ARTICLES

SECURED FINANCING AND INFORMATION PROPERTY RIGHTS

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INTRODUCTION

We advocate a simple proposition. Financing law and intellectual property law should jointly foster, rather than impede, investment in information and technological assets. To do this, there must be a coherent and stable body of law applicable to information asset financing. Current law falls far short of this requirement. This Article begins to define how and where coordination can be achieved in the laws governing intellectual property and finance. It also identifies current issues important to the structure of contemporary credit financing of information assets.

Society has entered an “information age.” This phrase has different connotations for different aspects of how we do business and how we function socially. Foremost among these is the simple fact that information, how it is processed and how it is used, has increasing value and influence in our economy. Information is an asset at the forefront of current technological development and commercial investment. It will remain there for the foreseeable future.

Commercial and intellectual activity in technological areas is intense and cannot continue to be burdened by uncoordinated and uncertain law. Therefore, reconciling commercial finance law with intellectual property law is not an elective question. We have no choice. The integration of law and practice in these two fields will occur in one form or another. The issue today is when this integration will occur and according to what policy themes. We propose that the proper goals in information asset financing law are (1) to provide clearly articulated rules around which transactions can be planned, and (2) to establish a system that minimizes the costs and limits the risks in creating and maintaining interests in intellectual property assets.

Section one of this Article outlines the general interaction between intellectual property and commercial finance law. Both legal frameworks provide incentives that promote and facilitate their respective activities. The optimum system would coordinate incentives to enhance opportunities for development and use of information assets. As will be shown, our attainment of this goal is
impaired by the lack of coordination of the applicable fields of law and by the variety of property interests, with associated substantive rules, that exist in intellectual property assets.

Section two discusses third party rights in light of the interaction between these two legal fields. The legal rules as they relate to third parties are uncertain both as to how a lender can establish its position in relation to third party investors and under what rules that position will be defined. The questions of whether or to what extent federal laws preempt state rules for perfecting a security interest or determining its priority have not been authoritatively resolved. Consequently, careful lenders must now comply with two parallel systems and structure their transactions so as to hold priority under both. But even with double compliance, existing federal priority concepts make the lender's position uncertain.

We propose a system of federal filing for security interests in those forms of intellectual property currently governed by substantive federal law. This will move us toward the goal of consistent and identifiable rules, while minimizing lender costs. We further propose that federal filing should be connected to state law priority rules. State laws can coordinate finance law for federal property under rules affecting the types of intellectual property governed purely by state law.

Section three examines the relationship between the lender and the "owner" of proprietary rights. Although the issues in this area are more diverse, many can be resolved contractually. The role of law in this area should be to build underlying presumptions and structural rules that generate acceptable outcomes if the parties do not clearly address the issues by contract. However, federal patent and trademark laws currently emphasize concepts no longer central to contemporary commercial finance law. These federal laws should be updated to reflect contemporary commercial finance practices.

We will finally discuss other lender-owner conflicts that may not permit a contractual solution. Currently, the value and existence of certain information assets can be destroyed if the debtor, or the party with which it holds a license agreement, files for bankruptcy. The treatment of intellectual property licenses in bankruptcy influences their value as stable assets against which financing can be provided. Further unresolved issues arise in the treatment of new developments or refinements of existing technology from an original intellectual property base. We propose a broadened conception of after-acquired property which incorporates newly developed intellectual property based on prior work into "proceeds" of the original information asset.

I. COMPETING SOURCES OF LAW AND THE DEVELOPMENT OF INFORMATION ASSETS

The development of information assets requires a confluence of creative work and adequate resources. Spontaneous development or sudden insight innovation rarely happens, yet the popular notion that it does often obscures the effort and resources involved in developing information assets. As a matter of
business policy we cannot afford to continue to let this fallacy diminish the importance of actively encouraging development of intellectual property.\(^1\)

The goals of an ideal legal system governing intellectual property should be to stimulate development of information assets and create an environment in which the confluence of creative effort and resources is planned for and implemented. A legal framework that encourages technological and information based investment must reward both the creative party and the one who supplies the resources to find, make, market, or otherwise exploit the information. These two parties must be able to understand and manipulate their relative legal positions and the position of third parties making claims or seeking access to the product.

In broad outline, intellectual property laws deal with rewarding the creative party for his or her creativity \textit{per se}, while commercial finance law deals primarily with the rights of resource providers. Intellectual property law is fundamentally designed to reinforce incentives for artistic and scientific achievement. It balances the rights of the developer against the interests of others desiring to use the technology. This balance entails defining the exclusive rights of one party and the means for their enforcement against others. In contrast, credit finance laws distribute financial risks and provide a framework for conducting transactions that establish the secured party's rights of access to the debtor's property if the debtor fails to voluntarily pay its debts.

The coordination of these two bodies of law is vital at the product development stage where, without appropriate levels of financial investment and support, important advances may be retarded or lost. Access to financing is equally important for placing products in commerce and for post-development marketing.

A. Investment and Legal Incentives

Our legal system influences investment in information assets in various ways. It is used to manipulate the risks and rewards associated with the development of information-based property. Dissonance among applicable laws can cripple any effort to encourage investment. The goal of the legal system should be to encourage and coordinate the manipulated effects so to stimulate investment in intellectual property assets. However, because of frequent change and general uncertainty in the applicable areas of the law, coordination and encouragement are not always achieved. This section will discuss three areas of law which significantly affect investment in information assets: tax, intellectual property, and credit laws.

Tax laws influence investment in information assets by manipulating the financial benefits of investment in development and new products. This direct financial consequence impacts treatment of research and development costs, investment partnership rules, and investment tax credits.\(^2\) Generally, rules

\(^1\) See P. DRUCKER, INNOVATION AND ENTREPRENEURSHIP (1985) (arguing that innovation can be approached as a systematic rather than purely fortuitous undertaking).

\(^2\) The investment tax credit was repealed in the 1986 amendments to the Internal Revenue Code, but treatment of research and development costs as well as intellectual property assets
granting favorable tax treatment are an incentive for technology or information development, while converse rules work as a disincentive to investment. As a matter of practice, however, tax rules shift frequently and have uncertain application to information technology.

Our legal system also influences investment by apportioning rewards in the form of exclusive rights to control the information or technology created. This is the main province of intellectual property laws i.e., patent, copyright, trademark, and trade secrecy. These laws grant benefits based either on financial contributions or personal creative efforts. Unlike tax law, intellectual property law incentives are indirect. The investor or creator obtains value only by exploiting his exclusive rights to the work. This may involve marketing the product to third parties or retaining it to support other activities, such as future development.

A major theme in intellectual property law focuses on defining the rights of the developer of the property against third parties. These are "infringement" questions. As we write this article, infringement rules in copyright, patent, and trade secrecy law are being stretched and strained in an unprecedented manner by new information technologies. In simple fact, the changes induced by technology have altered the way in which we treat information, transforming it into a palpable asset whose control has both economic and political significance. The vital but unanswered question of our era is how the goal of encouraging creative work will effect the scope of private control over information assets. Questions of control over the asset have an obvious relationship to encouraging financial investment as well as creative effort. The breadth and certainty of control held by the debtor determines in part the value of the asset as collateral.

In addition to infringement questions, intellectual property law also decides who receives (or owns) the exclusive rights of the property where, as in the common case, several parties invest in the final product. In many situations, each party contributes its own "investment" in the form of creative effort. In other cases, however, one party claims ownership on the basis of financial or resource contributions, while another makes such a claim on the basis of


6. The process of re-evaluation and the likelihood of fundamental changes in current law is inevitable. An influential overview of the issues is provided in U.S. Office of Technology Assessment, Intellectual Property Rights in an Age of Electronics and Information (1986).
creative skill. Outside of work done within the scope of an employee’s job, the governing legal systems intellectual property presume that ownership is in the author, the creative party, but can be transferred to the investor by an explicit contractual agreement. Because there may be a number of financial investors and creative individuals claiming an interest in intellectual property, ownership issues have created increasingly frequent controversy.

Finally, credit laws have a significant influence on investment in information assets. Since this Article is primarily concerned with this influence, let us begin with an explanation of how a credit transaction works.

In a credit arrangement, the investor delivers value, usually in some form of capital and expects repayment of the value by the debtor, along with a return on the investment, such as accrued interest. The creditor relies on the creditworthiness of the debtor (and any guarantors), expecting that the debtor’s business operations will be adequate to repay the debt. Usually value (e.g., a loan) will not be delivered unless the investor (e.g., a creditor) obtains additional assurance of payment such as an interest in the debtor’s assets as security for the debt or as means to control the business operation. These “secured assets” are usually tangible property, but the value of information assets makes them a potentially important source of security. For the debtor, the feasibility of using information assets as security is based on the extent to which these assets comprise a significant part of the company’s value; thus, information assets are most used as security in the financing of software, database, or other information oriented businesses.

Because credit laws influence the cost and risk associated with a loan secured by information assets, they affect both the availability of financing for information oriented companies and the development and marketing of information property. Credit law is not neutral. It affects investment by increasing or decreasing the risk of credit loss along with the cost of protecting against that loss.

There are two measures of the effectiveness of credit laws. The first is whether credit laws pertaining to intellectual property clearly indicate the legal relationships created. Since a credit transaction is a voluntary exchange, the decision to make a loan reflects an assessment of risk balanced against potential gain. Clarity of law enhances the creditor’s ability to assess risks by delineating and converting the legal risks into clear statements of relative position.

