous" to the debtor estate, "including leases and other executory contracts," considerably before this "doctrine of abandonment" was codified in the English Bankruptcy Act. Countryman, *Executory Contracts in Bankruptcy: Part I*, 57 MINN. L. REV. 439, 440 (1973) [hereinafter Countryman I]. In the 19th century the United States Supreme Court incorporated English doctrine in its consideration of a case arising under the Bankruptcy Act of 1867. *Id.* American codification of the doctrine began in the Bankruptcy Act of 1935 with provisions explicitly limited to railroad reorganizations. *See* 49 Stat. 911 (1935), 11 U.S.C. § 205 (1940). The Chandler Act amendments of 1938 extended the option to assume or reject executory contracts and unexpired leases of real property to trustees in straight bankruptcy cases through the addition of section 70(b) to the Act. 52 Stat. 873 (1938), 11 U.S.C. § 110(b) (1940). Section 70(b) was the precursor of the 1978 Bankruptcy Code's § 365. *See* 2 King, *supra* note 48, at ¶ 365.01-.02. The Code's § 365 differs substantially from the former § 706(b). *See* Quittner, *Franchises In Bankruptcy: Termination, Rejection and Assumption*, 1984 COMM. L. J. 84. The 1984 Amendments have also affected § 365; some of these changes will be discussed subsequently in this Article. For an overview of all of the 1984 Amendments' implications for § 365, see Chatz & Schumm, III, *1984 Bankruptcy Code Amendments—Fresh From the Anvil*, Aug./Sept. 1984 COMM. L. J. 317, 324-28. For a more detailed history of this doctrine, see Countryman I, *supra*, and Silverstein, *Rejection of Executory Contracts in Bankruptcy and Reorganization*, 31 U. CHI. L. REV. 467 (1964).

54. The Commission on the Bankruptcy Laws of the United States, after a Congressionally authorized two-year study, recommended that "the term 'executory contract' should not be defined. Its general meaning is well understood, and any succinct statutory language risks an unintended omission or inclusion. Instead, the proposed Act should clearly indicate the treatment of certain incompletely performed agreements." H.R. DOC. NO. 137, 93d Cong., 1st Sess. 198-99 (1973) [hereinafter *Commission Report*].

55. Whether a contract is "executory" under the Bankruptcy Code is a question of federal common law. *In re* Meadows, 39 Bankr. 538, 540 (Bankr. W.D. Ken. 1984). In contrast,

> the legal consequences of one party's failure to perform its remaining obligations under a contract is an issue of state contract law . . . a bankruptcy court should determine whether one of the parties' failure to perform its remaining obligations would give rise to a 'material breach' excusing performance by other party under the contract law applicable to the contract under the choice of law rules of the state in which the court sits.

In re Cochise College Park, 703 F.2d 1339, 1348 n.4 (9th Cir. 1983); *accord In re* Alexander, 670 F.2d 885, 898 (9th Cir. 1982).

> if the only performance that remains is repayment. Performance on one side of the contract would have been completed and the contract is no longer executory.[56]

The majority of courts have interpreted section 365 and its history as adopting Professor Vern Countryman's familiar definition of executory contract: "a contract under which the obligation of both the bankrupt and the other party to the contract are so far unperformed that the failure of either to complete performance would constitute a material breach excusing the performance of the other."[57] Courts that differ from the Countryman definition have either expanded the definition[58]

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56. H.R. REP. NO. 595, *supra* note 10, at 347; *see also* S. REP. NO. 989, *supra* note 10.

57. *See, e.g., In re* Alexander, 670 F.2d 885 (9th Cir. 1982); *In re* Select-A-Seat Corp., 265 F.2d 290 (9th Cir. 1980); *In re* Knudson, 563 F.2d 916 (8th Cir. 1977); *In re* Farrar McWill, Inc., 26 Bankr. 313 (Bankr. W.D. Ken. 1982); *In re* Fashion Twenty, Inc., 16 Bankr. 784 (N.D. Ohio 1982); *In re* Rovine, 6 Bankr. 661 (Bankr. W.D. Tenn., 1980). Commentators generally agree that Congress intended to adopt the Countryman definition. *See* Cook, *Judicial Standards for Rejection of Executory Contracts in Bankruptcy Code Reorganization Cases*, 1980 ANNUAL SURVEY OF AMERICAN LAW 691, and Quittner, *supra* note 53, at 84.

58. The Tenth Circuit applied a "gloss" to Countryman's definition, which effectively expands it. The contract is executory when "neither party [has] completely performed and the obligations of each remain complex." Workman v. Harrison, 282 F.2d 693, 699 (10th Cir. 1960); King v. Baer, 482 F.2d 552, 557 (10th Cir. 1973), *cert. denied*, 414 U.S. 1068 (1973); *see also In re* Harms, 7 BANKR. CT. DEC. (CRR) 671, 673 (D. Colo. 1981). The Tenth Circuit thus retains Countryman's requirement of bilateral nonperformance but removes the necessity of such nonperformance's resulting in material breach. *In re Harms* demonstrated the different results obtained by the two definitions. Debtor was sole general partner in several limited partnerships. Neither the limited nor the general partners fully performed. Under Countryman, however, the partnership contract would not have been executory because under the terms of the partnership agreement failure of a limited partner to perform did not excuse the general partnership from performing. The limited partner would simply be forced to forfeit his partnership interest. *Id.* Because the general partner had many services left to perform and the limited partners were obligated to make substantial payments, the court did find the outstanding obligations of all parties complex, and therefore held the partnership contract executory. The *Harms* court's substitution of "complex" for Countryman's requirement that outstanding obligations constitute "material breach excusing the performance of the other [party]," simply makes it easier for courts to find contracts executory. The Tenth Circuit test will thus increase, not decrease, the chances that software license agreements may be considered executory in the Tenth Circuit. The meaning of "complex" does not appear to be well developed, but both *Workman* and *King* focus on remaining detailed obligations that require additional expenditure of large sums of money. In *Workman* the court also contemplated the risky and speculative nature of the enterprise.

Some courts remove the bilateral nonperformance requirement entirely and state that "a contract is executory when something remains to be done by one or more of the parties". *In re* American Magnesium Co., 488 F.2d 147, 152 (5th Cir. 1974); *see In re* Brethren's Home, 5 Bankr. Ct. Dec. (CRR) 658 (S.D. Ohio 1979) (where debtor nursing home owed ongoing obligations under resident patient's life care contracts and resident patients had completed performance by lump sum payment, life care contracts were nevertheless held executory). Despite the breadth of such holdings, the contract is generally not held

or added a second step to the analysis.[59]

A recent example of the application of section 365 to technology licensing is *Lubrizol Enterprises v. Richmond Metal Finishers*.[60] The debtor, Richmond Metal Finishers ("RMF"), had granted Lubrizol a nonexclusive license to use a metal coating process owned by RMF. The license required RMF to notify Lubrizol of, and to defend, any patent infringement suit regarding the licensed technology and to indemnify Lubrizol for any losses resulting from misrepresentation or breach of warranty by RMF. It also required RMF to give Lubrizol the benefit of a "most favored nation" clause.[61] For its part, Lubrizol was required to pay royalties based on quarterly written reports delivered to RMF. The reports were subject to inspection by a certified public accountant.[62]

Like the district court, the Fourth Circuit found the license agree-

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to be executory where the debtor has no remaining performance obligations. *See* H.K. Porter Co., 24 F. Supp. 766 (W.D. Penn. 1938) (where debtor had fully executed an assignment of rents to mortgage company to prevent foreclosure on his property, but mortgagee was still obliged to collect future rents, the contract was not executory); *In re* Horace Jones, 8 Col. Bankr. 215 (M.D. Fla. 1976) (rejection of lease was not permitted, where the debtor landlord had no further duties to perform); *see also* Silverstein, *supra* note 53, at 475-76; Shanker, *The Treatment of Executory Contract and Leases in Bankruptcy Chapter X and Chapter XI Proceedings*, 18 PRAC. LAW., Apr. 4, 1972, 15, 28 ("[A] contract is executory only if there is future performance required on the part of the bankrupt.").

59. An alternative line of cases, following from *In re* Booth, 19 Bankr. 53 (Bankr. D. Utah 1982), potentially restrict the number of contracts that may be found executory. B. Weintraub & A. Resnick, *From the Bankruptcy Courts*, 15 U.C.C. L.J. 273, 277 (1983). The Booth line of analysis treats the Countryman definition as a threshold inquiry "serv[ing] more as an 'exclusionary rule' than as the ultimate test of an executory contract." *In re* Gladding Corp., 22 Bankr. 632, 635 (Bankr. D. Mass. 1982). As the *Booth* court stated:

> [I]n the final analysis, executory contracts are measured not by a mutuality of commitments but by the nature of the parties and the goals of reorganization . . . it is the consequences of applying section 365 to a party, especially in terms of benefit to the estate and the protection of creditors, not the form of contract between vendor and vendee, which controls.

Booth, 19 Bankr. at 56-57. Courts following the *Booth* line of analysis resist formalistic, automatic application of a rule in favor of an exercise of the bankruptcy court's equitable powers. *See, e.g., In re* Adolphsen, 38 Bankr. 776 (Bankr. D. Minn. 1983), *aff'd*, 38 Bankr. 780 (Bankr. D. Minn. 1983); *In re* Cox, 28 Bankr. 588 (Bankr. D. Idaho 1983); *see also* B. Weinstraub & A. Resnick, *supra; but see* Shaw v. Dawson, 48 Bankr. 857 (Bankr. D. N.M. 1985) (refusing to follow *Booth*). While these cases deal primarily with real estate contracts, the analysis suggests an alternative equitable argument for treating software licenses as not executory. Some courts may be willing to accept such an alternative in light of the relatively new and undefined legal nature of software copyright licenses.

60. 756 F.2d 1043 (4th Cir. 1985), *cert. denied*, 106 S. Ct. 1285 (1986), *rev'g In re* Richmond Metal Finishers, 38 Bankr. 341 (Bankr. E.D. Va. 1984).

61. Under this clause, Lubrizol got the benefit of any lower royalty rate made available to another licensee. *Lubrizol*, 756 F.2d at 1045.

62. *Id.* at 1046.

ment to be executory under the Countryman test.[63] On the debtor RMF's side were the continuing obligations to defend infringement suits, to indemnify Lubrizol for certain losses, and to give Lubrizol the benefit of the "most favored nation" clause.[64] On Lubrizol's side were the obligations to account for and pay royalties, to make quarterly sales reports, and to keep books of account open to inspection by a certified public accountant.[65] The breach of any of these obligations would excuse performance by the other party.

After finding the licensing agreement to be executory, the court addressed the question whether its rejection would be "advantageous to the bankrupt."[66] The debtor's president testified that sale or further licensing of the technology, which was the debtor's principal asset, would be facilitated by stripping Lubrizol of its rights. Laboring under what the Fourth Circuit considered a "misapprehension of controlling law,"[67] the district court held that rejection could not deprive Lubrizol of its right to use the licensed technology and therefore "could not reasonably be found beneficial" to the debtor's estate.[68] The Fourth Circuit held otherwise. It stated that upon rejection Lubrizol "could not seek to retain its contract rights in the technology by specific performance even if that remedy would ordinarily be available upon breach of this type of contract."[69] Worse yet, the court held that "Lubrizol [could] not rely on provisions within its agreement with RMF for continued use of the technology by Lubrizol upon breach of RMF," because section 365(g) "provides only a money damages remedy for the nonbankrupt party," and "allowing specific performance would obviously undercut the core purpose of rejection under section 365(a) . . . ."[70] Based on its finding that rejection can "strip" the licensee of the technology, the court easily concluded that rejection passes the "sound business judgment" test.

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63. The Fourth Circuit had recently adopted the Countryman test. *See* Gloria Manufacturing Corp. v. Int'l Ladies' Garment Workers' Union, 734 F.2d 1020, 1022 (4th Cir. 1984).

64. *Lubrizol*, 756 F.2d at 1046.

65. *Id.* In circuits which do not follow Countryman, a debtor's outstanding obligations to perform may well be enough to make a contract executory, even if the other party is obligated only to make payments. *See supra* note 58. A Countryman court might even be expected to reach a comparable result if the debtor's executory obligations constituted a significant impediment to the reorganization or liquidation of the debtor.

66. In courts following the *Booth* line of analysis this question is merged with the question whether the contract is executory. *See supra* note 59.

67. *Lubrizol*, 756 F.2d at 1048; *but cf. In re* Select-a-Seat Corp., 265 F.2d 290, 292 (9th Cir. 1980) (court allowed rejection of exclusive software license relying in part on fact that trustee had not attempted to deprive the licensee of right to use software).

