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Juliet M. Moringiello
0@0.com

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FALSE CATEGORIES IN COMMERCIAL LAW:
THE (IR)RELEVANCE OF (IN)TANGIBILITY

Juliet M. Moringiello
I. INTRODUCTION

eSnowshoes, Inc. is a hypothetical small company selling snowshoes online. To finance its business, eSnowshoes borrowed $100,000 from Commercial Bank and granted the bank a security interest in its inventory, accounts receivable, and general intangibles, including the www.snowshoes.com domain name that it registered with Network Solutions and the eSnowshoes storefront in the virtual world Second Life.¹ Commercial Bank properly perfected the security interest by filing a financing statement. Because of unusually warm winters in the northeastern United States, eSnowshoes’ biggest market, snowshoes started to fall out of favor, and eSnowshoes defaulted on the loan. Commercial Bank knows that it can use self-help repossession to obtain the inventory and self-help collection remedies to obtain payment on the accounts receivable, but it wants to know how to enforce its interest in the Internet domain name and the Second Life virtual “real estate.”

The methods of enforcing a security interest against tangible goods² and intangible payment rights³ are clear under Article 9 of the Uniform Commercial Code (U.C.C.) and to a lesser extent under

² U.C.C. § 9-609(a)(1) (2005) (“after default, a secured party may take possession of the collateral”).
³ Id. § 9-607(a) (“[A]fter default, a secured party may notify an account debtor or other person obligated on collateral to make payment or otherwise render performance to or for the benefit of the secured party.”). This section must be read with § 9-406, which outlines the rights and obligations of persons obligated on payment rights.
other state laws governing creditors' rights. A creditor's ability to enforce a security interest against other electronic assets, however, is far less certain. One reason for this lack of certainty is the adherence of commercial law to the notion of tangibility. Classifying property according to its tangibility or intangibility creates false categories unrelated to significant legal distinctions, and these false categories hinder the ability of commercial law to expand to adequately accommodate electronic assets. In this Article, I will demonstrate that the category of “tangible” is irrelevant in property law and argue that commercial law must discard distinctions based on the physical manifestation of assets and focus instead on the legal qualities of those assets. Such a shift in focus will allow commercial law to more readily adapt to the proliferation of emerging electronic assets that do not fit into established categories of intangible rights such as intellectual property and payment rights.

In Part II of this Article, I will illustrate the dichotomous treatment of tangible and intangible rights under Article 9 of the U.C.C. I will focus specifically on the default provisions of Article 9, which allow a creditor to repossess collateral upon its debtor's default. The focus on creditors' remedies will illustrate the importance that the U.C.C. places on manual possession, a concept that has no relevance when the collateral consists of electronic assets. I choose the area of remedies because, while many have written on the role of possession in the Article 9 perfection context, the role of possession in the remedies context begs for analysis. Although the U.C.C. was drafted to allow courts to adapt it to changing commercial conditions, in Part III, I will discuss some reasons why courts may have trouble expanding the creditors' remedies in Article 9 to emerging electronic assets. In that Part, I will discuss several cases that illustrate the extent to which intangible assets confound lawyers and judges. In Part IV, I go back in time and discuss cases from the past two hundred years that have successfully grappled with the concept of possession in fact scenarios in which manual possession was either impossible or impracticable.

My goal in this Article is to illustrate that the challenges posed by electronic assets are not new and that by keeping traditional prop-

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4. See infra notes 64-74 and accompanying text.
5. Others have focused on this issue over the years, usually when an article of the Uniform Commercial Code was in the revision process. See, e.g., Jeanne L. Schroeder, Some Realism About Legal Surrealism, 37 WM. & MARY L. REV. 455, 455 (1996) (stating that “[c]ommercial law is in the grasp of a physical metaphor”).
property law principles in mind the institutions that make commercial law will be better able to adapt that body of law to modern transactions. Almost fifty years ago, Grant Gilmore, the coreporter for Article 9, identified the challenges that intangible assets present to the law of secured transactions and suggested ways in which courts might conquer them.\textsuperscript{7} A half-century later, lawmaking bodies continue to struggle with these problems, which present themselves in both property law generally and the more specific property laws related to creditors' rights. By comparing today's electronic assets to yesterday's novel assets, both tangible and intangible, I hope to integrate electronic assets into the larger category of property and thereby suggest a coherent approach to creditors' rights in electronic assets.

A coherent theory of electronic assets is necessary to the development of the laws governing the transfer and financing of these assets. The need for such a theory can be illustrated by comparing the development of the law of electronic contracting with the treatment of electronic assets in our creditors' rights laws. Courts have been grappling with electronic contracting issues since 1999, when the court in \textit{Caspi v. Microsoft}\textsuperscript{8} held that a person who clicked an “I agree” icon assented to online terms.\textsuperscript{9} Courts opining on the enforceability of electronic contracts are guided by two statutes: the Uniform Electronic Transactions Act\textsuperscript{10} and the Electronic Signatures in National and Global Commerce Act,\textsuperscript{11} both of which instruct courts that a contract cannot be denied enforceability solely because it is in electronic form or signed electronically. While some courts may have interpreted this mandate too broadly, ignoring important differences between paper and electronic communications,\textsuperscript{12} the statutes provide courts with a framework within which to analyze contract terms presented electronically. The electronic contracting statutes instruct courts to look beyond form and consider, regardless of the physical manifestation of the terms, whether contract rules such as those governing offer and acceptance are satisfied. Because there is no statute that tells courts that the physical manifestation of an asset should be ignored or given little weight by courts in deciding when rights in an asset have been transferred, I hope in this Article to urge the recognition of a general property law framework that discards tangibility \textit{qua} tangibility as a relevant category.

\textsuperscript{7} See infra notes 90-93 and accompanying text.
\textsuperscript{9} Id. at 530-33.
\textsuperscript{10} UNIF. ELEC. TRANSACTIONS ACT §7, 7A U.L.A. 211 (2002).
\textsuperscript{12} See generally Juliet M. Moringiello, Signals, Assent and Internet Contracting, 57 RUTGERS L. REV. 1307 (2005).
II. TANGIBILITY AND THE U.C.C.

A. Generally

Article 1 of the U.C.C. sets forth its purposes and policies. Included among these purposes and policies is the modernization of the law governing commercial transactions and the “continued expansion of commercial practices.”13 As I will illustrate in this section, the pervasive dichotomy in the U.C.C. between tangible and intangible rights stifles this expansion.