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9. We make this statement relying on the widespread notion that secured interests facilitate lending, although a few recent articles in the law and economics literature purport to find a lack of theoretical support for this belief. See, e.g., Schwartz, The Continuing Puzzle of Secured Debt, 37 VAND. L. REV. 1051 (1984); White, Efficiency Justifications for Personal Property Security, 37 VAND. L. REV. 473 (1984).
Conversely, uncertainty regarding the effect of a transaction reduces a lender's willingness to make a loan.

The second measure is whether credit laws minimize the cost and effort required to adequately secure a debt with information assets. It is important that information assets be as economically feasible forms of collateral as other sources of security in the credit marketplace. Disproportionate costs or legal risks in information lending will induce lenders to choose other investments as security, thereby depriving debtors who rely on information assets adequate financing arrangements. Thus, the ease of securing the debt should be sacrificed only if it infringes clear interests that cannot otherwise be protected.\(^1\)

Simplified rules and clear statements of rights reduce credit costs and permit effective assessment of risks. For example, in the 1960s, Article 9 of the Uniform Commercial Code (U.C.C.) created a framework to expedite secured commercial lending through simplified, relatively clear cut rules concerning the creation and enforcement of security interests.\(^1\) Clarity in the law is especially important when using information assets, since such assets are often ephemeral and changing, giving them uncertain value. The creditor's costs relating to these assets include both how the security interest can initially be created and how that interest can be maintained as the assets are modified and developed over time. The ideal legal system would unambiguously allow a creditor to create and maintain rights in intellectual property on a cost-competitive basis with other assets, and would clearly state how these rights position the creditor if it faces competing claims.

**B. The Value of Intellectual Property Rights as an Asset**

To understand the issues regarding information based assets, we must distinguish financing based on intellectual property rights from financing based on a debtor's other assets. Simply put, traditional commercial collateral includes either tangible items (*e.g.*, equipment and inventory) or the debtor's rights to receive payment from third parties (*e.g.*, accounts receivable). Along with real property, these two types of assets are the staple of many businesses and are the most common security for commercial loans.\(^1\)\(^2\)

Intellectual property rights do not resemble any of these traditional assets. A patent, for example, is not tangible property nor does it entail a right to receive money. Rather, patents, as well as copyrights, trademarks and other intellectual property, are proprietary rights, *i.e.*, rights of exclusivity and control of technology, information, products, or other work.\(^1\)\(^3\) Although the right to control differs for the various forms of intellectual property, this right legally defines the asset.

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10. In the aggregate, a creditor's costs are passed on to debtors as a group; this directly affects the availability of credit, especially at the margins for potential debtors who cannot afford the cost.
12. See generally Asset Based Financing (H. Ruda ed. 1985) (listing many of the areas of commercial secured lending).
For example, the author of a novel holds the copyright of the "work of authorship," which consists of the expression that comprises the novel. The copyright gives the author the exclusive right to make copies of the novel and create derivative works from the original.\textsuperscript{14} The author's asset consists of these rights. If the author makes and sells copies of the book, the buyers own the copy, but not the copyright. This ownership gives the buyer a right to read the book, give it to a friend, burn it or sell it, but she cannot make additional copies without infringing the copyright.\textsuperscript{15}

In copyright, and in all other forms of intellectual property, the value of the property rights depends on the salable value of the technology or product in which they subsist. Consequently, the value of intellectual property often cannot be determined until or unless it is exploited. This is especially troublesome for an information asset whose value depends on the information remaining confidential. The entire law of trade secrets, for example, is built on the premise that a company holding important or secret information can enforce that secrecy against attempted misappropriation.\textsuperscript{16} Reconciling a need for confidentiality with a need to appraise value, however, creates severe problems in lending. In addition, intellectual property rights are intangible and change in character and value over time. This uncertainty limits the willingness of lenders to use information assets as collateral, and requires the ideal system to have especially sensitive rules that track the changes and development of value over time.

C. Choice of Information Assets as Collateral and the Law

Intellectual property rights are personal property. They fall generally within the Uniform Commercial Code (U.C.C.) and, for secured lending Article 9 of the U.C.C. Some forms of intellectual property, such as trade secrets, are governed exclusively by state law. In contrast, patent, copyright, and many trademark rights are governed by federal intellectual property statutes. Although the federal system does not deal appropriately with commercial lending needs, it is nevertheless controlling on various issues and preempts state law, at least in part.

When the debtor markets intellectual property, he generates contract rights which shift the applicable body of law from proprietary rights under federal law to contract and priority rights under state law. Just as the sale of inventory transforms collateral from goods to cash or an account, the marketing of intellectual property also transforms the underlying information assets used as collateral. Unlike the case with inventory, however, the debtor can often both market and retain intellectual property rights. For example, a novelist who

\textsuperscript{14} 17 U.S.C. § 106 (1982).
\textsuperscript{15} Copyright law extends not only to novels and short stories, but also to computer software, databases and most other forms of information. See, e.g., Apple Computer, Inc. v. Franklin Computer, 714 F.2d 1240 (3d Cir. 1983), cert. dismissed, 464 U.S. 1033 (1984); 17 U.S.C. §§ 101, 102(a), 117 (1982).
\textsuperscript{16} See R. Milgrim, supra note 13; RESTATMENT (FIRST) OF TORTS § 757 (1939) (trade secret is essentially a common law right to control use or disclosure of secret information).
authorizes the reproduction and sale of copies of a book may keep the copyright (intellectual property) while exploiting other rights by selling the tangible item (the book). In many cases, however, the creditor desires a security interest in both the intellectual property and the tangible item.

The author’s authorization also has value as security. It may be in the form of a license to produce and market the copies of the novel in return for a royalty. A license conveys mere permission to exercise rights otherwise controlled by the owner of the intellectual property. It contrasts to an assignment, which conveys title in the underlying right (i.e., a sale of the copyright), reserving a right to royalties.17 In a license agreement, the author retains the copyright, but creates a contract right to receive payments from the publisher.18 These contract rights may be collateral that has greater value than the copyright itself after the license.

The use or sale of information thus generates various and potentially valuable forms of collateral. When using information assets as security, the parties must sort among the various forms of property and define both the scope and limits of the secured interest. The choice of collateral affects both what risks the lender takes and what law applies.

To illustrate the different types of property that are covered by the term “intellectual property,” consider the case of a software company that develops a product we will call SOFTALK I. Table 1 lists only some types of property that might be involved as collateral for a loan to this company:

### Table 1: Software Company Assets

**Intellectual Property Rights:**

**COPYRIGHT**

- right to reproduce copies of SOFTALK I
- right to develop works based on SOFTALK I

**TRADE SECRET**

- right to use confidential design of SOFTALK I
- rights in confidential process that developed SOFTALK I

**TRADEMARK**

- right to use and license name “SOFTALK I”

17. See A. DELLER, 4 DELLER’S WALKER ON PATENTS § 409 (2d ed. 1965).
18. R. NIMMER, supra note 2, at 5-4, ¶ 1.03.
Related Assets:

TANGIBLE PROPERTY

- current and future inventory of copies of SOFTALK I
- inventory of subsequent versions of SOFTALK I

INTANGIBLE PROPERTY

- license contracts with end users of SOFTALK I
- license contracts with publisher of SOFTALK I
- license contracts with distributors of SOFTALK I
- license contracts on subsequent versions of SOFTALK I
- accounts receivable from the sale of copies of SOFTALK I

Depending on the particular transaction, a lender and a debtor may want to encumber some or all of the assets of SOFTALK I. Each item on this list has separate value; the rights in each asset may be governed by different bodies of substantive law.

Parties frequently face questions about which legal system applies when they negotiate the form of the lending transaction. The choice of security conveyance often reflects the body of law the parties believe governs the transaction. In practice, parties choose between a security interest or a collateral assignment. Modern security interests, now commonplace in commercial lending, leave the debtor with ownership and control that is subject to a creditor’s right of foreclosure. Conversely, a collateral assignment conveys (assigns) title to the lender who grants back a “license” to the debtor. Title reverts to the debtor when the debt is paid. The language of collateral assignment derives from intellectual property law (which deals in assignments and licenses), while a “security interest” implicates U.C.C. considerations.

Although the parties often regard the chosen language as significant, seemingly explicit contract choices may be over-ridden. U.C.C. Article 9 is not controlled by the form of the agreement or contract titles. A security interest is defined to include many personal property “leases,” “consignments,” many “sales” of accounts, and all “conditional sales.”\(^\text{19}\) Thus, whether or not the parties use the label of “assignment” on a particular transaction may be irrelevant under Article 9. However, the label can determine the application of federal laws and the scope of their preemption of the U.C.C. section 9-104(a) provides:

This Article does not apply to a security interest subject to any statute of the United States, to the extent that such statute governs the rights of parties to and third parties affected by transactions in particular types of property.\(^\text{20}\)

\(^{19}\) See B. Clark, The Law of Secured Transactions Under the Uniform Commercial Code §§ 1.2-1.4 (1980); see also U.C.C. § 1-201(37) (1978).

\(^{20}\) U.C.C. § 9-104(a) (1978).
If federal law provides no governing rules, the transaction is subject to the provisions of Article 9. Federal preemption and the choice of governing law will be discussed more fully later in a discussion of specific forms of intellectual property.

II. THIRD PARTY RIGHTS AND LOAN RISKS

From a creditor's standpoint, the value of a security interest in any collateral is determined in part by its market value. As indicated earlier, this valuation is a special problem in dealing with intellectual property because the market value lies partly in the inability of others to duplicate it. The value of a security interest is also influenced by the legal rights or position the creditor holds with reference to the collateral, i.e., the legal conditions and costs associated with enforcing the creditor's rights against the debtor and other claimants who assert rights in the collateral.