68. *Lubrizol*, 756 F.2d at 1049. For this reason, the district court had disallowed rejection.

69. *Id.* at 1048.

70. *Id.*

In *Lubrizol*, the district court had reasoned that rejection of a nonexclusive technology license should not deprive the licensee of the right to use the technology because the license is comparable to a completed sale of property.[71] The court of appeals disagreed, arguing that "licensing agreements are more similar to leases than to sales of property because of the limited nature of the interest conveyed."[72] The district court's "sale of property" analogy would have been compelling if an exclusive copyright license had been involved. Under the Copyright Act, the exclusive licensee does not have a mere contractual right to use property for a limited period of time. Instead, the exclusive licensee gains something comparable to title in a separable piece of the original copyright.[73] The licensee may register as the owner of the exclusive

71. 38 Bankr. at 344; *see supra* text accompanying note 47. Rejection of the contract of sale under § 365 is not a right of rescission. *In re* Murphy, 694 F.2d 172, 174 (8th Cir. 1982). The trustee does not enjoy an equitable right to "undo" the transaction by recovering property already delivered to the purchaser. To recover the sold goods, the trustee would have to rely instead on the avoidance powers of 11 U.S.C. §§ 544(a)-(b) (1982) (state law fraudulent conveyances), 545 (statutory liens), 547 (preferential transfers), 548 (fraudulent transfers), and 549 (post bankruptcy petition transactions), and the "recovery" or "turnover" rights under §§ 550 and 542. A trustee may recover property transferred, or the value of such property, if the transfer is avoided, *id.* § 550(a), subject to limitations on recovery from subsequent third party good faith transferees, *id.* § 550(b). As discussed above, § 544(a)(1) grants the trustee the rights of a lien creditor. It is unlikely that a lien creditor would have rights superior to a buyer in the ordinary course under the laws of any jurisdiction. *See* U.C.C. § 9-307(1) (1978) (protecting buyers in the ordinary course against the holders of security interest). The right to recover property under § 550 is limited to avoided transfers and the code provides no comparable rights for property delivered pursuant to rejected executory contracts. Upon filing of the petition, however, an entity, other than a custodian, having possession or control of property of the estate must turnover such property to the trustee. 11 U.S.C. §§ 542(a), 363(b)(1) (1982). Section 541 in turn defines "property of the estate" as including "all legal or equitable interest of the debtor in property as of the commencement of the case." ("Property of the estate" also includes certain property acquired by the trustee after the commencement of the case. *See id.* § 541(a)(2)-(a)(7) (1982)). Where the debtor has legal title to the property, but no equitable right to immediate possession, § 541(d) provides that the trustee gains no better title:

> The legislative history of [§ 541(a)(1)] indicates that Congress intended to exclude from the estate property of others in which the debtor had some minor interest such as a lien or bare legal title . . . [but] not limit the ability of the trustee to regain possession of property in which the debtor had equitable as well a legal title.

United States v. Whiting Pools, Inc., 462 U.S. 198, 204 n.8 (1983). Under Article 2 of the Uniform Commercial Code, a seller has no right to repossession of goods following delivery, even if the buyer has failed to pay. *See* U.C.C. §§ 2-703-2-710 (1978). *A fortiori*, a seller that has breached the contract (including a trustee breaching by rejection) has no equitable interest in goods already delivered, even if the seller has purported to retain legal title. Such goods therefore are not "property of the estate" for purposes of section 541.

72. *Lubrizol*, 756 F.2d at 1046, 1048.

73. *See* 3 M. NIMMER, *supra* note 17, at § 10.02. The Copyright Act defines "transfers"

right transferred,[74] much as if it were the original owner of that right, and, provided that it has registered, the licensee may sue in its own name for infringements of its exclusive rights.[75] Thus, the Copyright Act vests substantial indicia of ownership in the exclusive licensee.[76] In contrast, the technology license in *Lubrizol* was a trade secret license, which does not transfer any property right in the trade secret to the licensee.[77]

The Fourth Circuit's rejection of the sale of property analogy applies wherever a technology transfer does not involve an exclusive copyright license or patent assignment.[78] There is no basis in the Copyright Act, the Patent Act, or the common law of trade secrets on which to

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as including exclusive rights limited in time. *See* 17 U.S.C. § 101 (definition of "transfer"). Modern real estate law (and other personal property law) generally disapprove "fee tails." Merrill v. American Baptist Missionary Union, 73 N.H. 414, 416 (1905) (conveyance in fee tail is not enforceable because tying up real estate indefinitely by entitlement is against state policy); *see* R. CUNNINGHAM, W. STOEBUCK AND D. WHITMAN, THE LAW OF REAL PROPERTY § 2.10 (1984) (fee tail estate is regarded with hostility by courts and legislatures); 2 R. POWELL, REAL PROPERTY ¶¶ 192, 198 (1983) (listing various state statutes that operate so as to convert fee tail to fee simple estate). As a result, title to copyright can be carved up in the dimension of time, whereas title to other property cannot.

74. 17 U.S.C. § 408(a) (1982).

75. *Id.* § 501(b).

76. Even if an exclusive copyright license thus seems protected against loss of right to use the licensed programs following rejection under § 365, the license remains subject to avoidance under § 544(a)(1) if it has not been recorded in the manner required by Copyright Act § 205(c). *See supra* text accompanying notes 28-29. On the other hand, rejection of an exclusive license that has been recorded would split trade secrets rights in the licensed programs from copyright in the same programs. Under *Lubrizol*, rejection of the license would terminate the licensee's right to use the trade secrets, while § 205(c) of the Copyright Act would permit the licensee to retain its portion of the copyright. The same splitting occurs where the trustee avoids an exclusive copyright license, but cannot avoid the trade secret license covering the same technology. For reasons already discussed, Copyright Act § 301 appears to require the licensee to prevail under these circumstances. *See supra* text accompanying notes 47-48.

77. 1 MILGRIM, *supra* note 47, at § 1.06 (a trade secret is property that is subject to assignment by sale, but a license only conveys the right to use the property; property right in the secret remains with the licensor). An exclusive license of patent is also distinguishable from an exclusive copyright license because an exclusive patent license does not convey a property interest in patent. An exclusive patent license, as opposed to an assignment of the whole patent, merely protects the licensee from a claim of infringement by the patent owner. Western Electric Co. v. Pacent Reproducer Corp., 42 F.2d 116, 118-19 (2nd Cir. 1930), *cert. denied*, 282 U.S. 873 (1931); Bell Intercontinental Corps. v. United States, 381 F.2d 1004, 1010-11 (Ct. Cl. 1967). Where a patent licensor cancels a licensing agreement, the license cannot be given effect for any purpose. Krantz v. Van Dette, 165 F. Supp. 776, 784 (D. Ohio 1958), *aff'd*, 272 F.2d 709 (1959).

78. Comparable results are found in *In re* J.H. Land and Cattle Co., Inc., 3 Collier Bankr. Cas. 2d (MB) 695 (Bankr. W.D. Okla. 1981) (permitting rejection of an oil and gas leasehold) and O.P.M. Leasing Services, Inc., 23 Bankr. 104 (Bankr. S.D.N.Y. 1982) (requiring nondebtor equipment lessee to return equipment upon rejection of the lease). *But*

argue that a license is a transfer of property rights.[79] It is therefore difficult to analogize such licenses to complete sales. *Lubrizol* falls squarely within the rule of cases holding, for example, that bankruptcy trustees may reject contracts as diverse as oil and gas leases,[80] franchises,[81] and equipment leases.[82]

The typical software license imposes on both the licensor and licensee far greater executory obligations than the technology license imposed on the debtor in *Lubrizol*. Even the most barebones software license requires the licensor to warrant title to the licensed software[83] and requires the licensee not to disclose the trade secrets contained in the software to any third party.[84] Most software licenses go much farther, as well. For example, the vendor usually agrees to maintain the software by debugging and updating it.[85] Therefore, most nonexclusive software licenses are executory and subject to rejection under section 365.[86]

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see In re Petur U.S.A. Instrument Co., Inc., 35 Bankr. 561 (W.D. Wash. 1983) (refusing to allow rejection of a technology license where rejection would ruin the licensee's business).

79. Unless, of course, the license is an exclusive copyright license. *See supra* text accompanying notes 71-77.

80. *In re* J.H. Land and Cattle Co., Collier Bankr. Cas. 2d (MB) 695.

81. *In re* Fashion Two Twenty, 16 Bankr. 784 (Bankr. N.D. Ohio 1982).

82. *O.P.M. Leasing Services*, 23 Bankr. at 104; *but cf. In re Petur*, 35 Bankr. at 561.

83. The licensor's obligation to defend title is an executory obligation which, if breached, would excuse the licensee of its obligation to perform. *See O.P.M. Leasing Services*, 23 Bankr. at 117; Countryman, *Executory Contracts in Bankruptcy: Part II*, 58 MINN. L. REV. 479, 502 (1974) (discussing patent licenses). Many of the obligations in a software license, particularly those on the vendor, are contingent. Examples include warranties and an obligation to defend title to the licensed programs. But "contingency of an obligation does not prevent its being executory under § 365." *In re* G-N Partners, 48 Bankr. 462, 465 (Bankr. D. Minn. 1985); *see also In re* Sun Ray Bakery, 5 Bankr. 670, 672 (Bankr. D. Mass. 1980) (where consignees had fully paid for exclusive distribution rights, the consignee's continuing obligation to distribute goods according to contract is a material performance obligation constituting an executory contract); *In re Fashion Two Twenty*, 16 Bankr. at 786 (franchisee's contingent obligations to maintain its business location, to push the franchisor's products and to purchase a minimum amount of products are unperformed obligations constituting an executory contract, despite franchisee's full performance of payment obligation).

84. This assumes, of course, that the vendor protects its programs both under copyright and trade secret law. This is usually the case. *See supra* notes 6-7.

85. Debugging, updating, and other maintenance often require day-to-day cooperation between vendor and customer. In finding a franchise agreement to be executory, the court in *In Re* Rovine Corp. emphasized that the agreement "required a continuing cooperative effort between franchisor and franchisee." 6 Bankr. at 666.

86. *See In re* Select-a-Seat Corp., 265 F.2d 290 (9th Cir. 1980) (holding an exclusive software license to be executory, although the terms of rejection allowed the licensee to continue to use the software on a nonexclusive basis).

2. *Effect of Rejection on Right of Licensee to Use Software*

If a software license is executory, the question remains whether rejection by the trustee terminates the licensee's right to use the licensed software. The Fourth Circuit appeared to answer affirmatively in *Lubrizol*, but in a comparable case, *In re Select-A-Seat*,[87] the Ninth Circuit concluded that an exclusive software license was executory in part on the ground that the rejection would not deprive the licensee of the right to use the software on a nonexclusive basis.

Although the outcome may appear more humane than *Lubrizol*, *In re Select-A-Seat* is not a compelling contrary precedent. The Ninth Circuit did not consider whether the debtor could have abrogated the licensee's right to use the software if the debtor believed that termination of the licensee's right to use the software was supported by sound business judgment.

The *In re Select-A-Seat* court also failed to consider the implications of section 205(e) of the Copyright Act.[88] Because the software license in *In re Select-A-Seat* was exclusive, it constituted a transfer of copyright in the licensed program.[89] If the transfer was recorded in the manner provided by section 205(c) of the Copyright Act, then the purported rejection should not have been allowed because the licensee's acquisition of an exclusive right was protected against the trustee under section 205(e) of the Copyright Act.[90] If, however, the transfer was unrecorded, then the debtor could have avoided the transfer under section 544(a)(1), extinguishing the licensee's right to use the licensed software. There is no basis for believing that the right of rejection under section 365 should not terminate the licensee's right to use in the same manner that the avoidance power under section 544(a)(1) can and does.

If it had been considering a nonexclusive software license, the *In re Select-A-Seat* court might have considered basing its holding on section 205(f) of the Copyright Act. Section 205(f) provides that a nonexclusive

87. *Id.*

88. It is possible that *In re Select-a-Seat* arose prior to the Jan. 1, 1978 effective date for the Copyright Act. Section 30 of the Copyright Act of 1909, which was effective prior to that date, however, created the same relevant implications as § 205(e). Assignments of copyright not timely recorded were void under the old Act as against subsequent takers for value, without notice, who have duly recorded. 17 U.S.C.A. App. § 30 (West Supp. 1986) (former Title 17).

89. Even if the licensor had not registered the copyright, it could claim "automatic" protection of its copyright because the programs were works of authorship set down in a tangible medium of expression, which had not entered the public domain by publication without a copyright notice. 17 U.S.C. § 102(a) (1982). Note that such publication would also have destroyed the programs' trade secret status.