The drafters of the U.C.C. never intended for it to cover all areas of commercial law.14 For instance, real estate transactions are commonly considered to be commercial, but are expressly excluded from the scope of the U.C.C.15 Even when the U.C.C. governs a transaction, it is silent on some aspects of that transaction. For example, Article 2 of the U.C.C. governs sales of goods, but the common law of contracts governs most matters regarding the formation of a contract for the sale of goods.16 By its terms, the U.C.C. yields to common law principles,17 and it does not define such terms as property18 and possession.19 As a result, when novel issues arise in transactions covered by the U.C.C., courts should fill the statutory gaps. Courts, by focusing on the intangibility of electronic assets and not on the relationships between the persons claiming rights in those assets and the assets themselves, are not adequately filling the gaps.

The U.C.C. generally is divided between the tangible and the intangible. Numerous examples of this dichotomy are found by examining the scope of the U.C.C. and how it covers different types of rights within that scope. For instance, Article 2 governs the transfer of almost all tangible personal property,20 while Articles 3, 7, and 8 govern...
ern the transfer of specific types of intangible property: negotiable instruments,\textsuperscript{21} documents of title,\textsuperscript{22} and investment securities.\textsuperscript{23} The types of property governed by Articles 3, 7, and 8 are rights that were traditionally reified in paper. At the time that the U.C.C. was first promulgated, the intangible rights governed by Articles 3, 7, and 8 were commonly transferred by the manual transfer of the paper embodying those rights; in modern times, the drafters of the U.C.C. have recognized the fact that, at least in the businesses governed by Articles 7 and 8, the manual transfer of paper is declining in significance.\textsuperscript{24}

The articles of the U.C.C. that govern specific types of intangible property developed to accommodate business practices in various industries. The U.C.C. does not govern the sale of intangibles generally,\textsuperscript{25} and attempts to develop a statute governing the transfer of software have failed dismally.\textsuperscript{26}

In one area of commercial law, distinctions based on the physical manifestation of some assets once served a valuable business purpose. The law of negotiable instruments illustrates how possession and tangibility were once necessary to facilitate commerce. The requisites of negotiability were developed during the Industrial Revolution, a period in which cash was in short supply.\textsuperscript{27} The banking system at the time could not accommodate the expansion of commercial activity so the merchants responded by developing their own version of paper currency, the bill of exchange.\textsuperscript{28} These negotiable instru-

\textsuperscript{21}U.C.C. § 3-102 (2005).
\textsuperscript{22}Id. § 7-101.
\textsuperscript{23}Id. § 8-101.
\textsuperscript{25}The previous version of Article 1 of the U.C.C. contained a statute of frauds provision that applied to the sale of personal property not otherwise covered by the U.C.C. U.C.C. § 1-206 (2000). According to the Official Comment, that statute of frauds was applicable to sales of general intangibles. Revised Article 1 does not contain such a statute of frauds, and it has an explicit scope provision that states that Article 1 applies to a transaction “to the extent that it is governed by another article of” the U.C.C. U.C.C. § 1-102 (2005).
\textsuperscript{26}The story of the failed attempt to develop a uniform law of software contracts has been told many times. See, e.g., Amelia H. Boss, Taking UCITA on the Road: What Lessons Have We Learned?, 7 ROGER WILLIAMS L. REV. 167 (2001); Maureen A. O’Rourke, An Essay on the Challenges of Drafting a Uniform Law of Software Contracting, 10 LEWIS & CLARK L. REV. 925 (2006); Nim Razook, The Promise and Politics of UCITA, 36 CREIGHTON L. REV. 643 (2003).
\textsuperscript{27}Grant Gilmore, Formalism and the Law of Negotiable Instruments, 13 CREIGHTON L. REV. 441, 446-47 (1979).
\textsuperscript{28}Id. at 447.
ments were in fact passed from person to person in payment of debts.\textsuperscript{29} The formal requirements of negotiability developed not only to facilitate physical transfer, but also to facilitate valuation. The terms of the contract had to be certain so that potential buyers could evaluate the worth of the contract.\textsuperscript{30} These principles are codified in Article 3 of the U.C.C.

While the legal distinctions based on the tangible or intangible nature of payment rights survive, they have been under fire for decades. Grant Gilmore described Article 3 of the U.C.C. as a “museum of antiquities.”\textsuperscript{31} In the 1970s, the Permanent Editorial Board for the U.C.C. established a committee to explore the feasibility of a “New Payments Code” that would establish rules for payment rights organized on functional, rather than formal, lines.\textsuperscript{32} While this approach was never codified, payments scholars continue to explain the irrelevance of the tangible form to the function of the system, with one scholar urging that the law focus not on outdated concepts of negotiability in payment systems, but rather on the common functions of all payment systems, paper and electronic.\textsuperscript{33}

Today, tangibility plays a declining role in other areas of commercial law. In the past fifteen years, several U.C.C. articles have been revised successfully. One theme that ties these revisions together is the facilitation of electronic transactions. Article 1 (General Provisions), revised in 2001, aims to accommodate electronic contracts generally in several of its new definitions.\textsuperscript{34} Article 7 (Documents of Title), revised in 2003, now recognizes that rights in goods in storage or transit can now be transferred either by the manual transfer of a tangible document of title or by a transfer in control of an electronic document of title.\textsuperscript{35} Articles 7 and 9 of the U.C.C. now provide for

\begin{itemize}
  \item Id. at 447-48.
  \item Gilmore, supra note 27, at 461. Gilmore characterized one function of codification as “to preserve the past, like a fly in amber.” Id.
  \item See, e.g., U.C.C. §§ 1-201(a)(10) (2005) (defining “conspicuous” in a manner that accommodates both paper and electronic records), 1-201(a)(31) (defining “record” to mean “information that is inscribed on a tangible medium or that is stored in an electronic or other medium”), 1-201(a)(36) (defining “send” in a manner that accommodates both paper and electronic communications).
  \item Revised Article 7 Summary, supra note 24.
\end{itemize}
electronic documents of title\textsuperscript{36} and electronic chattel paper,\textsuperscript{37} respectively, although the U.C.C. provisions governing the transfer of those electronic assets appear tied to concepts of negotiability that become irrelevant when the rights in question are electronic.\textsuperscript{38}

Article 8 (Investment Securities), last revised in 1994, is an example of a U.C.C. article in which physical possession and manual transfer were once key. Over the years, Article 8 has evolved to recognize that the covered business, securities holding, will likely change form over the life of the statute.\textsuperscript{39} Article 8 of the U.C.C. rejects the paradigm securities transaction that relies on the physical transfer of a certificated security. This rejection was necessary because the securities business had ended its reliance on physical transfer.\textsuperscript{40}

These U.C.C. revisions illustrate that distinctions based on the physical manifestation of assets, while once commercially important, are becoming irrelevant. As I will discuss below, that view is only partially reflected in the current version of Article 9.