Questions of relative position among creditors are described as priority issues in financing law. While a U.C.C. security interest is enforceable between the creditor and debtor from the time that an agreement is established between the parties, the creditor's rights against third parties depend on various "priority" rules. In turn, the creditor's priority will often depend on whether and when the creditor took steps to "perfect" its interest. In most commercial transactions, perfecting an interest requires that the creditor record that interest in an appropriate public filing system for the particular type of collateral.

One of the primary functions of priority and perfection rules is to resolve disputes between competing claimants. More importantly, these rules permit effective planning with foreknowledge of what rights or risks accrue to a lender's position. Effective planning requires certainty of applicable rules and discoverability of the existence of competing claims. Unfortunately, the governing rules are not always clear.

Current perfection and priority rules regarding intellectual property interests represent an uneasy blend of federal and state law. For patent, copyright, and some trademarks, both federal and state law contain recording rules and some priority of rights provisions that may be applicable. The law is unclear, however, as to whether both sets of rules apply, and to what extent they interrelate. This uncertainty exacerbates the underlying question of which elements of intellectual property value are covered in a transaction. Consequently, lenders face a financing environment that often requires duplicative compliance,

22. See infra notes 88-115 and accompanying text.
27. See R. NIMMER, COMMERCIAL ASSET BASED FINANCING ch. 7 (to be published, fall 1988).
yet retains uncertainty about applicable rights. Accordingly, both costs and risks are increased.

We believe that this field is ripe for limited but explicit federal preemption. Federal law should govern the property rights in copyright, patent, and some trademarks. It should also govern where, when, and what to file to perfect an interest in these properties. Given federal perfection, however, the lender’s priority position should then be determined by state law priority rules which already control state intellectual property such as trade secrets and state law trademark rights.

A. Filing Location

To the extent that they are governed by the U.C.C., intellectual property rights are usually treated as “general intangibles.” Perfecting a security interest in this type of property requires filing of a financing statement. The principal question is whether a U.C.C. filing is sufficient to perfect an interest in information assets defined by federal law or whether federal filing is also required. As a practical matter, a creditor must currently file under both systems if uncertain which system applies.

U.C.C. section 9-302(3) provides that:

[ ] the filing of a financing statement otherwise required by this Article is not necessary or effective to perfect a security interest in property subject to (a) a statute or treaty of the United States which provides for a national registration or which specifies a place of filing different from that specified in this Article for filing of the security interest.

Thus, an applicable federal registration system preempts U.C.C. filing rules. When this occurs, a U.C.C. filing is not “effective” to perfect an interest in the property rights covered by federal law.

1. Copyrights

The Comment to U.C.C. section 9-104 states that although the Copyright Act permits the “mortgage of a copyright and for the recording of an assignment of a copyright . . . such a statute would not seem to contain sufficient provisions regulating the rights of the parties and third parties to exclude security interests in copyrights [entirely] from the provisions of this Article.” While the current Copyright Act does not entirely preempt state secured financing law, its filing system apparently does preempt state filing systems. The Copyright Act authorizes filing of “transfers” of registered copyrights and further provides that a “transfer of copyright ownership” includes a “mortgage . . . of a

copyright or of any of the exclusive rights comprised in a copyright." Under federal law, unfiled transfers are unenforceable against most transferees who have no notice of the unfiled lien. This express rule preempts the U.C.C.; a U.C.C. filing cannot perfect an interest in a copyright.

Unfortunately, federal copyright filing rules contain at least two potential weaknesses. First, no transfer can be recorded until the copyright itself has been registered, which requires a public record deposit of copies of the work. This creates a problem for copyrighted works containing trade secret material, such as computer programs, because public disclosure of the secret terminates confidentiality and relinquishes the right to enforce the secrecy claim. Registration which discloses secret materials, whether or not associated with financing, reduces the value of the property. The extent of the harm, however, has been partly reduced by Copyright Office regulations that allow a deposit of material to be edited to reduce (or eliminate) trade secret disclosure.

In contrast, Article 9 permits mere "notice" filing, in which potential creditors are put on notice as to what "types" of property are covered by the security agreement. A second deficiency in the federal copyright filing system is that it inefficiently handles "after-acquired property." Article 9 filings are recorded under a debtor's name and routinely cover subsequently acquired property within the general description contained in the filing statement. Indexing in the federal system, however, is according to the particular copyright and does not cover after-acquired property in works eligible for separate registration. This could be especially critical in information based properties, since new versions of an original may be even more valuable than the original work. The limited scope of this filing requires the creditor in its security agreement to make and enforce appropriate provisions for refiling when new works are developed, thus imposing additional monitoring and compliance costs not present under the U.C.C.

2. Patents

Perfection of security interests in patents is less clear than with copyrights. The federal Patent Act mandates recording of "assignments, grants and other conveyances" of patents and indicates that:

40. "After-acquired property" is property received by the debtor after the creation of a security interest that the creditor wishes to be incorporated into the existing security agreement. See U.C.C. § 9-204 (1978).
[an assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.]

This statute governs both recordation and priority of interests. Initially it might appear that this federal patent recording system preempts state law as does the Copyright Act, rendering a state filing ineffective. However, it is uncertain if federal law preempts state law in the patent area.

The uncertainty centers around whether the reference to "assignments" and "grants" includes security interests or refers only to conveyances that transfer title to the creditor. When the patent statute was enacted, most secured lending involved transfers of title, but this is no longer common. Since modern day security interests leave title in the debtor, and the federal system records only conveyances of title, the federal system would appear not to apply to security interests nor to preempt Article 9.

Although this issue has not been litigated extensively, the reported cases are in complete disarray. The court rejected the transfer of title distinction and applied the preemptive federal system for recording patent transfers in In re Otto Fabric, Inc. The court held that a U.C.C. filing did not perfect a security interest since the Patent Office maintained an "adequate filing system that entirely preempts U.C.C. filing." This analysis would place all patent filing activity under a single system. The harm of this analysis flows from the relatively archaic and limited character of patent filing rules and the unsatisfactory way they deal with contemporary security interests.

The opposite result is suggested in Holt v. United States, where the court held that patent filing does not apply to a security interest in a patent application, because a U.C.C. interest does not involve a transfer of title. Under this analysis, security interests in patents would be governed by Article 9 and must be recorded as a general intangible in state records.

To complete the circle, one bankruptcy court adopted an intermediate position that is difficult to justify under any view of the federal registration system. In In re Transportation Design & Technology, Inc., the court held that "a security interest is not a conveyance of a present ownership [and] is not required to be recorded with the Patent Office." Nevertheless, it held that the federal patent system is partly preemptive. Filing in the federal system is

43. See supra text accompanying notes 19-21 (discussing the difference between a secured interest and a collateral assignment).
45. Id. at 657.
47. Id. at 339.
49. Id. at 639.
adequate against all parties, but not necessary,\textsuperscript{50} while a U.C.C. filing protects the creditor against judgment liens. This result-oriented outcome meant that any filing perfected the security interest against a judgment creditor, such as a trustee in bankruptcy.\textsuperscript{51}

These cases illustrate the great uncertainty in current law about how to perfect security interests in patents and patent applications. Despite the confusion, one author suggests that federal filing of a collateral assignment under the Patent Act will protect the creditor against all subsequent purchasers of the collateral.\textsuperscript{52} This is true, however, only if a collateral assignment is not treated as a disguised security interest, or if it is decided that federal rules cover security interests in patents. Thus, the only safe approach currently requires recording in both state and federal systems. In the federal records, the lender should record a collateral assignment with license back.\textsuperscript{53} The U.C.C. recording simply covers an interest in general intangibles,\textsuperscript{54} including but not necessarily limited to, patents and patent applications.\textsuperscript{55}

For the lender, the best approach in making the proper double filing may be to use a collateral assignment format in its transaction. A collateral assignment viewed as a whole under the U.C.C. clearly creates a secured transaction, since the label of a transaction does not bar the application of Article 9.\textsuperscript{56} This justifies the Article 9 filing, while the possibility of federal preemption mandates the federal filing as a backup.\textsuperscript{57}

3. \textit{Trade Secrets}

Trade secrets consist of confidential information important to a commercial entity whose disclosure and use are subject to explicit confidentiality restrictions.\textsuperscript{58} The debtor's rights in a trade secret include the right to use the secret information exclusive of any other person who obtained the information from

\begin{footnotesize}
\begin{enumerate}
\item Id. at 639-40.
\item But see 11 U.S.C. § 544(a) (Supp. 1988) (trustee in bankruptcy can avoid security interests to same extent as a judgment lien creditor).
\item See Nicewander, \textit{General Intangibles and Intellectual Property as Collateral}, in SMU INSTITUTE ON THE FUNDAMENTALS OF (COMMERCIAL LENDING (1986).
\item See infra note 61 (defining general intangible).
\item The proper location of a U.C.C. filing varies, depending on which subsections of U.C.C. § 9-401(1) have been adopted by a particular state. See U.C.C. § 9-401(1) (1978).
\item See, e.g., U.C.C. § 1-201(37) (1978) (certain leases treated as secured interests for purposes of Article 9).
\item An important caveat involves what interest is claimed as collateral. If the collateral involves royalties received from a license, an interest in the license is not considered an interest in the patent. The security interest in the debtor's contract right is a general intangible that requires a state law filing. Similarly, an interest in the product of a patented process is an interest in goods, not in the patent. Therefore, this interest requires a state law filing, since it is a perfection of an interest in goods.
\item \textit{Restatement (First) of Torts} § 757 (1939).
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the holder and the right to preclude disclosure by such third parties. Unlike patents and copyrights, a debtor's rights in trade secrets are not governed by federal law. Filing under Article 9 is clearly mandated.