90. For a discussion of the question whether the power to reject an executory contract permits the trustee to in effect avoid a duly recorded exclusive license, see *infra* text accompanying notes 116-19.

copyright license prevails over a subsequent transferee if the license is in writing, signed by the copyright owner, and taken before execution of the transfer or its recordation, in good faith, and without notice of the transfer.[91] As the bankruptcy trustee is a subsequent transferee,[92] does this mean that the Copyright Act protects the holder of a nonexclusive copyright license against loss of its right to use the licensed work following rejection of the license?

Again, it is necessary to reconcile the Copyright Act and Bankruptcy Code. Copyright Act section 205(f) is plainly intended to protect nonexclusive licensees against persons who acquire copyrights in the subject work from their licensors. It is not intended to protect nonexclusive licensees against their own licensors. In the context of a section 365 rejection, the trustee is not asserting special status as a transferee from the debtor.[93] Instead, the trustee is exercising an option the debtor had all along: the option of defaulting. Section 365 does not create this option; it merely limits the remedies available to the non-bankrupt contracting party following default by the trustee. In practical terms, section 365 means that following rejection the non-bankrupt licensee cannot assert equitable rights for specific performance[94] and can recover only monetary damages in the form of an unsecured claim against the debtor's estate.[95] Section 205(f) does not purport to regulate the circumstances under which a copyright licensor may terminate a nonexclusive license, nor does it regulate the licensee's remedies in the event of such termination. It should not, therefore, protect a nonexclusive software licensee from the risk of losing the right to use the licensed programs following rejection of the license by the vendor's trustee.

Lubrizol had urged affirming the district court for "policy consider-

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91. 17 U.S.C. § 205(f) (1982).

92. *See supra* text accompanying notes 30-44.

93. Compare § 544(a)(1), under which the trustee has the rights of a lien creditor. *See supra* text accompanying notes 16-44.

94. *In re* Waldron, 36 Bankr. 633, 642 n.4 (Bankr. S.D. Fla. 1984); *rev'd on other grounds* 785 F.2d 936 (11th Cir. 1986), *cert. denied sub nom.* Waldron v. Shell Oil Co., 106 S. Ct. 3343 (1986).

95. *See Lubrizol*, 756 F.2d at 1048 ("Allowing specific performance would obviously undercut the core purpose of rejection under § 365(a)."); 2 KING, *supra* note 48, at ¶ 365.08. Compare the Bankruptcy Code's remedies for rejection in two unique situations: where the non-bankrupt lessee or vendee is in possession of real property that is the subject of either lease or sale. In either situation, the non-bankrupt may choose to treat the lease or contract as "terminated" and assert a claim for damages, or the non-bankrupt may remain in possession, continue to make payments due and offset against such payments certain damages caused by the rejecting bankrupt. 11 U.S.C. § 365(h)-(i) (1982). The difference in treatment of lessees of realty and lessees of personal property and licensees follows from the tradition that only the former creates an estate in the property. *See* 2 KING, *supra* note 48, at ¶ 365.09-365.10; *see also supra* text accompanying notes 48, 71-77.

ations," including "serious burdens" on contracting parties and the "general chilling effect upon the willingness of such parties to contract at all with businesses in possible financial difficulty."[96] Indeed, there are some practical differences between certain types of technology licenses and other executory contracts. For example, it is not uncommon for software licensees to pay a lump sum up front as the license fee, followed by smaller periodic payments thereafter as "maintenance" fees. In such a case, a transfer of the right to use appears to be "fully performed" upon execution of the license, while the maintenance obligations remain executory.[97] Furthermore, following installation of the licensed software, the licensee's business may become so heavily dependent upon its use that an abrupt termination caused by a bankrupt vendor's rejection could have catastrophic effects on the licensee.

Aside from the Copyright Act provisions discussed above, it is difficult to see why the plight of a terminated technology transferee is more troubling than that of, for example, a franchisee whose franchise agreement has been terminated by a bankrupt franchisor. The franchisee probably made a substantial up front payment for the right to operate the franchise. Loss of the right to use the franchised name could be as catastrophic to its business as the loss of the right to use a program that controls the internal operation of a business would be to the software licensee. Nevertheless, it has been held that rejection of the franchise agreement terminates the franchisee's right to operate the franchise.[98]

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96. *Lubrizol*, 756 F.2d at 1048.

97. A similar case occurs with the sale of goods under warranty where the sale (delivery and payment) is fully performed, but the obligations under the warranty remain outstanding. In such a case, the court may treat the warranty as an executory contract and allow rejection by the trustee without requiring the return of the goods. *See, e.g., In re* Smith Jones, Inc., 26 Bankr. 289 (Bankr. D. Minn. 1982) (rejection of express written warranties of furnaces and air conditioners sold by debtor). If exclusive copyright licenses were treated similarly—as fully performed transfers of property coupled with outstanding maintenance obligations—then the effect of rejection would be limited to the maintenance obligations. In deciding to authorize the trustee's rejection of warranties, the *Smith Jones* court noted that other remedies for defective parts, available at common law or by statute, were not affected by rejection, and, furthermore, customers, by reason of rejection of the warranties, may have an immediate, estimatable claim for damages. *Id.* at 294. Because alternative rights to maintenance of licensed software are not available at common law or by statute, a software licensee's remedies would be limited to an unsecured claim for damages.

98. *See In re* Fashion Two Twenty, Inc., 16 Bankr. 784 (Bankr. N.D. Ohio 1982). It could be argued that the franchisor has a more compelling business reason for terminating the franchisee's right to use than the technology licensor. In the franchise situation, a trademark or a system of trademarks is usually the central licensed asset. Multiple ownership of trademarks is disfavored because it tends to deceive the public as to the source of the products or services being sold. *See* 1 J. MCCARTHY, TRADEMARKS AND UNFAIR COMPETITION § 16.14 (1984). Furthermore, use of a trademark by one not subject to license obligations regarding the quality and types of goods and services provided under the

As the Fourth Circuit stated, "[t]echnology licensees such as Lubrizol . . . share the general hazards created by section 365 for all business entities dealing with potential bankrupts."[99]

Yet, the Fourth Circuit's declaration that "under bankruptcy law such equitable considerations may not be indulged by the courts"[100] may be harsher than necessary. A better approach would be to adjust the trustee's remedy upon termination without jeopardizing the trustee's ultimate right to terminate the licensee's use of the technology. In the case of computer software, few programs are truly unique. If the effective reorganization of a bankrupt vendor required its trustee to terminate all existing licenses so that he or she could offer exclusive rights in the licensed programs, the court could allow the licensees a reasonable period of time in which to find and bring on line software from another vendor which would replace the functions of the software covered by the terminated licenses. The licensee should be permitted to use the licensed technology indefinitely only in the very unusual case where no comparable technology is obtainable on the market and the licensee paid for the license in full prior to the filing of bankruptcy proceedings.[101]

Thus, a trustee for a bankrupt software vendor may reject software licenses in exercise of his or her sound business judgment, and, upon rejection, the licensee's right to use the software may be terminated.[102] Accordingly, a skillful trustee can use rejection in two ways. First, the trustee can use the threat of rejection to persuade licensees that the terms of their licenses need revision: most likely, that the payments need to be increased. Alternatively, the trustee can reject all outstanding licenses and sell the programs to another vendor. Such a vendor would be free to renegotiate new license terms with the rejected customers of the bankrupt vendor. The customers' outrage at their treatment may be overcome by their need to continue operations that

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trademark tends to dilute its distinctive quality and diminish its value to the bankrupt franchisor's estate. On the other hand, an exclusive technology license can be much more valuable than a nonexclusive one. The ability of a bankrupt software vendor, such as RMF in *Lubrizol*, to offer an exclusive license to potential purchaser would be lost if any prior licensee retained the right to continue to use the licensed technology. The difference, if any, between the trademark license as a franchise and a technology license is, at most, one of degree, not one of kind.

99. *Lubrizol*, 756 F.2d at 1048.

100. *Id.; but see supra* note 41 (equitable powers of bankruptcy court) and note 66 (merger of equitable considerations and determination of executority).

101. This may explain the result in *In re* Petur, 35 Bankr. 561 (Bankr. W.D. Wash. 1983), where there was evidence that termination of the technology license would ruin the licensee's business.

102. This conclusion follows from the recent denial of Lubrizol's petition for certiorari. Lubrizol Enterprises, Inc. v. Canfield, 106 S. Ct. 1285 (1986).

depend on the licensed programs. It is, in either case, very much a seller's market.

In sum, vendor bankruptcy presents the following threats to the software licensee. First, if the license is exclusive and recorded, the licensee's right to use may be protected, but the trustee can, nevertheless, reject any outstanding obligations under the license agreement, including debugging and maintenance. If the exclusive license is unrecorded, then, under Bankruptcy Code section 544(a)(1), the trustee can avoid it altogether. Second, if the license is nonexclusive, it is subject to rejection by the trustee. Rejection terminates the obligation to perform debugging and maintenance for the software and, under *Lubrizol*, extinguishes the licensee's right to use the licensed programs.

Part II of this Article discusses strategies for reducing these risks, including escrows, recordation, and security interests.

II. SOURCE CODE ESCROWS AND SECURITY INTERESTS IN SOFTWARE

A. SOURCE CODE ESCROWS

1. *Description of Escrow Arrangement*

Software users who are concerned about their ability to use, modify, and update licensed software in the event of vendor bankruptcy frequently request that the source code be deposited with an escrow agent. Banks, companies specializing in software escrows, and attorneys are commonly used as escrow agents.[103]

Under the typical escrow arrangement, the software vendor agrees to place the source code and any related documentation in the possession of the escrow agent for a period of time at least equal to the term of the underlying software license. The agreement may also require the vendor to make periodic deposits of source code incorporating enhancements in, updates to, new editions of, or other variants of the licensed software.[104]

The escrow agent is required to hold the source code in secrecy until it receives notice of an event requiring release, or until it returns the source code to the vendor upon the termination of the escrow. To obtain the source code from the escrow agent, a participating licensee must inform the escrow agent and the vendor that an event requiring

103. For a discussion of software escrows, see generally Nycum, Kenfield & Keenan, *Debugging Software Escrow: Will It Work When You Need It?*, 4 COMPUTER L. J. 441 (1984) [hereinafter Nycum].

104. Exactly what further deposits are required depends on the terms of the underlying license. If, for example, the license does not cover future editions of the licensed programs, then the source code for such further editions would not need to be covered by the escrow agreement.

release has occurred. For example, such an event might be the failure or refusal of the vendor to maintain or update the software. Upon receipt of such notice, the escrow agent is required to notify the vendor that it will release the source code to the licensee unless the vendor objects in writing within a specified period of time.[105] If the vendor objects, the escrow agent is directed to hold the source code until ordered to release it by a court or by the vendor. If the vendor does not object, then the escrow agent is required to release a copy of the source code to the requesting licensee, retaining a copy for itself and for other participating licensees.

The escrow agent's reasonable expenses are sometimes paid by the vendor and sometimes by the vendee. Either or both parties indemnify the escrow agent for any liability arising as a result of its performance of its obligations under the escrow. Some escrow agreements require arbitration of disputes over the existence of an event requiring release.

Upon release of the source code to a licensee, the escrow agreement usually gives the licensee rights and obligations respecting the source code similar to those which apply to the object code. These include, at a minimum, the right to use the source code to maintain the licensed programs, subject to the obligations not to disclose the source code to third persons and to return or destroy the source code upon the termination of the license.

The software escrow is a complex relationship which raises many practical and legal questions. How does the licensee determine whether the vendor has deposited what it is required to deposit? How does the licensee determine whether what has been deposited is of any value in maintaining the software? Of what use is the software escrow if every time there is an "event requiring release," the vendor objects to the release, and the dispute is shunted into interminable legal proceedings during which the licensee is without effective maintenance and support? Examination of all of these issues is beyond the scope of this Article. Instead, this Article focuses on the question whether a software escrow can be made to survive a vendor's bankruptcy proceedings.

2. *Enforceability of Escrows in Bankruptcy Proceedings: In Re* Newcomb

No reported case has yet addressed the enforceability of source code escrow arrangements in bankruptcy proceedings. One of the few cases that discuss escrows in the bankruptcy setting is *In re New-*

105. The vendor might object on the grounds that no event requiring release has occurred or that the licensee is in default of its obligations to the vendor.

comb[106] but that case required the Eighth Circuit to address the enforceability of an escrow agreement in bankruptcy proceedings in the starkest possible terms. In *Newcomb*, the United States had recovered a judgment against Newcomb (the bankrupt) prior to the filing of bankruptcy proceedings. Newcomb appealed, depositing with a bank in escrow a sum sufficient to satisfy the judgment. The terms of the escrow were simple. If the judgment was affirmed on appeal, the United States got the money; if the judgment was reversed on appeal, Newcomb got the money. The appellate court affirmed,[107] but before the escrowed funds were paid to the government Newcomb and his wife filed for bankruptcy.