\textbf{B. Tangibility and Article 9}

Article 9 of the U.C.C. was also revised recently, but its provisions do not adequately govern security interests in intangible rights. Although Article 9 purports to cover all types of personal property rights, both tangible and intangible, and includes as a category of collateral "general intangibles,"\textsuperscript{41} in many ways it best illustrates the problem of the U.C.C.'s distinction between tangible and intangible property rights. Although a debtor can grant a security interest under Article 9 in all sorts of personal property rights, and the creditor can perfect an interest in tangible and intangible rights by filing a financing statement,\textsuperscript{42} Article 9 handles enforcement of those security interests in intangible property on an asset-by-asset basis. This is a problem that I have identified in earlier articles focused on Internet

\textsuperscript{36} U.C.C. §§ 1-201(a)(16) (including electronic documents of title in the definition of "document of title"), 7-501(b) (explaining the process for negotiating an electronic document of title).

\textsuperscript{37} Id. §§ 9-102(a)(31) (defining electronic chattel paper), § 9-105 (setting forth rules for control of chattel paper).

\textsuperscript{38} Mann, supra note 33, at 962.


\textsuperscript{40} Charles W. Mooney, Jr., Beyond Negotiability: A New Model for Transfer and Pledge of Interests in Securities Controlled By Intermediaries, 12 CARDOZO L. REV. 305, 307-30 (1990); James Steven Rogers, Policy Perspectives on Revised U.C.C. Article 8, 43 UCLA L. REV. 1431, 1441-47 (1996).

\textsuperscript{41} U.C.C. § 9-102(a)(42) (defining "general intangible" as all personal property that does not fit within the enumerated categories of collateral in Article 9).

\textsuperscript{42} Id. §§ 9-310, 9-312.
domain names and is a problem that is exacerbated by the tendency of those involved in lawmaking to focus on tangible property as the property prototype.

The history of Article 9 shows a gradual decrease in the importance of tangibility and manual possession. As business grew and secured transactions became more sophisticated, the laws governing secured transactions placed a decreasing amount of weight on manual possession by a secured creditor as a method of perfecting a security interest. One hundred and fifty years before the original U.C.C. was promulgated, physical pledge was the only method of perfecting a security interest in personal property. Various types of nonpossessionary security interests, perfected by filing, developed with the increased demand for credit secured by inventory and receivables. As Karl Llewellyn described Article 9, it was designed to “bring[ ] into simplified and workable form the law of all chattel security, whether the asset be tangible, or be a single contract or accounts receivable transferred at wholesale or other intangibles.”

Until its most recent revision, Article 9 provided for perfection by both pledge and filing but retained the mandatory pledge for certain types of property, such as negotiable instruments. The physical transfer of paper remains crucial in the law of negotiable instruments and prerevised Article 9 recognized that. The most recent iteration of Article 9 even further reduces the significance of possession by allowing perfection of security interests in instruments and chattel paper by filing, while continuing to give higher priority to perfection by pledge.

In its default provisions, however, Article 9 starts from the baseline idea that all collateral is tangible and that a creditor can take physical possession of such collateral upon its debtor’s default and sell the collateral to satisfy the debt owed. Interestingly, nothing in the plain language of Article 9 limits the repossession remedy to goods and other tangible assets. As noted above, the U.C.C. does not define possession. Commentators, however, including the authors of some of the leading casebooks and treatises in the field, contend that

44. Coogan, supra note 6, at 1014.
45. Llewellyn, supra note 14, at 379 (emphasis added).
47. U.C.C. §§ 9-312(a), 9-330(b), (d) (2005).
48. Id. § 9-609(a).
the repossession remedy is limited to tangible property.\footnote{LYNN M. LOPUCKI & ELIZABETH WARREN, SECURED CREDIT: A SYSTEMS APPROACH 43 (5th ed. 2006); LINDA J. RUSCH & STEPHEN L. SEPINUCK, PROBLEMS AND MATERIALS ON SECURED TRANSACTIONS 135 (2006); WHITE & SUMMERS, supra note 16 at § 25-4 ("[The secured creditor] can repossess the goods subject to the security interest . . . ."); TIMOTHY R. ZINNECKER, THE DEFAULT PROVISIONS OF REVISED ARTICLE 9, at 21 (1999) (discussing general intangibles as the type of collateral for which "collection" under § 9-607 is the appropriate remedy). As I will explain below, § 9-607 does not adequately protect creditors with a security interest in general intangibles. See infra notes 52-57 and accompanying text.} Therefore, in the hypothetical transaction described in the Introduction to this Article, Commercial Bank knows that it can repossess the inventory using the self-help remedy so long as it does not breach the peace.\footnote{U.C.C. § 9-609.} It is unlikely that Commercial Bank would be able to repossess inventory from the debtor’s warehouse without breaching the peace, but it can resort to replevin, one of the old common-law writs that allows a creditor to obtain possession of tangible personal property.\footnote{Id. § 9-609(b)(1); 1 WILLIAM HOUSTON BROWN, THE LAW OF DEBTORS AND CREDITORS § 6:32 (rev. ed. 2005); WHITE & SUMMERS, supra note 16, at § 25-8.} Therefore, whether Commercial Bank proceeds by self-help under Article 9 or by replevin under the applicable state’s non-U.C.C. law, it knows how to foreclose on its tangible collateral, the inventory.