Trade secret "rights" are considered general intangibles under Article 9. The primary legal problem in using these information rights as collateral involves distinguishing these secrets from the debtor's tangible property or other proprietary rights. For example, with regard to tangibility, in United States v. Antenna Systems, Inc., the court held that a security agreement extending to inventory, work in progress, contract rights and equipment of a software company did not cover "blueprint and technical data produced when the company's engineering staff designed a product." It ruled that data were the visual reproductions of "engineering concepts, ideas and principles [and] are general intangibles" under the U.C.C. In effect, the court was suggesting that ideas or conceptual attributes dominate intellectual property, making the tangible embodiment of the conceptual attributes inseparable from the attributes themselves.

A similar problem existed in In re Bedford Computer Corp., but the court suggested a converse outcome. The creditor claimed an interest in the "source code" of a computer program developed by the debtor. The court noted:

If . . . compelled to make a definitive characterization, I believe I would conclude that the software here involved should be characterized as tangible rather than intangible property. [The] source code and object code embodiment of that "technology" cannot exist independent from the actual hardware components to which it gives operational life. The source code does not demonstrate some broad generalized technology or technical principles and ideas, existing apart from a particular tangible machine already in existence, but instead presupposes the bold existence of particular hardware to give the source code any meaning. Moreover, the source code itself is embodied in tangible magnetic media . . .

If the code is a tangible item, the proper U.C.C. classification is "goods" (e.g., equipment or inventory). Once again, the tangible embodiment and the underlying concepts are inseparable, but here the tangible attributes dominate.

Such inconsistent analyses reflect a fundamental misconception of rights inherent in intellectual property as opposed to other types of property. Rather than getting bogged down in the tangibility question, courts should ask: "what is the nature of the potential proprietary rights claim to this material?" For example, in Antenna Systems and Bedford, the technical material was comprised of trade secret and possible copyrightable subject matter. To the extent that the creditor claims the right to disclose, use or copy this proprietary information, the

59. See generally R. Nimmer, supra note 2, at 3.02.
60. R. Milgrim, supra note 13, at § 7.02[2].
63. Id. at 1015.
64. Id. at 1016.
66. Id. at 567 (emphasis in original).
claim would cover intangible assets. If the creditor merely sought possession of existing copies (e.g., on disk) of the software, however, the claim would be dealing with goods.

A related problem occurs when a creditor provides only partial funding for the debtor or the debtor desires to hold some valuable information outside the secured transaction. In such a case, filing against all general intangibles may reach too broadly, as would a similar description in the security agreement.67

4. Trademarks

Trademark rights arise under federal law, state statutes, and common law. We focus here on trademarks that are subject to federal law pursuant to the Lanham Act which provides that:

[a]n assignment shall be void as against any subsequent purchaser for a valuable consideration without notice, unless it is recorded in the Patent and Trademark Office within three months after the date thereof or prior to such subsequent purchase.68

Federal regulations provide for registration of assignments and other instruments "which may relate to such marks . . . in the discretion of the Commissioner."69

The federal statutory language refers only to recording assignments of federal trademarks and raises similar issues about the choice of an appropriate recording system as do the patent laws.70 For example, in Acme Valve & Fitting Co. v. Wayne,71 the court noted that "[i]n order for a transfer of rights in a trademark to constitute a sale or assignment . . . the transfer must be absolute and must relate to the entire rights in the trademark."72 Thus, if a court concludes that the transaction is an assignment, the Lanham Act recording provisions would control the transaction, preempting and displacing the U.C.C. filing provisions.73

At least one author advocates the recording of a collateral assignment in federal records to perfect an interest in federally registered trademarks.74 However, several cases have held that Article 9 applies if the secured transaction does not assign title in fact.75 These cases indicate that federal filing is necessary

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67. In Bedford, the lender lost all claim because it could not distinguish its collateral from other technology developed by the debtor, a point we shall amplify later. Id. at 570-71.

70. See supra notes 52-55 and accompanying text.
72. Id. at 1165.
73. See U.C.C. § 9-104(a) (1978); see also supra note 21 and accompanying text (federal preemption of the U.C.C.).
74. See Bramson, supra note 53, at 1593-94 (filing of a collateral assignment in the federal system is adequate to perfect).
75. See Engel & Radcliffe, supra note 36, at 20. See generally In re Roman Cleanser Co., 43 Bankr. 940 (Bankr. E.D. Mich. 1984), aff'd, 802 F.2d 207 (6th Cir. 1986) (grant of a security interest in a federally registered trademark is not an assignment for purposes of Lanham Act because it is not an absolute transfer of the entire right, title and interest); In re TR-3 Industries, 41 Bankr. 128 (Bankr. C.D. Cal. 1984) (compliance with the U.C.C. filing requirements for general intangibles perfects the interest in the trademark since the Lanham Act does not provide for recording of a security interest).
only if there is a current and absolute conveyance of control and ownership to the "lender." Since the debtor owns the collateral in an ordinary security interest until there is a default, federal system would be considered as merely a title registry irrelevant to secured financing liens. Once again, the only practical response to ensure perfection is to file in both systems.77

Regardless of whether a security agreement or a collateral assignment is used, the transaction must comply with trademark law. Trademark law requires the owner to be able to monitor operations under the trademark. Absent this monitoring, the transaction may be construed as a naked license and therefore potentially invalid.78 In a collateral assignment, the "owner" is the assignee, i.e., the creditor. The prohibition on naked licenses materially increases a creditor's cost by requiring this monitoring function.

Federal trademark law also prohibits "assignments in gross."79 This means that a trademark cannot be sold or assigned apart from the goodwill it represents, because trademarks are considered meaningless if divorced from their goodwill.80 A security interest or collateral assignment is considered an assignment in gross if it is restricted solely to the mark.81

There is some dispute about how far a transaction must extend beyond the trademark to avoid characterization as an assignment in gross, but recent decisions indicate that the need to extend beyond mere conveyance of the mark can be met with relative ease.82 For example, in In re Roman Cleanser Co.,83 the Sixth Circuit held that a security interest in a trademark was not an assignment in gross even though the security interest failed to include the machinery and equipment needed to produce the product.84 The court noted that it was "of the opinion that the 'goodwill' spoken of in the statute does not mean machinery, 

76. Under state law, a trademark is a general intangible. See, e.g., In re Magnum Opus Elec., Ltd., 19 U.C.C Rep. Serv. (Callaghan) 242 (D.N.H. 1976); see also supra note 61 (defining general intangible under the U.C.C.).
77. An alternative, suggested in a leading treatise, attempts to bend the collateral assignment to fit the transaction:
    One approach . . . would be an agreement to assign the trademarks in the future, conditioned upon a default as defined in the underlying security agreement. This agreement to assign can be part of the mortgage . . . and can also include an irrevocable power of attorney to the . . . "secured party" to execute the assignment on behalf of the debtor in the event of default, should the latter fail or refuse to execute and deliver the assignment. Such a security agreement to assign should be recorded in the United States Patent and Trademark Office so that third parties would be put on notice . . .
78. See generally VISA USA, Inc. v. Birmingham Trust Nat'l Bank, 696 F.2d 1371, 1377 (Fed. Cir. 1982).
80. See McCARTHY, TRADEMARKS AND UNFAIR COMPETITION § 18.1 (1973); see also Handler & Lin, How to Perfect Security Interests in Patents, Trademarks, and Copyrights, 11 U.C.C. L.J. 346, 347 (1978); Marshak v. Green, 746 F.2d 927 (2d Cir. 1984); VISA USA, 696 F.2d at 1375.
81. Id. at 1376.
84. 802 F.2d at 209.
and that the transfer of formulas and customer lists, both classic elements of goodwill, along with the trademarks, satisfies the statutory requirement. 85

It must be remembered that we are no longer dealing solely with federal law if the transaction extends beyond the trademark. There must be a state law filing to cover other elements of the agreement, such as equipment and inventory.

5. Licenses as Collateral

In information based lending, debtors often use existing license agreements as collateral. A license contract is typically governed by state law and is not covered by federal filing rules.

If a licensee’s rights are used as collateral for a loan to him, the primary problem is defining the value of the rights and whether the license contract itself can serve as collateral. Valuation is simpler if an exclusive license is involved, since the license value matches the value of the underlying property licensed. In effect, the exclusive license creates a property right in the licensee, although it is not explicitly referred to as such.

If the license is non-exclusive, both its value and the licensee’s ability to encumber that value change. A non-exclusive license is “personal to the licensee and is not transferable unless it contains words which show that it was intended to be assignable.” 86 To the extent assignability is a precondition to a valid lien, 87 it eliminates non-exclusive licenses as potential collateral unless the licensor expressly permits the assignment. Even then, the fact that the license is non-exclusive reduces its value and may eliminate it as a possible source of collateral.

In contrast, a licensor’s rights in a loan agreement to the licensor clearly can be subjected to a security interest. The licensor may hold a reversionary interest, but more importantly has a contract right to receive royalties. This right to payment can be encumbered under Article 9 as a general intangible. The value of the collateral depends, as any contract right does, on the strength of the underlying obligor’s commitment and ability to pay.

B. Priority Issues

Filing and perfection rules ultimately relate to determining a creditor’s priority as compared with third parties. The simple fact that an interest was perfected (or not perfected) does not necessarily determine its position or priority relative to all other parties. A creditor’s position will be defined by reference to explicit priority rules in federal or state law. Although these rules will

85. Id. In Roman Cleanser, the creditor originally took a comprehensive lien, but released its interest in the machinery and equipment before the debtor’s bankruptcy. See Roman Cleanser, 43 Bankr. at 942.
87. See supra text accompanying notes 29-31 (discussing federal filing system requirements).
generally give priority to the claimant who first perfects her interest, federal and state rules are not consistent on this point.