The bankruptcy trustee filed a complaint for turnover of the escrowed funds, claiming: (1) the escrow agreement was an executory contract; (2) the transfer of the escrowed funds was preferential; and (3) the trustee's status as lien creditor under section 544(a)(1) was superior to any interest of the government in the escrowed funds.[108] The bankruptcy court ordered the funds turned over to the trustee, and the district court affirmed.

On appeal, the Eighth Circuit reversed in a brief opinion, which is nevertheless one of the most detailed to date addressing the enforceability of escrow arrangements in bankruptcy proceedings.[109] Considering whether the escrow agreement was an executory contract, the court held that at the time the bankruptcy petition was filed the only remaining performance was the escrow agent's act of turning over the funds to the United States. The court found this insufficient to meet the Eighth Circuit's test for executority: whether "performance remains due on both sides at the time of the bankruptcy petition."[110] The court opined that "an escrow is something more than a contract—it is a method of conveying property."[111] Analyzing Missouri law in detail, the court

106. *In re* Newcomb, 744 F.2d 621 (8th Cir. 1984) *rev'g In re* O.P.M. Leasing Services, Inc., 46 Bankr. 661 (S.D.N.Y. 1985).

107. United States v. Newcomb, 682 F.2d 758 (8th Cir. 1982).

108. *Newcomb*, 744 F.2d at 624.

109. Escrow arrangements are discussed in the context of § 365 in several cases where a deed for land was placed in escrow and the executority of the real estate contract is at issue. *See, e.g.*, Shaw v. Dawson, 48 Bankr. 857 (Bankr. D. N.M. 1985). The cases are generally inapplicable to escrow arrangements for copyrighted software because state law determines the effect to be given real estate contracts, and the decisions focus on whether such contracts are security devices in a particular state. *Id.*, at 861. Compare *In re* Simon wherein the court held that funds placed in an escrow account with a mortgagee bank by a bankruptcy mortgagor prior to the filing of bankruptcy proceedings were not property of the estate, and thus not subject to the turnover provision, because the funds were no longer within the bankrupt's control. *In re* Simon, 167 F. Supp. 214, 215 (E.D.N.Y. 1958).

110. *Newcomb*, 744 F.2d at 624; *see also supra* note 59 (discussion of this alternative to the Countryman test).

111. *Newcomb*, 744 F.2d at 624. Similarly, some courts have recognized an escrow as a

found that the creation of an escrow transfers an equitable interest in the escrowed property to the ultimate grantee, while leaving legal title in the hands of the depositor. Legal title is conveyed to the ultimate grantee when and if the condition of the escrow is satisfied.[112]

The court found that both the creation of the escrow and the payment of the escrowed funds upon satisfaction of the condition of the escrow were "transfers" within the meaning of the Bankruptcy Code.[113] It concluded, however, that the second "transfer" would not deprive the estate of "anything of value" because the only interest in the escrowed funds remaining in the debtor was a contingent right to the funds if the court reversed the judgment for the United States.[114] Because the first transfer—the creation of the escrow—had been made more than 90 days before the filing of bankruptcy proceedings, it was not preferential under Bankruptcy Code section 547. The court therefore resolved the trustee's preference claim in favor of the United States.

The *Newcomb* court rejected the trustee's third contention, that its avoidance power under section 544(a)(1) took priority over the United States' interest in the escrowed funds. The court concluded that by the time the bankruptcy petition was filed the condition of the escrow had been satisfied, and the debtor therefore had no interest in the escrowed funds to which a judgment lien could attach.[115]

Newcomb strongly supports the enforceability of an escrow arrangement in bankruptcy proceedings, at least when the escrow agreement is very simple and the escrowed property is not regulated by recording or title registration statutes. Under the *Newcomb* analysis, a bankruptcy trustee cannot recover escrowed property under sections 541 and 542, even if the escrow agreement is executory, so long as there

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method of conveying and perfecting a security interest. *See, e.g., In re* Copeland, 531 F.2d 1195 (3d. Cir. 1976); *but see In re* Dolly Madison Indus., Inc., 351 F. Supp. 1038 (E.D. Pa. 1972), *aff'd mem.*, 480 F.2d 917, 918 (3d. Cir. 1973).

112. *Newcomb*, 744 F.2d at 725-26. A majority of courts concur with the Missouri rule that delivery to an escrow agent transfers equitable title to the escrowed property and satisfaction of the conditions of an escrow agreement transfers legal title. *See e.g. In re* Missionary Baptist Found. of America, 14 Bankr. Ct. Dec. 1252, 1254 (5th Cir. 1986) (Texas law); *see also* 28 AM. JUR. 2D *Escrow* § 10 (1963); 30A C.J.S. *Escrows* §§ 9, 10 (1965).

113. *Newcomb*, 744 F.2d at 626. *See* 11 U.S.C. § 101(48) (1982); *see supra* note 18.

114. *Newcomb*, 744 F.2d at 627; *compare* 11 U.S.C. § 541, discussed *supra* note 71 (bare legal title is not "property of the estate" for purposes of § 541).

115. *Id.* at 624. The court did not address whether the debtor would have such an interest if the condition were still unresolved on the date the petition in bankruptcy was filed. Its analysis of the preference issue, however, strongly suggests that § 544(a)(1) should not assist the trustee in this situation either. *See supra* notes 23-24 and accompanying text. Even if local law permitted a lien creditor to attach the bankrupt's contingent reversionary interest in the escrowed funds, it could attach no more of an interest than the bankrupt had: a contingent reversionary interest. *See supra* note 71. If the condition of the escrow were fulfilled, this interest would prove to be worthless.

is a possibility that an event requiring release could occur. Further, *Newcomb* squarely holds that the release of property (e.g., source code) from escrow is not a transfer which the trustee may avoid under Bankruptcy Code sections 547 or 549. In contrast, any escrow deposit made within ninety days prior to the filing of bankruptcy proceedings may be preferential, depending on the circumstances of the deposit.[116]

3. Application of *In re Newcomb* to Source Code Escrows

Newcomb's application to source code escrows may be problematic. The typical source code escrow agreement is considerably more complicated than the one-shot deal in *Newcomb*. A source code escrow usually requires the vendor to make an initial deposit of the then-current version of the source code for the licensed programs, followed by periodic deposits reflecting modifications and updates of the program. If bankruptcy proceedings are initiated respecting the vendor after the initial deposit is made, but before deposits of updates and modifications are made, the vendor's obligation to make such deposits would almost certainly be subject to rejection by the trustee under section 365,[117] even if the source code already deposited cannot be recovered by the trustee.

Applied to a source code escrow, *Newcomb* is unlikely to prove helpful on the section 544(a)(1) issue. Its finding that the debtor's contingent right to recover the escrowed funds cannot be used as a basis for avoidance of the escrow under section 544(a)(1) is based on the holding that the creation of an escrow is a "transfer" for purposes of the Bankruptcy Code. If it is also a "transfer" of copyright in the source code, it

116. A detailed discussion of the circumstances under which a trustee may avoid preferential transfers is beyond the scope of this Article. In general, a transfer to one who is not an "insider" may be avoided if it is within ninety days of filing of the bankruptcy petition and it is not a "contemporaneous exchange for new value given by the debtor," 11 U.S.C. § 547(c)(1) (1982), and not a payment of a debt in the ordinary course of business, *id.* § 547(c)(2). *See generally id.* § 547(c). Additionally, an attempt to perfect an interest by recording within 90 days of filing of the bankruptcy petition and more than ten days after the agreement was executed would probably be preferential even if the agreement creating the interest had been executed more than 90 days before filing. *See id.* §§ 547(e)(1)(B), (2)(B).

117. One unanswered question is whether this executory obligation means that the trustee can reject the escrow arrangement as a whole. The answer is probably "no." If the materials deposited into escrow are not "property of the estate," as *Newcomb* suggests, then the escrow arrangement becomes quite analogous to a sale of goods which are delivered in installments. The courts have held that such contracts are not executory with respect to delivered installments; the trustee cannot, by rejecting the contract, require the buyer to give back goods which have already been delivered. *See In re* Perry, 25 Bankr. 817, 819-20 (Bankr. D. Md. 1982). For these reasons, Nycum's proposal for a series of "mini-escrows", one for each successive deposit, is probably unnecessary to protect against loss of source code already deposited in escrow. Nycum, *supra* note 103, at 461. For most software vendors, such a series of mini-escrows is commercially impractical as well.

will be effective against the bankruptcy trustee only if it has been recorded in the manner required by Copyright Act section 205(c).[118]

The recording problem of Copyright Act section 205 will not often arise because most escrow agreements do not purport to transfer copyright in the escrowed source code. Instead, they concern only the physical tapes, disks, documentation, or listings embodying source code. The agreement usually states that the licensee's right to use the source code following an event requiring release is governed by the same license agreement that governs the licensee's original right to use the licensed programs in non-object code form. Thus, the typical source code escrow agreement will not itself conflict with section 544(a)(1), but its usefulness may depend on the continuing existence of the underlying license agreement.

The vulnerability of software licenses in vendor bankruptcy proceedings has been considered at length in this Article. If the license is exclusive and unrecorded, the vendor's trustee can probably avoid it under section 544(a)(1). If it is nonexclusive, the trustee can probably reject it under section 365. In either case, the escrow arrangement may well leave the licensee with possession of a copy of the source code, but without the benefit of the underlying license.

The possibility of a licensee gaining possession of a copy of the source code for a licensed program by exercising its rights under a source code escrow, while at the same time losing its license to use the program, raises a further issue at the copyright/bankruptcy boundary. Section 117 of the Copyright Act provides that the owner of a copy of a computer program copy acquires a transferable right to make a copy for archival purposes or adaptation in order to use the program on a "machine."[119] There is a strong argument that a licensee that gains lawful possession of a copy of the source code through an escrow arrangement is entitled to the benefit of section 117, and may therefore continue to use the program, despite avoidance or rejection of its software license. Note, however, that the rights of the owner of a copy under section 117 are strictly limited. In particular, they do not include the right to modify the program other than for use on a single machine, or to make copies of it other than for use on a single machine.

This suggests that a source code escrow may successfully protect the licensee against loss of the right to use licensed software in the

118. *Cf. supra* note 116 (discussing preferential transfers when an interest is recorded within ninety days of bankruptcy). This Article has already examined the Copyright Act's definition of "transfer" in detail. *See supra* text accompanying notes 15-20. It seems likely that any escrow purporting to cover copyright in the source code is a "conveyance, alienation or hypothecation" and therefore falls within the Copyright Act's definition of a "transfer."

119. 17 U.S.C. § 117 (1982).

event of vendor bankruptcy, but it may not protect the licensee's need to debug and modify the program using the escrowed source code. It is questionable whether a bankruptcy trustee would have either the resources or the inclination to police its rights to prevent such licensees from making debugged or modified versions of the program. If the trustee does not police such rights, the escrow may serve its purpose, partly by operation of law and partly otherwise.

In sum, source code escrows afford partial protection against the dangers of vendor bankruptcy. Source code deposits made more than ninety days prior to the filing of bankruptcy proceedings are likely to survive the trustee's claims and find their way into the possession of a licensee participating in the escrow arrangement. Under section 117, the licensee will acquire a right to use the source code on a single machine. The licensee will not, however, retain any additional right to debug or modify the licensed programs using the source code, unless copyright in the licensed programs was also transferred to the escrow agent, and the transfer was recorded in the Copyright Office. Also, any versions of the source code which were not deposited with the escrow at least ninety days before the bankruptcy filing, will be lost to the bankruptcy trustee.

B. SECURITY INTERESTS IN SOFTWARE

To the commercial lawyer, protecting the interests of a party dealing with a potential insolvent is simple: get a security interest whenever performance is not immediate. This section of the Article examines whether this proven method of protecting against the bankruptcy trustee is feasible in the software license context.

First, consider the advantages a security interest in software might afford a licensee when the software licensor files a petition in bankruptcy. Under the "equality is equity" motto of bankruptcy,[120] ideal equality seems to require that all creditors share equally in the bankrupt's estate, without regard to their pre-bankruptcy status. Bankruptcy law, however, does not go that far.[121] Instead, bankruptcy law has been shaped by an early policy decision that security interests are valid property rights which should not be disturbed in bankruptcy proceedings.[122] Property of the estate administered by the trustee consists of whatever assets of the bankrupt remain after the secured creditors have taken their collateral.

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120. *See* Jackson, *supra* note 13, at 859.