Commercial Bank also has a relatively easy way to collect the accounts receivable granted as collateral. The U.C.C. allows a secured creditor, after a default on the part of its debtor, to “notify an account debtor or other person obligated on collateral” to pay to the secured creditor the money that it would otherwise have paid to the debtor.\footnote{U.C.C. § 9-607(a)(1).} The definition of “account debtor” includes a person obligated on an account receivable,\footnote{Id. § 9-102(a)(3).} so Commercial Bank need only send notice to the parties that owe eSnowshoes money for snowshoes. After those persons receive the notice from Commercial Bank, they can discharge their obligations to eSnowshoes only by paying Commercial Bank.\footnote{Id. § 9-406.} Article 9 protects these account debtors by giving them the right to ask the secured creditor, in this case Commercial Bank, for proof that the accounts have been assigned to the creditor.\footnote{Id. § 9-406(d).} After Commercial Bank furnishes such proof, the account debtors must pay Commercial Bank or risk having to pay twice.\footnote{Id § 9-406(a) (explaining that an account debtor can discharge its obligation by paying the assignor only until it receives notification that payment is to be made to the assignee).}

Article 9 provides no foreclosure remedy to a creditor holding a security interest in intangible property that is not a payment right, or a “true” general intangible. Because the definition of “account debtor” includes not only persons obligated on accounts receivable or chattel
paper but also any person obligated on a general intangible,\textsuperscript{57} the collection remedy appears at first to extend to all types of intangible collateral, not just payment rights. The U.C.C. protects only the account debtor obligated on an account, chattel paper, or a payment intangible, however, because only those account debtors may discharge their obligations by rendering performance to the secured party.\textsuperscript{58}

As a result, Commercial Bank will not find any remedies against the Internet domain name and the Second Life assets in the U.C.C. Assuming that the rights to the domain name and virtual “real estate” are considered the debtor’s property, an assumption that I will address in the next Part of this Article, eSnowshoes will be able to grant a security interest in them. Under Article 9, one of the requisites for creation of a security interest is that the debtor must have “rights in the collateral.”\textsuperscript{59} Collateral is defined in property terms, as “the property subject to a security interest.”\textsuperscript{60} Both the domain name and the Second Life assets would be included in the definition of “general intangibles,”\textsuperscript{61} one of the collateral categories under Article 9. A secured party must perfect its security interest in general intangibles by filing a financing statement.\textsuperscript{62} As explained above, however, Article 9 does not explicitly provide for any remedy against intangible rights that are not payment rights.

The absence of a foreclosure remedy under Article 9 does not necessarily deprive Commercial Bank of a remedy. Under Article 9, a secured party may enforce its interest by “any available judicial procedure.”\textsuperscript{63} These judicial procedures also developed along lines based on the tangibility or intangibility of the assets involved, and they vary greatly from state to state. Replevin, as noted above, allows a secured creditor to gain possession only of tangible personal property.\textsuperscript{64} Article 9 also allows a secured creditor to resort to the judicial remedies available to unsecured creditors, such as execution and garnishment, but these remedies likewise may not allow the secured creditor to gain control over intangible rights that are not payment rights.\textsuperscript{65}

Creditors in every state can force the seizure and sale of a debtor’s

\begin{itemize}
\item \textsuperscript{57} Id. § 9-102(a)(3).
\item \textsuperscript{58} Id. § 9-406. Article 9 also allows creditors to collect deposit accounts, which can also be characterized as payment rights. Id. § 9-607.
\item \textsuperscript{59} Id. § 9-203(b)(2).
\item \textsuperscript{60} Id. § 9-102(a)(12).
\item \textsuperscript{61} Id. § 9-102(a)(42).
\item \textsuperscript{62} Id. § 9-310(a).
\item \textsuperscript{63} Id. § 9-601(a)(1).
\item \textsuperscript{64} 1 Brown, supra note 51, § 6.32, at 6-82 (“T]he property must be tangible and specifically identifiable.”).
\item \textsuperscript{65} Id. § 6.32, at 6-139 (“It has been said that intangible personal property is not subject to execution; however, it seems that intangible property is not subject to execution because it most often is a debt due the judgment debtor, in which case, garnishment must be used.” (footnote omitted)); Moringiello, supra note 43, at 131-32.
\end{itemize}
tangible property through the execution process, but there is no universally available mechanism by which to gain control over intangible property.

Generally, garnishment—the process by which the creditor brings an action to force a third party holding an asset of the debtor to turn that asset over to the creditor—is available to a creditor seeking to enforce rights in property of its debtor that is held by a third party. Some garnishment statutes appear to enable the creditor to reach any property, tangible or intangible; others, however, narrowly define the categories of garnishable property.

Many have criticized the morass of state laws governing collection of judgments. These judicial remedies are based on ancient writs, and while some states have modernized their creditors' rights laws to simplify the process of obtaining assets to satisfy a judgment, the process of enforcing a security interest against intangible assets is far from uniform. Fifty years ago, Stefan Riesenfeld described the field as possessing “hopeless prolixity and diversification” and placed the blame for such deficiencies on “the unhappy tendency of American jurisdictions . . . to cling with amazing tenacity to outmoded preconceptions and traditions of the common law.” Riesenfeld was not alone. Others have described in detail the inadequacies of the laws governing enforcement of judgments. It is not the goal of this Article to repeat those criticisms, but it is useful to compare two statutes in effect today, those of Illinois and Massachusetts, to illustrate some of the difficulties facing a secured creditor searching for a remedy against a general intangible. In Illinois, a creditor is entitled to institute a garnishment proceeding against anyone who is either indebted to or holds “other property” of its debtor. In Massachusetts, however, a creditor can bring a garnishment action only against one who holds “goods, effects, or credits” of the debtor. In 1946, a court interpreting the Massachusetts statute held that the use of the words...

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67. See, e.g., Pa. R. Civ. P. § 3101 (Supp. 2006) (allowing a garnishment action against anyone who has “custody, possession or control” of the debtor’s property).
68. See, e.g., Va. Code Ann. § 8.01-511 (2001) (allowing only a “liability” to be garnished).
69. See generally Stefan A. Riesenfeld, Collection of Money Judgments in American Law—A Historical Inventory and a Prospectus, 42 Iowa L. Rev. 155 (1957).
70. Id. at 155.
“goods” and “effects” require “actual possession” by the third party.\(^{74}\) While it is possible that a court today would interpret a statute such as this to cover intangible assets, in the next section of this Article, I will demonstrate that today’s courts cling to notions of tangibility that may never have been relevant.