While we propose that federal preemption of state law is appropriate for recording rules concerning intellectual property governed by federal law, we also believe that priority rules should be governed entirely by state law. This is because virtually every financing package involving intellectual property also contains collateral that is subject to state finance laws. Accordingly, an artificial split of priority rules among these packaged rights would unnecessarily invite confusion and uncertainty.

Unlike filing rules, conflicting priority rules under federal and state law cannot always be reconciled or their effect avoided. As a result, determining as a matter of law which priority rules govern the relationship between a creditor and a third party is probably more critical than determining the appropriate filing system.

The structure for analysis of priority rules is similar to that used to examine filing issues. Under both the common law and Article 9, priority rules are preempted to the extent that federal law applies.\(^8\) Applying this partial preemption rule to priority questions, however, is made difficult because the federal statutes deal with some priority issues, but are silent on others. Silence in a preemptive statute creates ambiguities as to whether state law is permitted to operate in an area not expressly dealt with by federal law. In lien priority issues, the better view is that silence does not indicate a Congressional intention to occupy the field. Otherwise, the field would be governed by no rule at all. State law should appropriately be used to fill the void created by the absence of federal provisions.

There is very little law dealing with preemption by federal intellectual property statutes, but cases dealing with other credit laws have so far indicated that the scope of preemption will be limited to the express language of the federal statute. The most closely related context involves the Federal Aviation Act (FAA).\(^8\) The FAA contains both registration and priority rules.\(^9\) The U.S. Supreme Court, in *Philco Aviation, Inc. v. Shacket*,\(^9\) held that federal recording rules preempted state law for security interests in aircraft and other property covered by the FAA. The Court suggested, however, and other courts have subsequently held, that state law priority rules are largely unaffected by federal law.\(^9\)

The FAA provides that an unrecorded interest in an aircraft is invalid against any person not "having actual notice thereof . . . ."\(^9\) This defines the effect of an FAA filing. Arguably, the rule expressed could be interpreted to preempt all other priority laws creating a "first to file" rule augmented by actual

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88. U.C.C. § 9-104 (1978); see supra note 21 and accompanying text.
92. Id. at 413; see, e.g., *Aircraft Trading & Services, Inc. v. Braniff, Inc.*, 819 F.2d 1227 (2d Cir. 1987).
notice provisions. However, its preemptive scope has been held to be quite narrow. The Supreme Court has noted that:

[State] law determines priorities [but] all interests must be federally recorded before they can obtain whatever priority to which they are entitled under state law.\(^9\)

Thus, for security interests in aircraft and related property, the "only situation in which priority appears to be determined by [federal law] is where the security holder has failed to record his interest."\(^9\) An unfiled interest is subordinate to all persons lacking actual notice, but a filed interest obtains only the priority given to perfected interests under state law.

This narrow preemption leaves most priority issues to state law, and should be applied in the context of intellectual property interests governed by federal law. Whether or not this will become the rule, however, is a question that remains unanswered.

The extant federal intellectual property statutes partially address priority issues, but in a different manner than under Article 9 of the U.C.C. This is most apparent in the federal rule which permits filing during a grace period to relate back and obtain priority against intervening claims. The U.C.C. bases priority of perfected security interests in the same collateral on a first to file rule.\(^9\) In conflicts between secured creditors and buyers, a perfected security interest takes precedence over any subsequent buyer of intangibles.\(^9\) Even an unperfected security interest in general intangibles has priority over a subsequent buyer with notice of the security interest.\(^9\)

1. **Priority of Copyrights**

The federal copyright system is also based on a first to file rule, but contains a grace period where a transfer recorded within a one or two month period after it is made has priority over subsequent transfers if the copyright is registered.\(^9\) If there is a registration and the first transferee does not record within the grace period, the second transferee takes priority if it (1) filed first, (2) accepted the transfer in good faith, (3) for valuable consideration, and (4) without notice of the prior transfer.\(^9\)

This priority system applies to transfers of copyrights and, as we have shown, apparently includes security interests.\(^9\) It does not cover non-exclusive licenses, as these are not considered copyright "transfers." As a result, a non-exclusive license takes priority over a competing transfer if the license occurred

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\(9\). *Philco Aviation*, 462 U.S. at 413.
\(96\). U.C.C. § 9-312(5) (1978). This is not the rule in transactions involving negotiable instruments, where possession is the only method of perfection. See U.C.C. § 9-304(1) (1978).
\(99\). 17 U.S.C. § 205(c)(e) (1982). As noted earlier, while copyright holders often register their property, many technology companies keep their information in the form of trade secrets because of concerns about public disclosure of information. See supra notes 37-39 and accompanying text.
\(101\). See supra notes 90-95 and accompanying text.
first and is in writing;\footnote{102} no recording is required. As with a true personal property lease, the subsequent lender takes subject to the license even if it has no knowledge of its terms.\footnote{103}

2. \textit{Priority of Patents}

The Patent Act permits recording of assignments, grants, and other conveyances of patents and specifies that:

\begin{quote}
[a]n assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.\footnote{104}
\end{quote}

As previously discussed, this recording statute and priority rule may not apply to security interests at all.\footnote{105} If it does, there are numerous unresolved issues concerning the scope of preemption of state priority rules.\footnote{106}

A narrow preemption analysis, consistent with the FAA cases,\footnote{107} would hold that the Patent Act deals only with priority questions involving unrecorded security interests. All other priority questions would fall under state law. Therefore, an unrecorded security interest would be subordinate to a purchaser without notice (although it would benefit from the three month federal grace period for filing), while a recorded interest would have only the priority given such interest under state law.

It is also possible that the Patent Act gives an unrecorded conveyance priority over all parties except mortgagees or subsequent purchasers of the collateral. This results from the omission in the Act of any reference to other parties when it specifies that unrecorded interests are invalid as to specified parties.\footnote{108} Thus, giving priority to unrecorded liens over judgment creditors would be consistent with the Act, but contrary to Article 9 rules. The main impact of this interpretation would be that an unrecorded transfer is valid against a trustee in bankruptcy.

It should be noted that the federal recording creates a colorable title until the record is changed. For example, in \textit{Magnuson Industries, Inc. v. Co-Rect Products, Inc.},\footnote{109} after a mortgage on a patent was recorded in the Patent and Trademark Office, there was a compromise of the debt and the Small Business Administration (SBA) returned the patent by assignment to the original party.\footnote{110} However, the parties did not remove the recording.\footnote{111} The court ruled that the

\begin{footnotes}
\footnotetext[102]{17 U.S.C. § 205(f) (1982).}
\footnotetext[103]{See \textit{In re Access Equipment, Inc.}, 62 Bankr. 642 (Bankr. D. Mass. 1986). Pursuant to U.C.C. §§ 9-102, 1-201(37) (1978), a true lease is not subject to Article 9.}
\footnotetext[104]{35 U.S.C. § 261 (1982).}
\footnotetext[105]{See \textit{supra} notes 41-55 and accompanying text.}
\footnotetext[106]{\textit{Id.}}
\footnotetext[107]{See \textit{supra} notes 91-95 and accompanying text.}
\footnotetext[108]{See \textit{Why Corp. v. Super Ironer Corp.}, 128 F.2d 539, 541 (6th Cir. 1942); \textit{Bailey v. Chattem, Inc.}, 684 F.2d 386, 392-93 (6th Cir. 1982).}
\footnotetext[109]{13 U.S.P.Q. (BNA) 652 (D. Minn. 1981).}
\footnotetext[110]{\textit{Id.} at 654.}
\footnotetext[111]{\textit{Id.} at 656.}
\end{footnotes}
SBA could pass title to another party who had no notice of the prior, unrecorded assignment, but that a party with notice could not obtain more than the bare legal title held in constructive trust by the SBA for the debtor.\textsuperscript{112} In contrast, under the U.C.C., a financing statement conveys no actual or apparent authority to the creditor to convey title of the collateral. It deals only with priority issues.

3. \textit{Priority of Trademarks}

For federal trademarks, the Lanham Act provides that:

An Assignment shall be void as against any subsequent purchaser for a valuable consideration without notice unless it is recorded in the Patent and Trademark Office within three months after the date thereof or prior to such subsequent purchase.\textsuperscript{113}

The language and effect are essentially identical to the priority rule of the Patent Act.

In a dispute between two secured parties, determining which priority system to use involves answering two questions. First, does the federal filing rule apply? Second, if it does apply, to what extent does it preempt state law? Where both claimants are creditors, the federal rules should apply either to both interests or neither interest.

The patent and trademark rules void an unrecorded interest against any subsequent purchaser of the collateral.\textsuperscript{114} Consistent with the Court's view in \textit{Philco},\textsuperscript{115} this should be interpreted as a limited priority rule that leaves state law to govern all other situations. This limited priority rule contains two important aspects. First, an unrecorded lien is valid against parties with notice of it. This notice-based priority rule goes beyond any similar provision under Article 9. Second, the federal statutes include grace period provisions not found in Article 9. A filing within this grace period preempts the priority of an intervening transfer. Thus, a prudent lender will not advance funds until the grace period has expired and it is assured of priority.

4. \textit{Priority Among Third Party Claimants}

Priority is unclear when the conflict is between a secured lender and another third party claimant (e.g., a buyer or assignee of the intellectual property). Federal rules apply, at least in part, to the rights of an assignee against subsequent buyers or recipients of conveyances. In effect, by recording within the applicable grace period, the assignee has title from the date of transfer. This title has priority over subsequent secured parties whose equitable and legal claims are less substantial than those of a bona fide purchaser.