121. 2 G. GILMORE, SECURITY INTERESTS IN PERSONAL PROPERTY § 45.2 (1965).

122. *Id.* A security interest is a property right and, as such, is no part of the bankrupt's estate. *Id.; see also* J. MACLACHLAN, LAW OF BANKRUPTCY § 150 (1965); 11 U.S.C. § 506 (1982) (determination of secured status of creditor's interest).

A software licensee could avail itself of the protection of a security interest in several ways. The simplest situation would be as follows. A vendor licenses its customer to use a particular complicated program. Pursuant to the license agreement, the vendor provides the program to the customer in the form of object code, contained on a tape, and provides the customer with explanatory documentation. The license agreement also requires the vendor to provide extensive training to the customer as well as system debugging, enhancements, updates, and other maintenance over the term of the license agreement. To secure the vendor's obligations during the license, the vendor could grant the customer a security interest in the source code of the program, including all enhancements, updates, and modifications in the program which the vendor is obligated to provide to the customer in object code form under the terms of the license. Additionally, the security agreement could include as collateral all of the vendor's rights, including both copyright and trade secret rights, in the programs. The security agreement would allow the customer to foreclose its interest in the source code and the collateral if the vendor defaults and the default is not cured within an agreed upon period after notice to the vendor.[123]

Using a security interest would solve the two fundamental problems of escrow arrangements in the bankruptcy context. First, a security interest would give the customer an interest in the vendor's source code, which is not subject to rejection by a trustee in bankruptcy, without at the same time giving the customer or an escrow agent possession of or title to the source code. This relieves the customer's concerns regarding potential rejection and avoids the necessity of transferring either title or possession of one of the vendor's most valuable assets to a third party in anticipation of a disagreeable contingency—the vendor's default. Second, a security interest would grant its holder a trustee-proof interest in updates and enhancements without any need for a series of transfers to the escrow agent. Moreover, the security interest arrangement can be made more simple than the typical escrow agreement.

123. In connection with such a security agreement, other parts of the contract between the vendor and the customer would require modification. For example, many licenses contain provisions requiring that the licensee not disclose even the object code to third parties, not compete with the vendor, and not modify the licensed software without the vendor's consent. Such licenses will further provide that such provisions survive any termination of the license agreement, even if caused by the default of the vendor. All of these provisions must be modified so that the customer would not incur liability to the vendor in the event of a foreclosure of its security interest in the source code. Alternatively, the security agreement could cover all of the vendor's rights under its license and other agreements relating to the source code, so that in the event of a foreclosure the rights of the vendor and the customer would effectively merge in the hands of the customer.

One objection to the use of a security interest is that its foreclosure is more time-consuming than obtaining source code from an escrow agent. In practice, this is unlikely to be true because most escrow agreements include a waiting period during which the vendor may object to release of the source code. Furthermore, it is unlikely that the vendor would permit its source code to be released by an escrow agent without a fight. Similarly, most security agreements contain provisions requiring the debtor to assemble the collateral and deliver it to the secured party upon the secured party's demand following default, but few debtors comply with such a demand until compelled to do so either by the circumstances or by a court. In either case, the customer must assume that some court action will be required to wrest control of the program from the vendor or from the vendor's trustee in bankruptcy.[124]

Another objection to the use of a security interest is that foreclosure of the security interest in the source code could be as costly as recovery of the source code from an escrow agent because a security agreement covering the source code would not prevent the vendor's trustee in bankruptcy from rejecting the underlying license. This objection is unsound. A secured party in possession may use or operate the collateral for the purpose of preserving its value or in a manner and to the extent provided in the security agreement.[125] Thus, a separate license is not required for the period between the time the licensee takes possession and the time the source code is either sold or retained in satisfaction of the vendor's obligations, if the security agreement provides for use during such period.[126] Furthermore, the security interest de-

124. If the vendor is in bankruptcy proceedings, the customer/secured party can move for leave to foreclose its security interest under § 362(d) of the Bankruptcy Code. Action on such a motion is usually quite prompt, at least in the bankruptcy courts with which the authors are familiar. Section 362(e) provides that the motion will be deemed allowed if the court does not otherwise order within thirty days of the filing of the motion. Because recovery of source code from an escrow agent would also be likely to require a § 362(d) motion for relief from the stay, the delay in obtaining possession of the source code would probably be the same whether the customer holds a security interest or participates in an escrow arrangement in any case in which the software vendor is in bankruptcy proceedings. *See* Nycum, *supra* note 103, at 456.

125. U.C.C. § 9-207(4) (1978).

126. It might be claimed that foreclosure on the source code would convey no right to use the object code. This is not itself a serious problem because object code can be generated from source code by using the appropriate compiler programs. To be safe, the security agreement could state that the secured party may generate object code during the period of the possession of the collateral following default.

In the present software marketplace, however, it would be unusual for the vendor's system designer or programmer to restrict the software to the use of standard compilers. More likely, enhancements or modifications of a compiler are used. Additionally, the compiler in its premodification form may have been licensed from a third party. In either case, the appropriate compiler may not be readily available to the licensee. Without the

scribed above covers not only the tangible embodiment of the licensed programs in source code form, but also copyright and trade secret rights in the intangible programs themselves. Following foreclosure, no license from the vendor would be required because the vendor would no longer own the property being licensed.[127]

1. *Priority With Respect to Lenders*

Despite the legal advantages discussed in the preceeding section of the Article, there are practical problems with having the customer licensee hold a security interest. The vendor may have already granted a security interest in the same collateral to a lender. In that case, granting the licensee a junior security interest in the same collateral would not ensure the licensee's access to it because the licensee's right to take possession of the collateral would be subject to the lender's prior security interest.[128]

The security interest also creates troublesome obligations in the event of default. Under Article 9 of the Uniform Commercial Code (the UCC), a foreclosing secured party must "dispose of any or all of the collateral in its then condition or following a commercially reasonable preparation or processing" and "apply the proceeds to the costs of such disposition and to the indebtedness, remitting any balance remaining either to the debtor or to the holders of junior security interests."[129] Selling the source code and rights in the programs to another vendor may be the last thing that a licensee wants to do when there has been a default in the vendor's maintenance or other obligations. Article 9 provides that the secured party may propose to retain the collateral in sat-

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appropriate compiler the source code would be useless. Similarly, the licensee's ability to perform maintenance and updating depends on access to maintenance tools such as test programs and program specifications. Therefore, any security agreement should include the vendor's rights in documented source code, maintenance tools, and specialized compilers or assemblers. Additional useful information includes: description of program generation; descriptions and locations of any programs or codes used by, but not owned by, the vendor; functional specifications for any development data bases; names and addresses of the system's programmers; and names and addresses of other users and licensees of the system. *See* B. OLSON, CLIENT ALERT: TRENDS IN HIGH TECHNOLOGY ASSET PROTECTION, Vol. I. Issue 2 (1986).

127. *See* U.C.C. § 9-504(1)(a) (1978) (secured party's right to sell, lease, or otherwise dispose of collateral following default).

128. The lender might be the first to foreclose its interest, in which case possession of the source code would never reach the licensee. Even if the lender chose not to foreclose its prior interest in the source code, the licensee's rights in the source code would remain subject to divesture at any time that the lender chose to assert its prior interest. U.C.C. § 9-503 (1978); 9 R. ANDERSON, UNIFORM COMMERCIAL CODE § 9-503:6 (3d ed. 1985).

129. U.C.C. § 9-504(1) (1978). Section 9-507(2) provides tests for determining what is "commercially reasonable."

isfaction of the indebtedness.[130] This route extinguishes the licensee's claim for damages caused by the vendor's default, but in the bankruptcy setting such a claim might not be valuable anyway. Of more concern is the right of the vendor, or its trustee, to require the foreclosing licensee to sell the collateral.[131]

2. *Priority With Respect to Multiple Licensees*

A further problem is created by the fact that vendors frequently have multiple customers for the same piece of software. Security interests under Article 9 are by nature "first come, first served." The first licensee to perfect a security interest would have priority over subsequent licensees holding similar interests. Thus, the utility of the security interest as a means of protecting the interests of licensees does not extend beyond the first licensee taking such an interest. Furthermore, a security interest held by one licensee could create a strong disincentive for others to obtain rights in the same software from the vendor, because a foreclosure could threaten to replace the vendor with a new owner of rights in the licensed programs. Additionally, the existence of multiple financing statements filed with respect to a vendor could intimidate potential lenders.

The problem of multiple licensees should not, however, be exaggerated. Expensive software of the type with which this Article is primarily concerned is usually custom-fit for each licensee. To the extent that rights in and the source code for programs licensed to a particular licensee can be segregated from the vendor's other products, it is quite possible that many licensees will be the only persons claiming a security interest in that particular item of collateral.

While the existence of multiple financing statements is an unavoidable consequence of granting security interests to licensees, the problem of priority can be solved, at least if the number of licensees is not too large. The licensees could, for example, participate in an agreement under which the most senior interest holder would, upon foreclosure, distribute copies of the source code, grant licenses to the other licensees and condition any sale of rights in the programs on such licensees' right to retain a copy of source code and license for their own use.[132] Where the number of licensees is comparatively large or the licensees do not

130. *Id.* § 9-505(2).

131. *Id.* The right of the debtor to require a sale of the collateral can be waived after default, but not before. *Id.* §§ 9-505(2), 9-501(3). If, however, a sale is required and not waived by the trustee, the licensee may buy the collateral at a public or private sale. *Id.* § 9-504(3).

132. Of course, such a plan would place the junior licensees at the mercy of a trustee in bankruptcy for the foreclosing senior licensee. If the senior licensee were a financially responsible entity, this risk might be acceptable.

wish to enter into contractual relationships among themselves, or the vendor does not want to reveal the identity of its licensees to the public at large,[133] granting security interests directly to licensees would probably not be feasible.

3. *Secured Source Code Escrows*

A potential solution to the practical problems associated with multiple holders of security interests in source code is to grant the security interest to an independent third party which could hold the interest in trust for the vendor's licensees. This could be viewed as a variation of the software escrow described above in which the escrow agent holds a security agreement in the source code and the vendor's rights in the licensed programs instead of (or in addition to) the source code itself. Such an approach would combine the simplicity and market acceptance of source code escrows with the protection against rejection by a bankruptcy trustee afforded by a security interest.

The solution might be structured around the standard software escrow. The vendor would enter into a master agreement with the escrow agent. Like the typical master escrow agreement, this agreement would require the vendor to make an initial deposit of source code and documentation covering the basic version of the licensed software and would require the vendor to make periodic deposits reflecting pertinent enhancements and updates. Unlike the typical escrow agreement, however, the vendor would also grant to the escrow agent a security interest in the source code for the licensed programs and in all of the vendor's rights in the licensed programs. The conditions permitting foreclosure of the agent's interest would be the same as the "events requiring release" under the standard escrow agreement: usually, the vendor's failure to provide updates, enhancements, debugging, or other maintenance. Licensees would execute contingent license agreements with the escrow agent, not with the vendor,[134] under which the escrow agent would agree to deliver to the licensees the source code for the licensed programs. The licensees would agree to hold the source code in confidence and to use it only for purposes within their license agreement for object code with the vendor.

The secured software escrow described above has the following advantages. It would protect the escrow against the dual dangers of rejec-

133. Regardless of the vendor's desire, the identities of the licensees would nevertheless appear in financing statements and collateral copyright assignments filed by each licensee. *See infra* text accompanying notes 144-62 (for a discussion of filing to perfect security interests).

134. The security agreement could provide that after foreclosure the escrow agent would have the right to grant such licenses. *See supra* text accompanying notes 124-26.

tion of the underlying license by a trustee in bankruptcy and failure of the vendor to make periodic deposits under he terms of the escrow agreement.[135] Also, it is a modest variation of the source code escrow, which is already in widespread use. For this reason, there is a better chance that the secured software escrow would be accepted by vendors and licensees than the more uncommon approaches, such as mini-escrows[136] or security interests granted directly to licensees.[137]

Perhaps the most important point is that the security interest would improve the escrow agent's (and indirectly the licensees') leverage in bankruptcy proceedings. Secured parties enjoy many special advantages under the Bankruptcy Code. Most important among them is the principle that the bankruptcy court must prohibit any use of property in which another entity holds a security interest unless there is "adequate protection" of the entity's security interest.[138] This requirement gives the escrow agent who holds a security interest considerably more leverage in bankruptcy proceedings than the escrow agent who does not hold such an interest. Compared with the ordinary software escrow, the secured escrow is therefore likely more protective of the interests of licensees in any situation in which the vendor's bankruptcy is a possibility.