Some states have attempted to alleviate some of the confusion by adopting turnover statutes that specifically allow creditors to gain control of intangible assets to satisfy their claims. For instance, in California, a creditor may obtain a turnover order under which the court can order all interests in the debtor’s property, either under the debtor’s control or under the control of a third person, to be applied toward the satisfaction of a money judgment.\(^{75}\) Rhode Island’s turnover statute authorizes a judgment creditor to reach “any equitable estate, any equitable assets, or any choses in action” of a debtor,\(^{76}\) and courts recognize that this statute facilitates the seizure of intangibles. In \textit{Howe v. Richardson}, the First Circuit, applying the Rhode Island turnover statute, discussed the history of the turnover statute, explaining that while the Rhode Island statutes governing creditors’ remedies are “a tangle of provisions cobbled together over time . . . there is no general statutory bar to the seizure of intangibles.”\(^{77}\)

Texas law also provides a clear method by which a judgment creditor can reach assets not covered by the traditional writs; the Texas statute gives a judgment creditor the aid of the court to reach property of the judgment debtor that “cannot readily be attached or levied on by ordinary legal process . . . and . . . is not exempt from attachment, execution, or seizure for the satisfaction of liabilities.”\(^{78}\)

The distinctions that Article 9 draws based on the physical qualities of assets make no sense today and contradict both the original intent of the U.C.C.’s drafters and the stated policies of the U.C.C. Several scholars have explained that the transfer of physical possession is an anachronism that is irrelevant in today’s economy. This charge has been leveled at the law of payment systems\(^{79}\) and the law

\(^{74}\) Jordan v. Lavin, 66 N.E.2d 41, 44 (Mass. 1946).

\(^{75}\) \textsc{Cal. Civ. Proc. Code.} § 708.205 (West 1987). In California, courts recognize that all property of a debtor, both tangible and intangible, is subject to enforcement of a money judgment. See Constant v. Advanced Micro-Devices, Inc., 1993 U.S. App. LEXIS 31939, at *10 (9th Cir. 1993) (“[A]ll property . . . is subject to enforcement of a money judgment, including intangible property such as patents and copyrights.”); Imperial Bank v. Pim Elec., Inc., 39 Cal. Rptr. 2d. 432, 443 (Cal. Ct. App. 1995) (“[C]ommentators have remarked upon the breadth of property reached by such order as one of its attributes.”).


\(^{77}\) Howe v. Richardson, 193 F.3d 60, 62 (1st Cir. 1999).


\(^{79}\) Mann, \textit{supra} note 33, at 953 (1997) (describing negotiability as “an outmoded and decaying relic”).
of investment securities. Some authors have also criticized the fact that Article 9 allows a creditor to perfect its interest by possession, noting that possession does not necessarily give notice to the relevant players of the creditor’s security interest.

The continued adherence to the concept of tangibility in Article 9’s remedies provisions is counter to the intent of the original U.C.C. drafters, as well as to the purposes and policies of the code. The absence of clear remedies for creditors with security interests in electronic assets renders the U.C.C. nonuniform, as the secured creditor must look to other state laws, which are far from uniform, for its remedies. As a result, the remedies provisions deviate from the U.C.C.’s purposes of simplifying, modernizing and clarifying the law governing commercial transactions and making “uniform the law among the various jurisdictions.” Before the U.C.C. was enacted in any state, the Code’s Chief Reporter, Karl Llewellyn, justified the U.C.C. by describing commercial law in the 1950s as “extremely scattered” and “costly in time to the lawyer and therefore costly in money to the business man.” As illustrated in this Section, the same might be said in describing a secured creditor’s ability to enforce its interest in intangible assets. Likewise, Grant Gilmore, another father of the U.C.C., explained that one of the tasks of Article 9’s drafters was “to simplify the legal framework so that businessmen and bankers could go on doing what they were already doing to everyone’s satisfaction.” Forty years ago, Gilmore recognized some of the problems inherent in dealing with intangible assets and noted that while the drafters could have made specific provisions for all of the known intangible assets at the time, they chose not to in the interest of drafting a code that would solve the problems of that time and the problems of the future.

The approach of the U.C.C.’s drafters—to allow courts to interpret the code language in light of changes in business practice—remains relevant today, even as new electronic assets are created. This approach is echoed by many cyberspace law scholars who have criticized the way in which Congress and state legislatures have re-

80. Jeanne L. Schroeder, Is Article 8 Finally Ready This Time? The Radical Reform of Secured Lending on Wall Street, 1994 COLUM. BUS. L. REV. 291, 303 (describing Amended Article 8 as a disaster in part because it “implicitly presumes that the paradigm of property interests in personalty is the actual sensuous grasp of a physical object in one’s hand”).
81. Zadek, supra note 6, at 399.
82. U.C.C. § 1-103(a) (2005).
84. But neither I nor any other modern writer would limit the pool of aggrieved parties to “business men.”
86. Id. at 300-01.
sponded to some of the challenges presented by the Internet. Part of the criticism is that the common law is better able than legislation to adapt to changing conditions. In an early cyberspace article, Professor Lawrence Lessig suggested that the common law process was the best way “to let the experience catch up with the technology . . . give the ordinary language a chance to evolve, and . . . encourage new languages where the old gives out.” This approach has a long history in commercial law, as the original drafters of the U.C.C. wanted not to emulate civil law jurisdictions by drafting a code designed to be an exclusive statement of law, but to draft a code clear enough to facilitate known transactions and flexible enough to allow judicial decisions to fill the statutory gaps. In the cyberspace era, however, courts are doing a poor job of adapting the commercial law of property to changing conditions, as I explain below. While it would have been imprudent for the U.C.C. drafting committees of the past fifteen years to enumerate electronic assets with specificity, the courts left with the task of fashioning rules governing both rightful and wrongful transfers of electronic property are doing a poor job of providing guidance to courts deciding commercial disputes.

III. THE LANGUAGE OF INTANGIBLE ASSETS

A. Giving the Property Label to Intangible Assets

Even for a lawyer, the “what is property?” problem presents no difficulty when you are dealing with goods, chattels, things: if you can see it, count, weigh and measure it, it exists; if you can’t, it doesn’t. But intangible claims are another matter entirely.

Grant Gilmore wrote these words more than forty years ago, in explaining that while Article 9 allows anything that is property to serve as collateral, it does not define “property.” He recognized that perhaps the question “what is property?” was the wrong question and wondered whether we should instead ask “what types of claims or choses in action . . . can be presently transferred . . . with the result that today’s assignee will have priority over interests that attach to the fund after it has indisputably come into existence?” For the purpose of creditors’ rights laws, this inquiry remains current; if a right can be transferred for value (or in exchange for a “fund”), then it should be capable of serving as collateral. Gilmore’s writings show a good deal of concern about the classification of intangibles in Arti-

90. Gilmore, supra note 85, at 301.
91. Id.
Article 9, and in several of his works he criticizes as overly complex the separation of “pure” intangibles into contract rights, accounts, and general intangibles. It remains necessary to give those rights a property label because Article 9 defines collateral in property terms. As a result, it is almost impossible today to discuss intangible assets such as domain names and items created in virtual worlds without first confronting the question of whether such rights constitute “property.”