The patent and trademark statutes refer to validity against purchasers and may not cover secured interests. However, if there were a completed sale

\textsuperscript{112} \textit{Id.} at 657.
\textsuperscript{115} See \textit{supra} notes 91-94 and accompanying text.
before the secured lender obtained an interest in the property, the probable result is that no property remains for the security interest to reach. This contrasts to a case in which a secured lender creates its interest in the property prior to the completion of the sale. As has been shown, the U.C.C. governs the secured party’s rights to the extent that federal law does not apply. The federal rules do not discuss the rights of prior secured parties, but only conveyances arising after the initial assignment. Thus, priority should be determined under Article 9, unless the secured party’s claim must be recorded under a federal system.

III. CHARACTER OF THE LENDING TRANSACTION

There are other increasingly important issues concerning debtor and creditor rights in intellectual property. We will discuss four topics: (1) the rights of the parties in the security prior to default, (2) the obligations of the lender following default, (3) the rights of the parties in bankruptcy, and (4) the coverage of after-acquired property rights in developing intellectual property.

In evaluating current law on these topics, an important distinction should be drawn between rules of law that can be altered by contract and those that cannot. In the financing context, one can anticipate the transactions will be structured to control or avoid the negative effects of an unalterable rule. The appropriate policy question becomes whether these adjustments in transactional practice are desirable and outweigh the importance of the rule’s policy goals. Rules that force costly and unnatural contractual adjustments should not be retained unless important policy reasons justify their existence.

Rules of law that can be altered or affected by contract terms present a different issue. These rules will apply unless overridden by the parties in the contract. It is critical that the presumptions be acceptable, predictable, and desirable. They should reflect our best estimation of the outcomes the parties themselves would have reached if they had considered the issue. Unfortunately, archaic intellectual property rules generate undesirable outcomes in a number of situations.

A. Rights Prior to Default

Who owns the intellectual property prior to default or complete performance by the debtor? This question is important because it determines who exercises residual rights of ownership and control not allocated by contract between the parties.

An easy but erroneous analysis relies on the style or label of the transaction. For example, in a collateral assignment the lender receives an assignment of the debtor’s intellectual property rights and gives back a license to use those

117. One example would be a rule permitting title to remain in an independent contractor unless the written contract conveys it to the employer.
rights. On the face of the transaction, the lender owns title to the intellectual property and the debtor has only those rights reconveyed to it in the license. While the license usually conveys a full right to use the property in the debtor’s business, the lender’s retention of ownership has potentially serious implications. For example, if possession of title is determinative, the residual rights of control in the property make the owner-creditor a necessary party to any litigation involving that property.

In contrast, a contemporary security agreement leaves title to the collateral undisturbed. The Official Comment to U.C.C. section 9-101 provides:

This Article does not determine whether “title” to collateral is in the secured party or in the debtor and adopts neither a “title theory” nor a “lien theory” of security interest. Rights, obligations, and remedies under the Article do not depend on the location of title.118

Unless the security agreement provides otherwise, the debtor retains possession and use of the collateral until default. The creditor has only a security interest, not an ownership interest. Upon default, the creditor has an immediate right to take possession of tangible property and the cash flow from intangible property.119

The U.C.C. rules should control if the transaction is a secured transaction. Pre-U.C.C. intellectual property cases, however, indicated that a mortgage may entail a current transfer of ownership.120 This permitted mortgages to be recorded as assignments and gave the lender the right to bring a suit for any patent infringement.121 This analysis, however, embodies outdated law regarding the actions required to transfer or retain title, and emphasizes issues no longer important. The contemporary view follows the U.C.C. in reducing the importance of title and possession. In re Transportation Design & Technology, Inc.,122 illustrates the modern approach. The court said:

the grant of a security interest is not a conveyance of a present ownership right in the patent and... is not required to be recorded with the Patent Office. It is no longer necessary to create a security interest by assignment or transfer of title as was done in the Waterman transaction.123

Thus, the debtor retains most rights in the property under intellectual property law. The creditor is not a necessary party in infringement actions and need not (unless the security agreement so requires) consent to or participate in further licensing of the technology.

This contemporary view leaves uncertain the legal effect of a collateral assignment. Although the assignment purports to convey title, it really creates a security interest. Should courts apply the language of assignment or favor

121. Id. at 260; see also Curtiss v. United States, 13 U.S.P.Q. (BNA) 400 (Ct. Cl. 1932).
123. Transportation Design & Technology, 48 Bankr. at 639.
substance over form? Focusing on substance rather than form is consistent with Article 9 and prevents differences in form from hiding the reality of the underlying transaction. Under the U.C.C., this is particularly evident in litigation concerning equipment leases. If the lessee-debtor has a right to "purchase" the property for a nominal sum, the transaction is treated as a security interest regardless of language that leaves "ownership" in the lessor. Similarly, a transaction where a "seller" retains title until the debt is paid creates a secured loan under the U.C.C.\footnote{124}

If an assignment transaction creates a security interest, then the debtor retains title and control over the property. If the transaction conveys title, the debtor retains only those rights contained in license back provisions.\footnote{126} The typical license precludes sublicensing or assignment by the debtor without the creditor's consent. Unless the license provides otherwise, the creditor must enforce any rights against infringement and cover the costs of perfecting and maintaining the underlying intellectual property right. Although most licenses give these obligations to the debtor, under federal law the creditor-owner remains a necessary party in any intellectual property lawsuit.

B. Rights and Obligations After Default

Transactions also specify a creditor's rights in the event of a debtor's default. If the transaction conveys title to the lender, a default should simply terminate the license to the debtor. Ownership remains in the lender, based on the assignment. In such event, the lender-owner should be free to use the property as it desires, subject to any restrictions created in the original contract. From the debtor's standpoint, the property would be lost upon default. Moreover, unless the agreement provides otherwise, the lender retains an action on the debt while the debtor receives no credit toward the debt for the value of the lost property.

Although this is consistent with the title conveyance in a collateral assignment, one can never assume that a revesting of title in the creditor adequately treats the consequences of default given the Article 9 characterization of collateral assignments as secured interests. This error has been made where the parties characterize the transaction as a lease and believe the transaction will be treated as such by the courts.\footnote{127} If they are wrong, the result is potentially serious liability for the lender for failing to comply with the obligations of a secured lender under Article 9 after default.\footnote{128}

\begin{itemize}
\item \footnote{124} U.C.C. § 1-201(37) (1978). See generally R. Nimmer supra note 2, at §§ 6.14 - 6.16.
\item \footnote{125} See U.C.C. §§ 1-201, 9-105 comment 2 (1978).
\item \footnote{126} In a trademark transaction, if the creditor uses a collateral assignment and license back, the agreement must contain steps to avoid the existence of a naked license by including the right to inspect and monitor the quality of merchandise produced under the license to the debtor. See supra note 78 and accompanying text.
\item \footnote{127} See Percival Const. Co. v. Miller & Miller Auctioneers, Inc., 387 F. Supp. 883 (W.D. Okla. 1973) (applying 93% of "lease" payments to purchase and holding lessee liable for the full term even if property returned held to be a security interest within the U.C.C.).
\item \footnote{128} See R. Nimmer, supra note 2, at ¶ 6.15. If the transaction is treated as a security interest and the lessor does not comply with U.C.C. § 9-203, she will not be entitled to enforce her security interest even as against the debtor.
\end{itemize}
The lender's proper response both in the agreement and its post-default conduct should be to assume the transaction is a secured loan even if characterized as a collateral assignment. It should also assume that federal law does not control. Indeed, in copyright law, a Congressional committee expressly decided that default issues should be left to state law and contractual agreement:

Representatives of motion picture producers have argued that foreclosures of copyright mortgages should not be left to varying State laws, and that the statute should establish a Federal foreclosure system. However the benefits of such a system would be of very limited application, and would not justify the complicated statutory and procedural requirements that would have to be established.¹²⁹

By treating a license as a secured loan in the event of default, the creditor has an immediate right to receive collections from any third party (e.g., a sublicensee) and to take possession of the collateral. If the creditor wants to retain rather than sell the property, it may propose in writing to retain the property in satisfaction of the debt (a procedure called "strict foreclosure"), if the debtor does not object within the statutory notice period.¹³⁰ Otherwise, the creditor must dispose of the property in a "commercially reasonable sale,"¹³¹ which can be either a public auction or a private sale.

As there are no cases dealing with what constitutes a commercially reasonable sale of intellectual property, the contract terms should specify the standards for such a sale. Absent such provisions, the lender has little or no guidance as to market, terms, advertising, and similar issues.

If the intellectual property includes trade secrets, protecting its value requires maintaining confidentiality. A commercially reasonable disposition undoubtedly would require adequate restraints on disclosure imposed on bidders and perhaps buyers. Failure to protect secrecy creates a liability risk, yet nondisclosure drives down the selling price. The parties must also decide whether the debtor can continue to use the secret material. Merely creating a right for the creditor to sell intellectual property to a third party does not necessarily mean that former employees and owners can no longer use the property in their future work.

If the property includes trademarks, the rules concerning prohibition of assignments in gross must be taken into account.¹³² Hence, the purchaser at foreclosure must receive sufficient title and cannot simply buy the rights without adequate supporting material.