The secured escrow does have some significant problems. The first problem would be the existence of a prior security interest held by a lender. Even if the lender has not taken an express interest in the vendor's source code, and in the rights in the vendor's programs, blanket security agreements used by banks and other lending institutions invariably cover all of the debtor's "general intangibles." There is a good chance that "general intangibles" include software, including its source code.[139] Thus, some accommodation must be made between the lender

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135. *See supra* text accompanying notes 117-18.

136. *See supra* note 117.

137. *See supra* text accompanying notes 123-27.

138. 11 U.S.C. § 363(e) (1982). In contrast, the interest of a party in an unsecured escrow agreement is afforded limited protection from the trustee's use of the property. If the trustee ultimately assumes the escrow agreement and the license, the licensee is entitled to "cure" of default, compensation for loss resulting from default, and adequate assurance of future performance as well as compensation for use of the property. *Id.* §§ 365(b), 363. If the trustee ultimately rejects the contract, the licensee is limited to compensation for use during the pendency of the petition and an unsecured claim for prepetition damages. *See supra* text accompanying notes 94-96; Whitcomb & Keller Mortgage Co., 715 F.2d 375 (7th Cir. 1983). In *Whitcomb & Keller*, the bankruptcy court ordered the vendor to continue providing computer service to the bankrupt and to turn over master databases to a third party purchaser of the bankrupt's accounts receivable. Ultimately, the trustee was allowed to reject the computer service contract, and the vendor was limited to prepetition damages. Post-petition services were paid for out of administrative expenses in the amount contracted for.

139. *See infra* text accompanying notes 146-49.

and the escrow agent.

One approach is for the lending bank to act as the escrow agent as well. It is not uncommon for the same bank to be a secured lender to a debtor and also the indenture trustee for holders of the debtor's debentures. A bank may feel that the security of knowing that it will not be required to negotiate with an escrow agent exceeds the discomfort that such a dual role could occasionally cause. So long as the bank agreed that, if an "event requiring release" occurred, it would foreclose on the collateral (the source code and rights in the licensed programs) and provide a copy of the source code to the licensees, the interest of the licensees should be protected.

An alternative is to require any prior holder of a security interest arguably covering the source code and rights in the licensed programs to subordinate its interest to that of the escrow agent. Although this may seem unlikely, lenders already accept unsecured source code escrows, which certainly diminish the value of source code as collateral for indebtedness should an event requiring release occur.[140] Lenders also realize that their best security is a financially healthy debtor. A vendor that offers its customers a secured source code and program rights escrow could enjoy a competitive advantage over a vendor that does not. Lenders who understand the marketplace would be quick to accommodate such competitive needs.

A second problem with the secured escrow is foreclosure of the security interest by the secured escrow agent in the event of default. This Article has observed that the vendor can require the foreclosing secured party to dispose of the source code in a "commercially reasonable manner."[141] The granting of rights in the source code to participants in the escrow arrangement could depress the market value of the collateral. The Official Comments to Article 9 recognize that circumstances exist where the otherwise valuable estate of a bankrupt would have little or no resale value if the secured party is allowed to repossess and sell that part of the estate that the secured party holds as collateral.[142] In such a case, a bankruptcy court may exercise its equitable powers to control the manner of disposition, regardless of whether the disposition proposed by the secured party is commercially reasonable, in order to pre-

140. If such an event occurs, the source code would be distributed among the vendor's licensees. Such distribution would threaten the source code's trade secret status and therefore diminish its value as collateral.

141. *See supra* text accompanying notes 129-31. A secured party proposing to dispose of collateral in an unreasonable manner may be enjoined from doing so. U.C.C. § 9-507(1) (1978). Section 9-507(1) further provides for damages where commercially unreasonable disposition has occurred.

142. U.C.C. § 9-507, comment 1 (1978).

serve the estate for the benefit of all creditors.[143] These risks can be diminished, but not eliminated, by restricting the rights of the licensees in the source code. Imposing the risk of liability for failure to sell in a commercially reasonable manner on the escrow agent might raise escrow fees to unacceptable levels. It probably would, however, solve the problem if the licensees indemnified the escrow agent for such liability. This would represent, at most, a fee for the source code.

4. *Perfection of Security Interests in Software*

For a security interest in source code to work, the secured party must perfect its security interest in the source code and in all the rights in the licensed program. Perfection of a security interest in the tangible embodiments of the source code should be a straightforward filing in which the financing statement would identify the embodiments as collateral.[144] Perfection of a security interest in the vendor's intangible property rights is more complicated. This Article has noted that a vendor will usually claim two sorts of rights in software: copyright and trade secret.[145] Both copyrights and trade secrets fall within the Article 9 definition of "general intangibles."[146] A security agreement that grants a security interest in "general intangibles" probably covers items such as copyrights and trade secrets,[147] but to avoid any doubt, the security agreement should identify the programs and expressly state that all copyright, trade secret, and other rights of any and all description in such programs are covered by the security interest. Because trade secret status for any item, including a computer program, will depend on a supporting network of confidentiality agreements and other claims, sound drafting of the security agreement should also include an assign-

143. *See supra* text accompanying notes 50-53; 11 U.S.C. § 105(a) (1978) (general equitable powers of bankruptcy courts); § 365(e)(1) (1978) (general unenforceability of executory contract clauses that ipso facto modify the contract upon insolvency or filing for bankruptcy).

144. *See* U.C.C. §§ 9-302, 9-402(1). Alternatively, perfection of a security interest in the embodiments of the source code may be had by possession. *Id.* § 9-305; *In re* Copeland, 391 F. Supp. 134 (D. Del. 1975), *aff'd*, 531 F.2d 1195 (3rd Cir. 1976) (security interest perfected by secured party's escrow agent taking possession of the collateral).

145. *See supra* note 5 and accompanying text. If patents are also involved, a security interest may be created and perfected in the patents. *See, e.g., In re* Transportation Design and Technology, Inc., 40 U.C.C. Rep. Serv. 1393 (Bankr. S.D. Cal. 1985).

146. *See* U.C.C. § 9-106 (1978) (definition of "general intangibles"); *id.* comment ("Examples [of "general intangibles"] are . . . copyrights, trademarks, and patents."); *see, e.g.*, United States v. Antenna Systems, Inc., 251 F. Supp. 1013, 1016 (D. N.H. 1966) (confidential engineering concepts, ideas and principles are "general intangibles" within the meaning of the Uniform Commercial Code).

147. *See* U.C.C. § 9-110 (the requisite description of collateral is sufficient "if it reasonably identifies what is described"); *cf. Antenna Systems*, 251 F. Supp. at 1016 (failure to refer to "general intangibles" in security agreement).

ment of all contracts and claims supporting trade secret status for the licensed programs and related documentation.[148] The financing statement, on the other hand, would merely describe the collateral as "general intangibles."[149]

This Article has already shown that all computer programs are subject to federal copyright protection from the time they are set down in a tangible medium of expression.[150] This protection applies regardless of whether the owner has registered its copyright claim with the Copyright Office,[151] and regardless of whether the owner has sought to protect its program as a trade secret. The question therefore arises whether a security interest in the copyright in computer programs should be perfected by filing in a state office,[152] or by filing in the Copyright Office.

The Copyright Act provides for the filing of assignments and other "document[s] pertaining to a copyright" in the Copyright Office.[153] This would seem to include agreements creating a security interest in copyright,[154] and, in fact, such filings are increasingly common.[155] Furthermore, documents properly filed in the Copyright Office with respect to registered work are constructive notice to all persons of the contents of the documents,[156] thus serving a purpose analogous to that of a financ-

148. For example, the security agreement should cover claims against third parties to whom the trade secret was disclosed under circumstances implying confidentiality. *See* RESTATEMENT OF TORTS § 757 comment b (1939); *see generally* U.S.M. Corp. v. Marson Fastener Corp., 379 Mass. 90 (1971) (describing steps necessary to create trade secret status for industrial information).

149. *See* U.C.C. § 9-402(1) (1978) and comments thereto (limited requirements of "notice filing"). *Compare infra* note 153 and accompanying text (notice provided by Copyright Office filing).

150. 17 U.S.C. § 101 (1982). *See supra* note 6.

151. Registration is not a precondition of copyright protection, unless registration is necessary to preserve a copyright otherwise invalidated by an omission of copyright notice. 17 U.S.C. §§ 408(a), 405(a) (1982). Registration is, however, a prerequisite to suing for copyright infringement and failure to register does preclude certain statutory remedies for infringement that occurred prior to the date of ultimate registration. *Id.* §§ 411(a), 412(1). Deposit of copies in the Copyright Office, which is required within three months of first publication, is not a precondition of copyright protection. *Id.* § 407(a).

152. *See* U.C.C. § 9-401 (1978) (place of filing) and § 9-103 (1978) (place of filing in multi-state transactions).

153. 17 U.S.C. § 205(a) (1982).

154. Copyright Office regulations define "a document [pertaining] to a copyright" as "a document . . . [having] a direct or indirect relationship to the existence, scope, duration, or identification of a copyright, or to the ownership, division, allocation, licensing, transfer, or exercise of rights under a copyright. That relationship may be past, present, future, or potential." 37 C.F.R. § 201.4(a)(2) (1986).

155. Note, *Transfers of Copyright Under the New Copyright Act*, 88 YALE L.J. 125 n.4 (1978).

156. 17 U.S.C. § 205(e) (1982). Copyright Office filing also satisfies a requirement for a

ing statement filed in a state office. On the other hand, the Copyright Act fails to specify whether or to what extent it governs or regulates security interests in copyrights.[157]

Whether filing a security agreement in the Copyright Office will perfect a security interest in copyrights is answered affirmatively in section 9-302 of the UCC. Compliance with the Copyright Office filing system is considered the equivalent of filing under Article 9 of the UCC, and a security interest in a copyright "can be perfected only by compliance therewith."[158] Thus, section 9-302 seems to spare holders of a security interest in copyright in licensed software the burden of having to file twice. Perfection of a security interest should be by Copyright Office filing.

Holders of security interests in copyright would nevertheless be well advised to comply with both Copyright Office and state filing systems. Copyright Office filing does not perfect the agent's security interest in either the tangible embodiments of the source code or in the vendor's trade secret rights in the source code. Furthermore, the effectiveness of Copyright Office filing has not been tested.[159] Finally, the scope of federal preemption does not extend to all aspects of a security interest in copyright. The Copyright Act does not establish priority in all circumstances,[160] and probably does not include sufficient provisions regulating the rights of parties and third parties to exclude security interests in copyright entirely from Article 9 of the UCC.[161] For these

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copyright owner's recovery of certain statutory damages, which are conditioned on the infringer's knowledge or reason to know that it was infringing a valid copyright. *Id.* § 504(c) (1982).

157. While the Copyright Act regulates "transfers of copyright ownership" that include "mortgage . . . or any other conveyance, alienation, or hypothecation," 17 U.S.C. § 101, the sections governing priority among conflicting transfers only cover conflicts in which at least one transfer is registered. *Id.* § 205(e)-(f). Despite a proposal by the motion picture industry, Congress refused to enact a federal system of copyright mortgage foreclosure. *See House Report, supra* note 17, at 123.

158. U.C.C. § 9-302(4) (1978); *see also id.* § 9-302(e) comment 8 (1978) ("Filing under [Article 9] is not a permissible alternative."). There is little case law on where to file to perfect a security interest in copyright. In the only case the authors found where the issue was raised, the failure to record in the Copyright Office was immaterial because there were no subsequent transfers in dispute. *See* Bankers Capital Corp., 637 S.W.2d 424, 430 (Mo. App. 1982). A 1985 case addressing the question of where to file to perfect a security interest in a patent noted that it was a case of first impression despite long coexistence of the UCC and the Patent Act. *In re* Transportation Design and Technology, Inc. 40 U.C.C. Rptr. Serv. 1393 (Bankr. S.D. Cal. 1985).

159. *See supra* note 158; *compare In re* Transportation Design and Technology, Inc., 40 U.C.C. Rptr. Serv. 1393 (UCC filing perfects security interest in patent) *with In re* Otto Fabrics, Inc., 55 Bankr. 654 (Bankr. D. Kan. 1985) (federal patent law governs perfection of security interest in patent).

160. *See supra* text accompanying note 157.

161. U.C.C. § 9-104(a) (1978) and comment 1; *see also* Republic Pictures Corp. v. Secur-

reasons, there is a consensus among commentators that holders of security interests in copyright should comply with both filing systems.[162]

Whether or not a secured party complies with both systems or files solely with the Copyright Office, compliance with Copyright Office filing regulations may be ineffective if the copyright is not registered. Part III of this Article discusses the specific requirements of copyright registration, including particularly the deposit requirement.