Despite the fact that the way persons communicate and do business has changed dramatically in the past fifteen years, we still lack an adequate vocabulary with which to describe intangible assets. With changes in business inevitably come changes in property rights and the business changes that developed with the growth of the Internet have similarly created a demand for new property rights. Before the advent of the World Wide Web, the term “Internet domain name” did not exist. Today, such names sell for millions of dollars. Likewise, in the burgeoning virtual worlds such as Second Life, participants buy and sell thousands of dollars worth of virtual cash and other items every day. Although there are markets for these assets, their intangibility causes people to question whether these assets are “property” at all.

92. 1 GILMORE, supra note 89, § 12.5, at 380-83; Grant Gilmore, Article 9: What It Does for the Past, 26 LA. L. REV. 285, 295 (1966); Grant Gilmore, Security Law, Formalism and Article 9, 47 NEB. L. REV. 659, 674 (1968). The category of “contract rights” no longer exists in Article 9.

93. See supra notes 59-61 and accompanying text.


95. For instance, the Wall Street Journal reported that the domain name “sex.com” sold for about $12 million in early 2006 and that “diamond.com” sold for $7.5 million. Kevin J. Delaney, Web Domain in Really Hot Locale: Hell.com Takes Bids, WALL ST. J., Oct. 26, 2006, at B2. Auction sites such as GreatDomains list generic domain names for sale. According to that site, the most valuable ones include “shrimp.com” (listed for $3,000,000), “hikers.com” (listed for $850,000), and “tell.com” (listed for $500,000). See GreatDomains, http://www.greatdomains.com/ (last visited Nov. 1, 2007).


97. See, e.g., Dorer v. Arel, 60 F. Supp. 2d 558, 560-61 (E.D. Va. 1999) (questioning whether an Internet domain name should be considered personal property subject to judgment liens and concluding that “a domain name that is not a trademark arguably entails only contract, not property rights”); Network Solutions, Inc. v. Umbro Int’l, Inc., 529 S.E.2d 80, 87 (Va. 2000) (concluding that an Internet domain name is the product of a contract for services); Complaint at 5-6, Bragg v. Linden Research, Inc., 487 F. Supp. 2d 593 (E.D. Pa. 2007) (Case No. 06-08711), available at http://lawyers.com/BraggvLinden_Complaint.pdf (alleging that the operators of some virtual worlds deny participants property rights in their creations, despite the active trade in virtual world items).
Of course, the question of whether a thing is “property” is somewhat miscast. The question of property is a question about relationships; therefore, it is more appropriate to ask whether the person who wants protection of his or her rights in a resource or asset has rights in that resource or asset that are superior to the rights of others. As Gilmore noted forty years ago, however, in asking property questions, we commonly conflate rights in things with the things themselves.98 We continue to do so, despite the widely accepted definition of “property” as the “relations among people with regard to things.”99 The use of the word “thing” in this definition may improperly imply that the term property refers to rights in tangible items. Joseph Singer recognizes this in his slightly amended definition of property as the relations among people with respect to resources.100

Today, the rules governing the relationships among people with respect to electronic assets are developing. This development is a natural consequence of the technological changes wrought by the Internet. As Debora Spar illustrates in her book, Ruling the Waves: Cycles of Discovery, Chaos, and Wealth from the Compass to the Internet, the innovators who initially eschew any interference from the state eventually return to the state for the protection of their new property rights.101

Many commentators writing in intellectual property and cyberspace law have also observed that we discuss property as though the term refers to a thing rather than a relationship. For instance, Stephen Carter, writing about intellectual property, stressed that “property” is just a legal conclusion, notwithstanding our “conversational habit . . . to talk about an owner of a resource as though the term [has] a legal significance.”102 Michael Madison, in advocating for an “all-purpose theory of things,”103 concludes that abandoning our conversational habit, or our “thing-based descriptions” in favor of descriptions based on rules and rights, leaves us “without a vocabulary adequate to capture actual human experience.”104 Dan Hunter explains that observations from cognitive science investigations support the contention that we think of cyberspace as a place,105 and that

98. See supra notes 90-92 and accompanying text.
99. See, e.g., JOSEPH WILLIAM SINGER, INTRODUCTION TO PROPERTY 2 (2d ed. 2005).
100. Id. Singer notes that because “things” include the intangible, it is preferable to define property as the relations among people with respect to valuable resources. Id.
101. SPAR, supra note 94, at 21.
104. Id. at 478.
this process of “mapping the physical onto the virtual” pervades academic discussions and lawmaking processes.106

This Article is not about whether electronic assets such as Internet domain names and electronic creations in virtual worlds should be protected as property and it is not about how these new rights should be distributed. A number of authors have already addressed those questions.107 As I will illustrate in this Part, however, our lack of an adequate language with which to describe intangible assets can cause courts, in what should be routine commercial law matters, to delve into the question of whether an intangible asset is property or something else. Routine problems should not be rethought constantly; otherwise, the efficiency that comes with their being routine is lost.

In Part II of this Article, I explained that eSnowshoes can grant a security interest in its Internet domain name and its Second Life assets if those rights are considered property of eSnowshoes. The question of whether rights in an asset are property rights is not often asked when the asset is tangible. When intangible assets are at issue, however, people have difficulty extricating the intangible asset from the contract that conveyed the property right in that asset. Participants in virtual worlds who develop their spaces in those worlds stand to forfeit their work if they do not comply with the terms of service governing those worlds. For example, while the Second Life Terms of Service108 and representations on the Second Life website109 indicate that participants in Second Life have property rights in their virtual world assets, the Terms of Service also provide that the participant’s account can be terminated and its assets forfeited if the participant violates the Terms of Service.110 As a result, a court would

106. Id. at 474.
110. The Terms of Service deny members any rights to data stored on the Second Life servers, including data created by the member. Second Life, Terms of Service, supra note 108, at § 3.3. In addition, the Terms of Service allow Linden Labs, the operator of Second
likely question the ability of eSnowshoes to grant a security interest in its Second Life assets.\textsuperscript{111}

On the other hand, real property law gives a seller of land several methods by which to control the use of the land that she sells. For instance, a seller might restrict the use and enjoyment of the land by inserting a covenant into the deed.\textsuperscript{112} The remedy for breach of such a covenant is money damages.\textsuperscript{113} Alternatively, a seller can restrict the use of the land by conveying a defeasible fee, such as a fee simple determinable or a fee simple subject to condition subsequent. The buyer of such a fee stands to forfeit the land if he uses it in certain ways.\textsuperscript{114} Regardless of how the seller chooses to restrict the use of the land, it is unlikely that anyone would argue that the buyer did not receive a property interest in the land.\textsuperscript{115} The contract of sale\textsuperscript{116} and deed\textsuperscript{117} for real property, however, convey not the things, the land and the building, but an estate in those things. The estate is itself an intangible right, the property right.