¹³². See supra note 80 and accompanying text.
C. Rights in Bankruptcy

In a Chapter 11 bankruptcy, the debtor utilizes bankruptcy law to substantially restructure and optimize the value of its assets and liabilities. This is a credit law system designed to control the distribution of value among creditors of an insolvent debtor.133

In Chapter 11 cases, a debtor can review existing contracts, retaining beneficial ones while rejecting burdensome contracts. By permitting the debtor in bankruptcy to affirm or reject certain agreements, the Bankruptcy Code seeks to optimize the value of the debtor's property available for the unsecured creditors. This affects a lender whose loan transaction involved assignment of a license or whose underlying collateral is a license agreement.

The right to select among contracts applies only to executory contracts.134 In bankruptcy, an executory contract is a contract in which substantial performance remains to be done on both sides of the agreement such that a breach by either party excuses further performance by the other.135 The debtor may either affirm or reject such contracts. Affirmation of a contract indicates that the debtor undertakes to cure defaults and perform the agreement, receiving reciprocal performance from the other party. Rejection, in contrast, is an anticipatory repudiation; it converts the creditor's rights into a claim for damages against the bankruptcy estate.

This treatment of executory contracts affects the enforceability of license agreements. Since patent and similar licenses are treated in nonbankruptcy law as unassignable without the licensor's consent, one bankruptcy court held that a patent license could not be assumed or assigned in bankruptcy.136 Under this view, the license would probably terminate as soon as the licensee files bankruptcy. Even if it did not terminate, it would at least not be transferable to a third party.

The Bankruptcy Code provides, however, that a debtor's bankruptcy estate consists of all legal and equitable interests of the debtor.137 This expansive definition indicates that intellectual property or technology licenses are property of the bankruptcy estate.138 The pertinent question becomes whether or not the license contract is executory. Since the predominant test is whether substantial performance remains due on both sides of the contract, this becomes a factual question that requires analysis of the terms and performance of the agreement.

In a leading article, one commentator noted that most licenses are executory, but in some cases "where there is no express undertaking by the licensor

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135. See Countryman, Executory Contracts in Bankruptcy, 57 MINN. L. REV. 439 (1973); see generally Nimmer, supra note 133, at 511.
138. See Lubrizol Enterprises v. Richmond Metal Finishers, Inc., 756 F.2d 1043, 1046 (4th Cir. 1985); cf., Harris v. Emus Records Corp., 734 F.2d 1329, 1333 (9th Cir. 1984) (under the 1909 act, a copyright license, which creates a mere personal right, is not assignable without permission of the licensor and does not become property of the estate).
the agreement... may not be executory because the licensor may have fully performed merely by executing the license...\textsuperscript{139} Although illustrations of this latter point are hard to find, in \textit{In re Monument Record Corp.},\textsuperscript{140} the court held that a recording license contract was not executory.\textsuperscript{141} The parties had entered into an agreement releasing the performer from his exclusive recording obligations, while reserving to the publisher the right to continue to market previously recorded works.\textsuperscript{142} Although the performer had an obligation to refrain from recording during a five-year period any works which were released by the publisher within 120 days of the termination agreement, no such works were released.\textsuperscript{143} The performer had no other obligations.\textsuperscript{144} Therefore, the licensor had fully performed by merely executing the license.\textsuperscript{145}

In technology licenses, performance usually remains to be done on both sides of the transaction for an extended period of time. Appellate decisions suggest both that the license is property of the estate and that the debtor can affirm or reject the license agreement with court approval. The first case to reach this result was \textit{In re Select-A-Seat Corp.}\textsuperscript{146} The court held that an exclusive software license was an executory contract.\textsuperscript{147} The licensee was required to make royalty payments out of its annual net return from use of the software and any failure to do so would be a material breach of the license.\textsuperscript{148} The licensor had a continuing obligation not to license or sell the software to anyone else, since the license was exclusive.\textsuperscript{149} Consequently, the court permitted the debtor, as the licensor, to reject the contract.\textsuperscript{150}

\textit{Select-A-Seat} illustrates how far courts may reach to find remaining performance sufficient to establish an executory contract. A similar outcome occurred in a nonexclusive technology license in \textit{Lubrizol Enterprises v. Richmond Metal Finishers, Inc.}\textsuperscript{151} The licensor-debtor owed the licensee continuing obligations that included notifying it of and defending law suits and indemnifying the licensee for certain losses.\textsuperscript{152} The licensee owed continuing duties of accounting and royalty payments as well as maintaining the confidentiality of the technology.\textsuperscript{153} As a result, the debtor was allowed to reject the license.\textsuperscript{154}

In \textit{Lubrizol}, rejection of the license by the debtor removed the rights to the technology from the licensee even though the license provided that it could

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  \item \textsuperscript{139} Countryman, \textit{Executory Contracts in Bankruptcy: Part II}, 58 Minn. L. Rev. 479, 502 (1974).
  \item \textsuperscript{140} 61 Bankr. 866 (Bankr. M.D. Tenn. 1986).
  \item \textsuperscript{141} Id. at 867.
  \item \textsuperscript{142} Id.
  \item \textsuperscript{143} Id.
  \item \textsuperscript{144} Id.
  \item \textsuperscript{145} Id. at 869.
  \item \textsuperscript{146} 625 F.2d 290, 292 (9th Cir. 1980).
  \item \textsuperscript{147} Id. at 292.
  \item \textsuperscript{148} Id. at 291.
  \item \textsuperscript{149} Id.
  \item \textsuperscript{150} Id. at 292-93.
  \item \textsuperscript{151} 756 F.2d 1043 (4th Cir. 1985).
  \item \textsuperscript{152} Id. at 1045-46.
  \item \textsuperscript{153} Id. at 1046.
  \item \textsuperscript{154} Id. at 1047.
\end{itemize}
continue to use the technology despite a breach by the debtor.\textsuperscript{155} Bankruptcy law gives the licensee only a right of action for damages against the bankruptcy estate and not a claim for enforcement of the license agreement.\textsuperscript{156} In \textit{Select-A-Seat}, the rejection terminated an ongoing exclusive dealing arrangement. The licensee was permitted to retain and sell copies he had already received, but had no right to further performance.\textsuperscript{157} In both cases, the damage to the licensee was substantial.

Rejection of a license agreement is ordinarily permitted, notwithstanding such harm to the injured party, because the purpose of the law is to benefit the \textit{bankrupt} and its creditors.\textsuperscript{158} While at least one lower court has rejected this policy in favor of a balance that disallows rejection of a technology license central to the licensee's entire business, this balancing analysis is ordinarily not permitted.\textsuperscript{159} The lender who advances funds to a licensee may suddenly see its collateral disappear because of the otherwise unrelated event of the licensor's bankruptcy.

A similar risk exists for the borrower in a collateral assignment if the lender enters bankruptcy. In such a case, the lender may be able to "reject" the license and keep the technology. The risk is especially significant where the lender is not an institutional creditor, but rather a financing partnership or similar entity.

In addition to creating a choice between assumption or rejection of executory contracts, bankruptcy law also modifies certain contractual rights in a manner that enhances value to the debtor's estate. Of particular importance to intellectual property transactions, the Bankruptcy Code does not allow a creditor to terminate a contract solely on the grounds that the debtor is bankrupt or has filed for bankruptcy.\textsuperscript{160} In addition, the Code gives the debtor a right to cure defaults in the contract so long as the contract was not terminated prior to filing the bankruptcy petition.\textsuperscript{161} The debtor may affirm that contract at any time before the confirmation of the reorganization plan, unless ordered by the court to act earlier.\textsuperscript{162}

Thus, the threat bankruptcy effects on license agreements leads to various adjustments of license contracts that attempt to assure that either the licensor or the licensee maintains access to and control of the relevant information or technology. For a lender, these risks seriously alter the viability of license rights as

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\item \textsuperscript{155} \textit{Id.} at 1048.
\item \textsuperscript{156} 11 U.S.C. § 365 (Supp. 1988).
\item \textsuperscript{157} \textit{In re Select-A-Seat}, 625 F.2d 292 (9th Cir. 1980).
\item \textsuperscript{158} See Nimmer, supra note 133, at 519.
\item \textsuperscript{159} See generally id.; see also \textit{In re Petur, U.S.A.}, 35 Bankr. 561 (Bankr. W.D. Wash. 1983); \textit{In re Chi-Feng Huang}, 23 Bankr. 798, 800 (Bankr. 9th Cir. 1982).
\item \textsuperscript{160} 11 U.S.C. § 525 (Supp. 1988). See also Nimmer, supra note 133, at 520.
\item \textsuperscript{161} 11 U.S.C. § 365(b) (Supp. 1988). See \textit{In re Power Swing Partners}, 9 Bankr. 512, 519 (Bankr. S.D. Cal. 1980) (terminating a patent license prior to filing bankruptcy for noncompliance with royalty provisions was effective); \textit{In re Gordon Car and Truck Rental, Inc.}, 59 Bankr. 956, 960 (Bankr. N.D.N.Y. 1985) (enforcing provision for termination without notice if licensee insolvent and termination occurred before bankruptcy).
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collateral for debt. The license becomes a volatile asset that can dissipate in the primary setting in which collateral becomes important: a bankruptcy filing by a debtor. A possible solution would be a rule providing for the creditor and/or licensee to keep some rights to the property despite a filing in bankruptcy by the other party to the license. A Bankruptcy Code provision provides a similar rule for buyers of certain real estate.\textsuperscript{163}

D. Access to New Developments

In many cases, the value of intellectual property is determined at least partly by its continued use and refinement. For instance, computer software routinely progresses through several revised versions. Trade secrets change in content, scope, and importance. New patents or patent applications develop from existing technology and further research and development. Consequently, the creditor often desires to incorporate subsequent developments in its security interest. The way to incorporate these subsequent developments varies, however, depending on whether state or federal law controls.