III. COPYRIGHT ACT DEPOSIT AND REGISTRATION REQUIREMENTS AS THEY APPLY TO COMPUTER SOFTWARE

The foregoing analysis suggests that a purchaser or exclusive licensee of computer programs, or one holding a security interest in such programs, must record with the Copyright Office in order to protect itself against the bankruptcy trustee. Unfortunately, recordation creates more problems than it should.

Pursuant to Copyright Act section 205(e), recordation of a program protects it against subsequent transferees such as a bankruptcy trustee if recordation is made "in the manner required to give constructive notice under subsection (c)." Subsection 205(c) requires registration of the program if recordation is to give constructive notice. Registration, in turn, requires a deposit, and the deposit creates a problem for computer software.

A. THE SECTION 408 DEPOSIT REQUIREMENT

Under Copyright Act section 408, registration is made by "delivering to the Copyright Office the deposit specified by this section, together with the application and fee specified by sections 409 and 708."[163] The deposit generally consists of one or two complete copies of the work.[164] The Register of Copyright is authorized, however, to adopt regulations which "require or permit, for particular classes, the deposit of identifying material instead of copies."[165] Once deposited, the identifying materials are held in the Copyright Office or delivered by the

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ity-First National Bank of Los Angeles, 197 F.2d 767 (9th Cir. 1952) (old Copyright Act preempts state secured transaction law only in the limited areas of recording and the effect of recording on priority); 1 G. GILMORE, SECURITY INTERESTS IN PERSONAL PROPERTY § 13.10 (1965).

162. *See* 3 NIMMER, NIMMER ON COPYRIGHT § 10.05[A] (1985); Conoff, *Motion Picture Secured Transactions Under the Uniform Commercial Code: Problems in Perfection*, 13 U.C.L.A. L. REV. 1214, 1215 (1966); *High-techs in Chapter 11 Can They Survive?: 2d Annual New England Bankruptcy Law Conference* 90-91 (MCLE, Inc. 1985).

163. 17 U.S.C. § 408(a) (1982).

164. *Id.* § 408(b).

165. *Id.* § 408(c).

Register of Copyright to the Library of Congress.[166] In either case, the original deposit or a facsimile reproduction is publicly available for inspection.[167]

Because most software vendors endeavor to protect their programs as trade secrets, they do not deposit complete copies of their programs pursuant to section 408(b). Instead, most vendors who register their copyrights avail themselves of Copyright Office Regulation 202.20(c)(2)(vii), which permits the deposit of "identifying materials" consisting of the first and last twenty-five pages of a visually perceptible copy of the program.[168] Unfortunately, a strict application of this regulation to most typical types of licensed computer programs is doubtful. By its own terms, the regulation applies only to a class consisting of works fixed or published only in machine-readable form. Most licensed software is fixed in a variety of forms, including both human-readable source code and machine-readable object code.[169] If all of these manifestations of the program are considered to be one "work," then the regulation would not apply because the source code version of the work is human-readable.[170] Thus, registration of the program under the Copy-

166. *Id.* § 704.

167. The Copyright Office must retain the deposit or a facsimile of unpublished works for the term of the copyright and of published works for as long as practicable and desirable. *Id.* § 704(d). All articles deposited in connection with completed copyright registrations and retained under the control of the Copyright Office are open to public inspection. *Id.* § 705(b); *see also* Davidson, *supra* note 6, at 734-43.

168. 37 C.F.R. § 202.20(c)(2)(vii) and (vii)(A) provide in full:

> (vii) Computer programs and data bases embodied in machine-readable copies. In cases where a computer program, database, compilation, statistical compendium or the like, if unpublished is fixed, or if published is published only in the form of machine-readable copies (such as magnetic tape or disks, punched cards, or the like) from which the work cannot ordinarily be perceived except with the aid of machine or device, the deposit shall consist of:
>
> (A) For published or unpublished computer programs, one copy of identifying portions of the program, reproduced in a form visually perceptible without the aid of a machine or device, either on paper or in microform. For these purposes, "identifying portions" shall mean either the first and last 25 pages or equivalent units of the program if reproduced on paper, or at least the first and last 25 pages or equivalent units of the program if reproduced in microform, together with the page or equivalent unit containing the copyright notice, if any. If the program is 50 pages or less, the required deposit will be the entire work. In the case of revised versions of such works, if the revisions occur throughout the entire computer program, the deposit of the first and last 25 pages will suffice; if the revisions are not contained in the first and last 25 pages, the deposit should consist of any 50 pages representative of the revised material.

169. *See supra* text accompanying note 7. The analysis in the text assumes that the software in question includes trade secrets and will therefore be considered "unpublished" by the vendor. A different conclusion might be reached for software published only in object code, such as mass-market programs sold pursuant to shrink-wrap agreement.

170. In applying Regulation 202.20(c)(2)(vii), the Copyright Office has taken the position that source code best satisfies the "identifying portions" requirement. 48 Fed. Reg.

right Act and the regulations promulgated thereunder could only be accomplished by depositing at least one complete copy of the work. Most vendors are reluctant to do this for fear of losing their trade secret protection for the program.

An alternate view is that the source and object code versions of a program are different "works," with the object code being a "derivative work" resulting from the "translation" of the source code into machine-readable form.[171] Applying this theory, a vendor might use the first and last twenty-five pages of object code as its deposit. Because object code is usually fixed only in machine-readable form, such a deposit would (on the separate works theory) be authorized by Regulation 202.20(c)(2)(vii).

If the separate works theory is accepted by the courts, registration of object code under Regulation 202.20(c)(2)(vii) followed by recordation of software licenses could be used to protect exclusive licensees and transferees of object code against a trustee's avoidance power under Bankruptcy Code section 544(a)(1), but it would not give any protection against the avoidance of source code licenses, transfers, and security interests.[172] Under section 103(b) of the Copyright Act, copyright in a derivative work "extends only to the material contributed by the author of such work, as distinguished from the preexisting material employed in the work."[173] Thus, if one considered object and source code versions of a program to be different works, registration of the first and last twenty-five pages of object code would be effective to register copyright in the object code, but not in the source code. Copyright in the source

22951,22952 (1983); Compendium II of Copyright Office Practices 806.12(a)(1) (1984). Thus, human-readable source code satisfies the deposit requirements for a class of work labeled "machine-readable works." The apparent inconsistency in the Copyright Office position offers little guidance to a court in choosing between the alternative views that source and object code of the program are either one "work" or a "work" and "derivative work." *See infra* text accompanying note 171.

171. The Copyright Act defines "derivative work" as "a work based upon one or more preexisting works, such as a translation, . . . or any other form in which a work may be recast, transformed, or adapted." 17 U.S.C. § 101 (1982) (definition of "derivative work"). Copyright in the derivative work is distinct from copyright in the work from which it is derived, although the permission of the owner of the prior work is needed to create a derivative work. *Id.* §§ 103, 106.

172. A software license will invariably cover object code, because without a right to use object code the licensed program cannot be used in connection with a computer. Source code might or might not be covered by a software license, but a contingent license to use source code will usually accompany any software escrow arrangement. *See supra* text accompanying notes 117-18.

173. The "author" of object code is usually a computer program known as a "compiler." The fact that there is no human author tends to support the conclusion that the object code is not a separate, derivative work, but merely the original work "fixed" in a different manner, just as a motion picture on film can also be "fixed" on a video tape.

code (a separate work) would be left unregistered, and the recordation of a license or other document covering source code in whole or in part would not give constructive notice under Copyright Act section 205(c) and therefore would not protect the licensee (or other transferee) against a bankruptcy trustee's claims under Copyright Act section 205(e) and Bankruptcy Code section 544(a)(1).

In practice, the dilemma created by the limitation of Regulation 202.20(c)(2)(vii) to works fixed or published only in machine readable form, is largely ignored. Most applicants follow the Copyright Office's lead[174] and submit source code to satisfy the "identifying portions" requirement for deposit. However, the validity of this practice, as a means of protecting both source and object codes, has not been considered by any court.

In addition to Regulation 202.20(c)(2)(vii), the Copyright Office has adopted an informal procedure whereby it will accept object code under its "Rule of Doubt"[175] as a deposit for purposes of registration if the copyright owner informs the Copyright Office that the work is a trade secret. Using this procedure, a software vendor might attempt to register copyrights in the object code version of its programs, and the vendor's exclusive licensees could thereafter seek the safe harbor of recordation under Copyright Act section 205(e) against the claims of a bankruptcy trustee.

As an alternative to Regulation 202.20(c)(2)(vii), owners of computer programs have increasingly requested permission for deposit of non-complying identifying materials under the "special relief" provisions of Regulation 202.20(d) in order to avoid making a deposit that reveals trade secrets.[176] "Special relief" is currently allowed by the Copyright Office in several alternative forms: the first and last 25 pages

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174. *See supra* note 170.

175. *See* Copyright Office Circular No. R. 61; 48 Fed. Reg. at 22952. The "Rule of Doubt" means that the office has acknowledged that the application for registration has been filed and a deposit made, but takes no position as to whether or not the work contains original authorship subject to copyright protection. *Id.* The apparent purpose of this rule is to facilitate registrations of the object code version of computer programs while withdrawing from such registrations the benefit of § 410(c) of the Copyright Act, under which a certificate of copyright registration constitutes prima facie evidence of the validity of the copyright and of the facts stated in the certificate. There is no statutory basis for "Rule of Doubt" registrations, nor are such registrations even supported by a formal regulation promulgated by the Copyright Office. For these reasons, the validity of a registration issued under the purported "Rule of Doubt" is doubtful. Its effect has never been considered by any court.

176. 51 Fed. Reg. 34667,34668 (1986). Regulation 202.20(d) provides in pertinent part: "In any case, the Register of Copyrights may, after consultation with other appropriate officals of the Library of Congress and upon such conditions as the Register may determine after such consultation, . . .(ii) permit the deposit of incomplete copies . . . ."

of source code with some parts blocked-out; at least the first and last 10 pages of source code, with no blocked-out portions; or the first and last 25 pages of object code plus any 10 or more consecutive pages of source code with no blocked-out portions.[177] These alternatives allow owners to satisfy Copyright Office procedures without jeopardizing state law trade secret protection.

The question arises whether the deposit alternatives allowed as "special relief" constitute "identifying materials" within the meaning of Copyright Act section 408(c)(1). The same question arises with regard to the first and last twenty-five page deposit authorized by Regulation 202.20(c)(2)(vii).[178] Source code (or object code) for any reasonably sophisticated computer program is typically hundreds, or even thousands, of pages long. One of the historical purposes of the deposit requirement for copyright registration is to create a public record of what the work is in which a copyright is claimed.[179] Therefore, the deposit of the first and last ten or twenty-five pages of a work that is several thousand pages long manifestly fails to achieve this purpose. Indeed, owners of computer programs who deposit their works make sure that nothing important appears in the few pages which are deposited. Under these circumstances, there would be no way for a person accused of infringement to determine whether the work introduced by the plaintiff into evidence is the same work as the one "registered," except by relying on the plaintiff's own testimony. Furthermore, the deposit fails to make the copyright work available for public inspection—a right usually thought to be the *quid pro quo* for the copyright monopoly.[180] For this reason, there is a very compelling argument that the deposits author-

177. 51 Fed. Reg. at 34668 (1986); *see* Compendium II of Copyright Office Practices 808 (1984). Proposed amendments to Regulation 202.20 include the three forms of "special relief" currently allowed and a fourth alternative for small programs of 25 pages or less. 51 Fed. Reg. at 34668-669. The proposed rulemaking codifies current practice with the additional requirement that a deposit include the page showing copyright notice and a statement as to the total number of lines in the program. *Id.*

178. *See supra* note 168.

179. Merrill v. Tice, 104 U.S. 557, 561 (1882) (deposits are quasi-records, kept for the purpose of public inspection and ascertaining the subject of the copyright); *see also* Samuelson, *supra* note 6, at 706-19 (public disclosure is a constitutionally mandated trade-off for the copyright monopoly).