The comparison between land in the tangible world and assets in a virtual world illustrates the problems that people tend to have giving property attributes to assets that they consider abstract. The development of the Internet and the World Wide Web has animated the discussion of intangible property rights, but intangible assets are not creations of the Internet era. Most of us would consider our bank accounts to be our property notwithstanding the intangibility of the bank account. Most of the known intangible assets before the advent of the Internet fell into two categories, intellectual property rights and payment rights. Both of these types of rights can be seen or otherwise sensed. An idea is not entitled to copyright protection until it is fixed in a medium that can be perceived.\textsuperscript{118} Therefore, while the idea of copyright is somewhat ephemeral, everyone understands the nature of a literary or musical work. Likewise, payment rights are intangible rights, but until recently, they tended to be evidenced by

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\textsuperscript{111} See infra notes 124-49 and accompanying text.


\textsuperscript{113} \textit{Id.} at \textsection 8.21.

\textsuperscript{114} See, e.g., JESSE DUKEMINIER ET AL., PROPERTY 772 (6th ed. 2006).

\textsuperscript{115} See Fairfield, supra note 107, at 1083-84 (“To state that such \textquotesingle contracts\textquotesingle presumably knock out any emergent property rights is to beg the question: why should we permit consensual agreements that prevent formation of property rights in the first instance any more than we tolerate other restraints on alienation?”).\textsuperscript{116} See Multiboard Residential Real Estate Contract 3.0, in DUKEMINIER ET AL., supra note 114, at 454, 458 (“Seller shall convey . . . to Buyer . . . good and merchantable title to the Real Estate . . . .”)

\textsuperscript{117} See General Warranty Deed, in DUKEMINIER ET AL., supra note 114, at 514 (“grantor . . . covenants . . . that he has a good right to convey the fee simple . . . .”).

\textsuperscript{118} 17 U.S.C. \textsection 102(a) (2000).

\end{small}
paper items such as checks, dollar bills, and promissory notes. Because all of these intangible rights are associated with things, giving the property label to them is not difficult.

As the thing in which rights are embodied declines in intrinsic value, the distinction between the tangible thing and the intangible right embodied in the tangible thing becomes less meaningful. Money serves as an interesting illustration of the false distinction between the tangible and the intangible. There is no inherent value of the pieces of paper that represent money. Therefore, money has no value at all unless people believe in money. Not only is American currency no longer backed by gold, but today, an enormous number of payment transactions do not even involve the transfer of paper money. Credit and debit cards represent value, but are not themselves money. Today, therefore, money is truly invisible, and we confer real value on the idea of money. The evolution of money from stone coins to gold-backed paper to paper not backed by gold to electronic impulses previewed in some ways the evolution of personal property. Whereas wealth had traditionally been represented by real estate and other tangible items, it is increasingly represented by intangible rights.

In Secrets of the Temple, William Greider provides the following description of today’s money:

> When money is no longer represented even by paper, it becomes a pure abstraction, numbers filed somewhere in the memory of a distant computer. In the computer, it cannot be seen by anyone, neither its owner nor the bank clerk who does the accounting. At this point, money has been reduced to nothing more tangible than electronic impulses, recorded on tape, which can be read or altered only by other electronic impulses.

Despite the fact that individuals commonly think of intangible rights embodied in almost worthless tangible things as property, intangible rights unconnected to tangible things continue to confound judges. Some judges seem to consider tangibility to be an essential component of property in deciding cases involving rights to electronic assets. By failing to look beyond the fact that the assets in question

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119. See Ronald J. Mann, Payment Systems and Other Financial Transactions: Cases, Materials and Problems 3 (3d ed. 2006) (“[A]s of 2003, cash was used in only 41 percent of consumer payment transactions, accounting for only 21 percent of dollars spent.”).


121. Securitising Intellectual Property: Intangible Opportunities, Economist, June 17, 2006, at 33 (reporting on a study by Baruch Lev, a finance professor at New York University, estimating the value of intangible assets on American companies’ balance sheets at about six trillion dollars).

122. Greider, supra note 120, at 230.

123. See infra notes 124-50 and accompanying text.
were intangible, the courts deciding these cases made decisions that have the potential to hinder the development of the property law components of commercial law. The cases discussed below show that despite the governing academic definition of property as the relationship among persons with respect to resources, the fact that a right is not tangible sometimes throws the property label into question.

Two cases involving enforcement of judgments against Internet domain names illustrate the courts’ discomfort with purely intangible rights. In both of these cases, Network Solutions, Inc. v. Umbro International, Inc.124 and Dorer v. Arel,125 the courts ruled that an Internet domain name is the “product of a contract for services between the registrar and registrant.”

Both courts were bound and hindered by the Virginia garnishment statute. As discussed in Part II of this Article, garnishment statutes tend to be outdated and many of them do not give creditors the general ability to seize all intangible rights. In Virginia, only a liability owed to the debtor can be garnished.127 Rather than holding simply that a domain name is not the type of liability contemplated by the statute or that the domain name registrar does have some garnishable liability to the domain name registrant, both courts engaged in some unfortunate reasoning that illustrates the lack of an adequate property vocabulary with which to describe intangible property rights.

In Dorer, the court ultimately avoided ruling on whether the domain name registrant had property rights in its name by finding an alternative method by which the plaintiff in a trademark infringement action could gain control over the infringing name. The plaintiff wanted to use the debt collection mechanism, but the court questioned whether a domain name could be subject to a judgment lien because only intangible personal property could be subject to a judgment lien.128 In the opinion, the Dorer court distinguished between domain names that are trademarks and generic domain names,129 which are not eligible for trademark protection.130 The court found clear property rights in trademarked names but questioned the property aspects of generic names, explaining that “a domain name that is not a trademark arguably entails only contract, not property rights.”131 One curious result of this reasoning, which the court itself

124. 529 S.E.2d 80 (Va. 2000).
126. Umbro, 529 S.E.2d at 86 (quoting Dorer, 60 F. Supp. 2d at 561).
128. Dorer, 60 F. Supp. 2d at 559.
129. Id. at 560-62.
131. Dorer, 60 F. Supp. 2d at 561 (emphasis added).
noted, is that a domain name that is a trademark has no exchange value apart from the goodwill of the enterprise holding the trademark, while generic names often have great exchange value. The court also noted, perhaps incorrectly, that a domain name has no value without use by its registrant, and that a valueless domain name could not be subject to a judgment lien.