Article 9 provides for easy encumbering of after-acquired property in commercial transactions.\textsuperscript{164} In most cases, a security agreement can include after-acquired property by a simple reference to such property.\textsuperscript{165} No detailed description is required.\textsuperscript{166} A financing statement covers after-acquired property automatically.\textsuperscript{167} Even if the agreement does not expressly cover after-acquired property, the U.C.C. gives a creditor rights in all proceeds of its original collateral.\textsuperscript{168} This covers any property received on sale or other disposition of the property, but does not include new research developments.\textsuperscript{169} There is also a limited right in products of the original collateral if the identity of the original is lost or if the creditor's financing statement specifically claims such products.\textsuperscript{170}

Federal intellectual property laws are less conducive to interests in after-acquired property because they are not designed to govern finance law issues. Recording under trademark, copyright, and patent law for new developments requires registration for each property.\textsuperscript{171} This creates compliance and monitoring costs that are mitigated, but not eliminated, by the fact that under federal law, control of the original technology gives control over many new, derivative technologies based on the original.

Collateral assignments ordinarily require that subsequent property be "conveyed" to the creditor. The debtor must notify the creditor of any new development (e.g., a patent application) and make an assignment of rights in the

\textsuperscript{164} See supra note 40 (defining after-acquired property).
\textsuperscript{165} U.C.C. § 9-204 (1978).
\textsuperscript{166} U.C.C. § 9-204 (1978).
\textsuperscript{167} U.C.C. § 9-402 (1978).
\textsuperscript{168} U.C.C. § 9-306(2) (1978).
\textsuperscript{170} Such products are termed "proceeds" and are governed by U.C.C. § 9-315 (1978).
new technology. These provisions are enforceable but are clearly more cumbersome than typical U.C.C. provisions. Where the property involves frequent and important changes (such as in software development), the creditor is faced with substantial compliance costs and encounters clear risks of incomplete or unattempted conveyances which may inhibit the use of intellectual property as collateral. These are avoidable risks and costs, but only if federal law is altered to reflect contemporary commercial expectations.

Although not governed by federal law, trade secrets or other technical information create additional problems of attempting to incorporate new developments in a lien. If the debtor intends to grant an interest in all information, this can be done easily. Trade secrets are general intangibles under the U.C.C. A collateral description referring to all general intangibles ensures that all such rights are covered. The description, however, does not include related tangible collateral, which must be specifically included in the agreement.

Often a debtor does not desire to encumber all of his property. This creates substantial problems in adequately distinguishing what property is covered and what is not. The difficulty is compounded by a desire to reveal no more about secret information or processes to third parties than necessary.

One recent case illustrates an ineffective effort to distinguish between pre-existing and new technology in an agreement to fund research and development work. In re Bedford Computer Corp. involved a partnership lender financing the development of software products who lost all claim to the software in bankruptcy because its security interest had not been filed. Furthermore, while the agreement provided that the partnership owned new technology developed with its loaned funds, neither the agreement nor the operation of the business identified or distinguished that technology from the debtor’s other property. The contract purported to create present ownership in the lender, but because no effort was made to separate the new technology from older technology, the court treated the transaction as a contract for future sale, making it insufficient to defeat the claims of the trustee in bankruptcy. The failure to separate the new technology from the old also defeated any claim that the property was held in trust by the debtor, therefore the lender became an unsecured creditor. The court cited a leading Treatise:

A petitioner in reclamation is required to identify positively the property he seeks to reclaim. Where the property sought has been mingled with other goods or property of the bankrupt, the claimant must trace his property. . . If he fails, he cannot reclaim, no matter what the equities are, and he is relegated to the position of asserting his rights as a general creditor.

Suggesting that secret material or information must be described with clarity, as did Bedford, does not provide a plausible solution for lenders in similar

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174. Id. at 562-63.
175. Id. at 566.
176. Id. at 570-71.
177. Id. at 569 (citing 4A COLIER ON BANKRUPTCY §§ 70.25[2], 70.39[3] (14th ed. 1978)).
situations. Credit law rules treat clarity as an important measure for communicating notice to third parties. But general notice is inconsistent with secrecy law and eliminates any residual value for both parties. Creating a way to segregate and identify intellectual property collateral for third party protection without relinquishing secrecy interests presents fundamental but unanswered problems in technology finance law.

Bankruptcy by the debtor also affects claims to new developments in a more direct and unavoidable manner. Bankruptcy Code section 552(a) provides that:

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\text{[e]xcept as provided in subsection (b) of this section, property acquired by the estate or by the debtor after the commencement of the case is not subject to any lien resulting from any security agreement entered into by the debtor before commencement of the case.}^{178}
\]

Under this provision, the lender does not ordinarily have an enforceable claim to new technology developed after the filing of bankruptcy. This is true even if the contract provides for such a claim in the absence of bankruptcy. For example, in *In re Transportation Design & Technology, Inc.*,\(^{179}\) the court held that under the U.C.C. definition of proceeds, a patent obtained post-petition is not a proceed of a pre-petition patent.\(^{180}\) The court ruled that the concept of proceeds requires a sale or other disposition of the original property, not merely a further development of its capability.\(^{181}\)

The result in *Transportation Design* creates sharp incongruities in dealing with intellectual property rights and credit. It creates a potential separation of property rights that diminishes the value held by both the estate and the creditor. A good solution would be to characterize new developments as proceeds, making them subject to the U.C.C. rules governing security interests applicable to proceeds.\(^{182}\) This rule traces the proceeds from the original product and provides that a security interest in the original product is effective against subsequent products as well. This rule could easily be expanded to include new developments in intellectual property.

**CONCLUSION**

Our basic premise is that the increasing value of information as a commercial asset mandates a need to develop consistent financing laws regarding that asset. In part, rules encouraging investment promote continued growth of the information industry and development of new technologies and information assets. Information industry companies, as well as many companies in other contemporary industries, have information assets as a major part of their asset bases. These assets must be usable as a means of obtaining adequate financial support for these companies.

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178. 11 U.S.C. § 552(a) (Supp. 1988). The exceptions to this rule focus on property that constitutes proceeds of the original collateral. 11 U.S.C. § 552(b).
180. Id. at 641.
181. Id.
Credit laws in this field should promote and expedite the use of information assets as collateral, but current rules governing intellectual property do not meet this goal. In order to use credit laws to facilitate investment in information assets, the system should have characteristics which are noticeably absent today. First, the law regarding the creation, enforcement, and relative priority of interests in information collateral should be clear and susceptible to effective planning. Second, the rules should reduce the costs associated with compliance and monitoring. Current law fails in both respects.

Our current legal framework for protecting information assets is quite unclear and leads to unpredictable results. Most of the uncertainty stems from attempting to reconcile the law and practice of intellectual property fields with related state credit laws under the U.C.C. At present, it is impossible to accurately predict which body of law governs registration of interests in patents or trademarks. It is equally unclear the extent to which the relative priority of interests in these types of property, as well as copyrights, are governed by federal or state rules.

The questions of filing and priority are analytically separable and that separation provides a way of solving the current problems. For registration and filing, federal systems should be the preemptive method for copyrights, patents, and federal trademarks. This is because patent, trademark, and copyright filing systems cover not only security interests, but other transfers as well. Even if intellectual property security interests were filed under state law, the federal records would still have to be consulted. Therefore, placing security interests exclusively within the federal filing systems would centralize the issue. This solution, however, requires legislation to clarify the coverage of the older federal systems. Legislation is also necessary to alter these antiquated filing systems, particularly in their treatment of after-acquired property. A rule that requires commercial entities to re-record interests in new products that were developed from existing technology with an existing security agreement imposes unnecessary cost with no discernible gain.

In contrast to registration rules, foreclosure and priority questions should be handled under state law. Such a result already occurs for registration of aircraft and interstate vehicles. Priority rules must accommodate an array of different interests in property. This accommodation would be facilitated by using state law. If state law governs, however, current federal provisions regarding grace periods for delayed filing should be reconciled with Article 9 of the U.C.C. The grace periods in current federal law are at least partly explained by the fact that those systems cover the rights of owners in addition to lenders. Various reconciliations could be adopted with no one methodology being clearly superior. The grace periods could be removed from federal law, creating a "first to file" rule. Alternatively, the grace periods could be retained and expressly treated as a relation back to the filing as if it occurred on the original date to which the grace period relates. However, a grace period imposes several months of uncertainty on any party transacting business with the intellectual property owner. For creditors, uncertainty is potentially damaging, but can be accommodated if the actual scope and effect is known. For example, funds can be held in escrow during the grace period to protect the parties.
These reactions to the current legal structure impose costs on the transaction and, as we have said, one objective of financing law should be to minimize a creditor's costs of compliance except where the costs are justified by important and explicit competing interests. Costs in intellectual property financing come from treatment of after-acquired property and double filing rules as well as from the underlying uncertainty of the law in this field. Insofar as possible, credit laws governing intellectual property should parallel contemporary notions about commercial financing as expressed in Article 9 and other state law rules.

Even if the law became clear and the costs reduced, intellectual property and information based financing involves many conceptually difficult and potentially complex issues. In many cases, the distinction between intellectual property and other related rights is unclear, and what a creditor desires or obtains as collateral becomes obscured in the distinction. We have discussed only some of these issues in this Article. Much more work remains to be done.

The basic theme we wish to leave with the reader is that legislative action is urgently needed to clarify and simplify intellectual property finance law. The practical issues discussed in this Article are accentuated and made more significant by archaic and poorly drafted laws. In an information age characterized by rapidly changing information technologies, this condition cannot be allowed to continue without detriment to all facets of information based financing.