180. *See supra* note 179; *but see* National Conference v. Multistate Legal Studies, 692 F.2d 478, 484-87 (7th Cir. 1982), *cert. denied*, 464 U.S. 814 (1983) (deposit requirements are procedural only and not for the purpose of public disclosure of the copyrighted work). The Multistate court upheld Regulation 202.20(c)(2)(vi) as consistent with the Copyright Act and constitutional despite the fact that the regulation requires return of secured test deposits submitted for registration. The Copyright Office relied in part on the Multistate holding when it created the informal procedure for registering computer programs containing trade secrets. *See* Notice of Inquiry Deposit of Computer Programs and Other Works Containing Trade Secrets, 48 Fed. Reg. 22951-54 (1983).

ized by Regulation 202.20(c)(2)(vii) and the informal rule for source code under Regulation 202.20(d) are invalid on the ground that they are inconsistent with the requirement of Copyright Act section 408(c)(1) that the deposit consist of "identifying material."[181]

It remains to be seen whether a bankruptcy court would hold that the trustee might avoid an exclusive software license if the vendor and its exclusive licensee had made a good faith effort to register the licensed programs and to record the license in a manner which is condoned by the Copyright Office, but which probably does not comply with the requirements of the Copyright Act. This issue reflects the conflict between the two radically different approaches taken by the Bankruptcy Code and the Copyright Act. In bankruptcy court, justice follows a very harsh logic. Bankruptcy judges have little sympathy with the defense: "But, your Honor, we assumed. . . ." If a secured lender files a financing statement identifying its collateral as inventory or equipment when it is really "general intangibles," such as copyright, this probably inadvertent mistake can cost the lender its secured status.[182] In contrast, in copyright infringement cases courts frequently overlook technicalities which might deprive the copyright owners of the benefit of copyright protection.[183] The policy of the Copyright Act is in part to do away with an over-technical approach to matters such as the placement of the copyright notice.[184] Similarly, the Copyright Office has strained to accommodate the needs of owners of copyrights in computer programs, even at the expense of possibly violating the Copyright Act.

It seems slightly more likely that, at least at the district court level, the balance would fall on the side of an exclusive licensee which attempted in good faith to have the licensed program registered by the vendor and to record its license in the manner provided by Copyright Act sections 205(c) and (e). Such a result cannot be assured, however, and the weight of logic probably favors a contrary outcome. In a situa-

181. By contrast, Regulation 202.20(c)(2)(viii), which applies to works such as textiles and fabrics, permits the deposit of "an actual swatch or piece of such material sufficient to show all elements of the work in which copyright is claimed." This gives potential infringers, defendants in infringement actions, and courts hearing such actions, a full opportunity to determine the similarity between the work registered and the allegedly infringing work, as well as providing public access to the copyrighted work."

182. U.S. v. Antenna Systems, Inc., 251 F. Supp. 1013, 1015-16 (D. N.H. 1966) ("general intangibles" are not "goods" and are not covered by "inventory" and "equipment" references in a security agreement).

183. *See, e.g.*, Midway Mfg. Co. v. Arctic Int'l., Inc., 547 F. Supp. 999, 1009 (N.D. Ill. 1981), *aff'd*, 704 F.2d 1009 (7th Cir. 1983), *cert. denied*, 464 U.S. 823 (1983) (holding that deposit of an audiovisual tape of the play of a video game is sufficient to register copyright in the computer program that operated the game).

184. *House Report*, *supra* note 17, at 143-44.

tion like this, old habits are of little assistance, and the first few cases of this type will permanently reshape the law.

B. THE SECTION 205 REGISTRATION REQUIREMENT

The conflict between Bankruptcy Code section 544(a)(1) and Copyright Act section 205 illustrates a second, and more fundamental, defect in the Copyright Act. Reflecting its heritage in laws that applied only to published works, section 205 of the Copyright Act works on the assumption that all copyrighted works can realistically be registered, and provides protection against subsequent transferees only where the transferred work has been registered. This may make sense for published works or for unpublished works which are destined for publication, but it produces absurd results when it is applied to other types of works subject to federal copyright law. Every piece of paper on which someone has written, every photograph, and every scrap of film on the cutting room floor is a "work" in which copyright subsists under the Act. This may seem academic, but it becomes very important in any transaction involving a purchase of assets where some of the assets consist of valuable intellectual property.

Suppose, for example, that a management consulting firm sold off a part of its business. The assets purchased would include a vast array of studies, reports, memoranda, computer programs, and other intangibles, the great bulk of which would not be registered with the Copyright Office. Must the purchaser insist on registration of all of these "works" to protect itself against a subsequent transferee or a trustee in bankruptcy?[185] The costs of such an undertaking could easily exceed the value of the transaction.[186] Yet such a result seems required by Copy-

185. Special relief might be sought by petitioning the Copyright Office under 37 C.F.R. § 202.20(d). The special relief might consist of an identification of the works en masse by the name of the transferor. Such relief, however, seems inconsistent with the requirement of Copyright Act § 409(6) that the application for registration identify the works by title as well as by author. Furthermore, to the extent that the special relief would relate to the works only of the transferor, the question might arise whether it is a "class" of works for which the Register of Copyrights is authorized to accept deposits of identifying materials under § 408(c). Finally, it would be difficult to imagine what the identifying materials would be for such an unwieldy mass of paper, short of a laboriously compiled index or photocopies of the works themselves.

186. Indeed, in response to cases involving related works or parts of a work that are published separately, Congress sought to rectify administrative problems and ease the burden and expense to copyright owners created by the separate registration requirement. Section 408(c)(2) allows for a single registration for a group of works by the same individual author, all first published as contributions to periodicals within a twelve-month period, to be effectuated by a single deposit, application, and registration fee. In providing for a single registration of a group of related published works, Congress recognized that "[i]n a number of cases the technical necessity for separate applications and fees has caused copyright owners to forego copyright altogether." *House Report*, *supra* note 17, at

right Act section 205. An analogy in the area of tangible property would require a purchaser of aggregates to register every rock, every pebble, and every grain of sand it is purchasing. The problem is that the Copyright Act gathered many works under its protective wing, but only has the ability to deal with those works one at a time, rather than in groups.

C. PROPOSED LEGISLATIVE AND REGULATORY SOLUTIONS

1. *Elimination of Registration Requirement*

This Article suggests three solutions to the deposit and prior registration problems. The first and most extreme solution is to eliminate the requirement of copyright registration altogether, bringing the United States' law into conformity with the copyright laws of many other countries. This solution is the most intellectually satisfying. It would recognize that copyright law is not like patent law, where the scope of monopoly is determined by an agency of the government, but rather is more like federal antitrust law, where Congress has specified broad goals and created federal causes of action but left it to the courts to sort out the details. This approach was considered and rejected during the many years of deliberations which ultimately led to the Copyright Act. Until the problems discussed in this Article cause a highly visible disaster, it is unlikely that Congress will enact such a sweeping change.

2. *Elimination or Modification of Deposit Requirement*

Much less extreme, the second solution is to accommodate the registration of copyright in works which are also protected as trade secrets. The Proprietary Rights in Software Committee of the American Bar Association proposed to solve this problem by eliminating the deposit requirement for computer programs altogether.[187] Alternatively, Copyright Act section 705(b) could be amended to exclude from public inspection articles that are deposited as unpublished trade secrets.[188] Regulation 202.20 could be discarded. In its place, and if an

154. What Congress failed to recognize or address are similar undesirable results involving unpublished groups of related works in the sale of assets. Additionally, § 408(c)(2) does nothing to ease the burden and expense of depositing each related work or part of a work. *See* discussion *supra* note 185; *see also infra* text accompanying notes 191-93.

187. *See* Davidson *supra* note 6.

188. The Semiconductor Chip Protection Act of 1984 (Chip Act) and related Copyright Office regulations provide a possible model for excluding trade secrets from deposited materials available for public inspection. The Semiconductor Chip Protection Act of 1984, Pub. L. No. 98-620, § 302, 1984 U.S. CODE CONG. & ADMIN. NEWS (98 Stat.) 3335 (codified at 17 U.S.C. §§ 901-14 (Supp. II 1985)). The Chip Act provides protection for a mask work in a semiconductor ship. A "mask work" is the series of related images representing the

appropriate amendment were made in section 705(b), the Copyright Office should adopt a regulation permitting the deposit of an entire work that the copyright holder treats as a trade secret in a way that will protect the work against disclosure to the public, whether under the Freedom of Information Act or otherwise.[189] This approach addresses the immediate problem of registering a computer program, but does not solve the problem of protecting transferees of unregistered works against the rights of subsequent transferees such as a bankruptcy trustee under section 205.

3. *Revision of Section 205 on Model of Uniform Commercial Code*

The third solution attempts to reach a middle ground between the two solutions suggested above.[190] This approach would amend section 205 to make it work on the model of the UCC. Rather than identifying and indexing transfers by the title or registration number of the work, transfers could be identified and indexed by the names of the transferor and transferee. The document filed might be called a "transfer statement;" on the model of the UCC's financing statement, it would be required to include only a general description of the work or works transferred.[191] Further, the section 205(c) requirement that the underlying work be registered could be eliminated.[192] Because only a brief description of the work transferred would be required, recording the transfer would not jeopardize any trade secret protection for the transferred works.

Under this proposal, a person acquiring all of the assets of a business could file a "transfer statement" identifying the transferred work as "all work of the transferor." A person acquiring an exclusive license to operate a computer program on a certain kind of central processing

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surface pattern on layers of a semiconductor chip. *Id.* § 902(a)(1), 901(a)(2). Regulations authorized by the Chip Act, allow for withholding of trade secrets from "identifying materials" for purposes of registration by means of "blocking out" such information on the deposit printout of a mask work. *Id.* § 908(d); 37 C.F.R. § 211.5(c).

189. Deposit of the entire work might be resisted by the owners of valuable programs, for fear of "leaks" out of the Copyright Office. The American Bar Association committee suggests that such a deposit should not be required at all, apparently believing that problems of proof could be addressed in other ways. *See* Davidson, *supra* note 6, at 742.

190. If this suggestion is followed, but registration is retained as a prerequisite to filing suit and other remedies under §§ 411, 412, then the second proposal—clearly accommodating the need for registration of works which are also protected as trade secrets—should also be adopted.

191. *Cf.* U.C.C. § 9-402 (1978).

192. *Cf.* 17 U.S.C. § 903(c)(1) (1984) (ownership, transfer, licensing, and recordation of a semiconductor chip mask work). Copyright Office recordation of signed documents pertaining to a mask work is constructive notice of the contents of the documents; registration is not a requirement for effective constructive notice.

unit could file a "transfer statement" describing the "transferred rights" as "the right to operate the [name] database management system on an a [name] mini-computer." As under the UCC and under real estate recording statutes, the burden would be on subsequent transferees to search the transfer records of their transferors and make inquiry if it appeared that someone else might have filed comparable rights at an earlier date. The limited purposes of "notice filing" would thereby be served.

A system like the one proposed would not provide absolute title assurance, as it always depends on the quality of the original transferor's title.[193] But the current system does not provide absolute protection either. For example, it is only possible to search the Copyright Office records under the current system if one knows either the title or registration number of the subject work. This approach is defective because the same work (or at least works so substantially similar that one would constitute an infringement of the other) might take on a variety of titles over time.[194] Furthermore, substantially similar works might be separately registered and have separate registration numbers. Moreover, there is always the problem that the original author of the work plagiarized it, so that the apparently clean title shown on the Copyright Office records would be subject to an infringement action.

A recordation system modeled after the UCC and title recording statutes (i.e., indexed by transferor and transferee, not by the identity of the property transferred) would eliminate the section 205 problems discussed in this Article and provide most of the "quiet title" advantages sought to be achieved by section 205.[195] Protecting exclusive licensees and asset purchasers against subsequent transferees such as a

193. Combining the two systems is a possibility. This would be similar to the dual system of registered and unregistered interests in realty that exists in some states, including Massachusetts. Thus, the holder of an exclusive right could "quiet title" by registering a previously unregistered work. Such a system could only be made to work if there was a formal proceeding in which others having arguably conflicting rights in the property could appear and object; it is doubtful whether such a system could be funded and made to work on a national scale through the Copyright Office.

194. *See* Note, *supra* note 156, at 131.

195. The current § 205(e) makes it possible for any transferee to obtain protection against competing transfers by recording its transfer first (subject, of course, to the three or six-month waiting period). This is believed to provide reassurance to persons who spend large sums on acquired properties, such as motion picture producers and publishers. Alternatively, one could amend § 205 to provide that § 205(e) applies only to transfers that take place after a work has been registered. The priority of a transfer occurring prior to registration should be governed by the simple rule of § 205(f): the transfer is prior to any conflicting transfer if it is in writing and taken prior to the execution or recordation of the other transfer. Such a change would dilute the "quiet title" advantages of the current § 205(e). The authors submit, however, that the implications of § 205(e) described in this Article are so destructive of the quiet title of purchasers and exclusive

bankruptcy trustee promotes commerce in copyrighted works and diminishes the threat of inconsistency between copyright and trade secret protection for unpublished works. It also provides a solution to serious defects in source code escrows by providing an effective means of perfecting security interests in copyrighted works.

Until Congress enacts statutes adopting changes like those suggested in this Article, transferees will be subject to the mercy of the courts. As this Article has discussed, if the court is a bankruptcy court, its mercy may not always be tender.

licensees of the great mass of unregistered works that, on balance, security would be enhanced rather than diminished by the change.