The dispute in *Umbro* arose out of a cybersquatting case, in which a company, 3263851 Canada, registered a domain name containing the Umbro trademark. *Umbro* won its cybersquatting case against 3263851 Canada, and was awarded injunctive relief and damages. *Umbro* attempted to enforce the damages award by garnishing 38 of 3263851 Canada’s domain names, which were generic names linked to pornographic web sites. To initiate the garnishment, *Umbro* named Network Solutions (NSI), the domain name registrar, as garnishee and requested that NSI place the domain names on hold and deposit control of them into the court so that the names could be sold at auction. NSI answered the summons by claiming that it held no garnishable property belonging to the debtor. The Virginia Supreme Court agreed with NSI and held that *Umbro* could not garnish the domain name. The governing statute provided that only a “liability” owing from a third party to a debtor could be the subject of a garnishment proceeding.

Like the court in *Dorer*, the court in *Umbro* placed great emphasis on the fact that a domain name is created by a contract. The court’s main basis for its holding was that a domain name, whether it is property or not, is “the product of a contract for services,” and therefore not a garnishable liability.

This holding is an excellent example of judicial discomfort with intangible rights. First, the court explained that a domain name cannot exist without the supporting services of the domain name registrar. Second, the court expressed its fear that if it allowed garnishment of a domain name, then *all services* could be garnished.

132. *Id.* at 560-61.
133. *Id.* at 561.
135. *Id.*
137. *Id.*
138. 529 S.E.2d at 81.
139. *Id.* at 88.
140. *Id.* at 85.
141. *Id.* at 86.
142. *Id.*
143. *Id.* at 86-87.
There are several problems with this reasoning. First, commercial law recognizes many contract rights as property rights. As I explained in Part II, in order for a right to serve as collateral, the debtor must have property rights in it.\textsuperscript{144} Three examples of contract rights that are included in U.C.C. property are accounts receivable,\textsuperscript{145} deposit accounts\textsuperscript{146} and negotiable instruments.\textsuperscript{147} Earlier versions of the U.C.C. included “contract rights” as a distinct category of collateral.\textsuperscript{148}

Second, most intangible rights need the support services of a third party in order to be usable. For instance, ING Direct, an Internet bank, offers online bank accounts.\textsuperscript{149} Unless someone at ING maintains the records of these bank accounts, the holders cannot reach the value of them. One need not use an Internet bank to make this point. Even bank accounts at brick and mortar banks are intangible rights, usable only because a third party, the bank, keeps a record of their existence. The fact that a third party must be involved in most intangible property rights is crucial to understanding electronic assets and crucial to developing a new method of classifying property rights in the Internet age.

Had the court focused on the property attributes of a domain name rather than its intangibility, it might have reached a different result. In \textit{Umbro}, the Virginia Supreme Court missed the opportunity to extend creditors’ remedies to intangible assets generally. In doing so, the court looked to the wrong analogy, the service contract.

Decisions like those in \textit{Dorer} and \textit{Umbro} are potentially harmful to the extension of existing commercial laws to electronic assets. One way in which this decision is harmful is that it is sometimes cited for the proposition that a domain name is “not property.”\textsuperscript{150} The “not property” label can in turn take such an asset out of the pool of rights

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\item\textsuperscript{144} See \textit{supra} notes 48-51 and accompanying text.
\item\textsuperscript{145} U.C.C. § 9-102(a)(2) (2005).
\item\textsuperscript{146} Id. § 9-102(a)(29).
\item\textsuperscript{147} Id. § 9-102(a)(47). A negotiable instrument is recognized as a contract. \textit{Miller & Harrell}, \textit{supra} note 30, at ¶ 1.03.
\item\textsuperscript{148} 1 \textit{Gilmore}, \textit{supra} note 89, at 150.
\item\textsuperscript{149} ING Direct, \url{http://home.ingdirect.com} (last visited Nov. 1, 2007).
\item\textsuperscript{150} See, \textit{e.g.}, Am. Online, Inc., v. Huang, 106 F. Supp. 2d 848, 858 n.29 (E.D. Va. 2000) (describing \textit{Umbro} as standing for the proposition that “a domain name is not a ‘thing’ with a particular location, as it does not ‘exist[] separate from [the] service that created it and that maintains its continued liability’”); Wornow v. Register.com, 778 N.Y.S.2d 25, 26 (N.Y. App. Div. 2004) (“We are in accord with authorities holding that a domain name that is not trademarked or patented is not personal property, but rather a contract right that cannot exist separate and apart from the services performed by a registrar . . . .”); Warren E. Agin, \textit{The Internet Bankruptcy: What Happens When the Bell Tolls for the eCommerce Industry?}, 1 J. HIGH TECH. L. 1, 11 (2002) (describing \textit{Umbro} as holding that “while a domain name is an intangible asset, that asset is limited to [] contract rights”); \textit{Chander}, \textit{supra} note 107, at 773-74 (describing \textit{Umbro} as concluding “that a domain name represents simply a service contract, not property subject to garnishment”).
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that can be used as collateral for a loan or distributed in a bankruptcy case. In addition, the Umbro court’s reluctance to extend the law of garnishment to Internet domain names and intangible property generally is bad precedent. The failure to extend the garnishment remedy to intangible rights generally contributes to the balkanization of the laws governing creditors’ rights in intangible property, which is in turn undesirable because of the uncertainty and lack of uniformity that it breeds.

B. “Intangible” as a Misleading Category

[T]he best way to learn the law applicable to specialized endeavors is to study general rules. Lots of cases deal with sales of horses; others deal with people kicked by horses . . . . Any effort to collect these strands into a course on “The Law of the Horse” is doomed to be shallow and to miss unifying principles.151

Judge Frank Easterbrook made these comments in 1996, in an article in which he analogized the subject of “property in cyberspace” to “the law of the horse.”152 The discussions regarding intangible assets in some scholarship as well as in case law seem to be leading to a “law of the horse” for intangibles. The intangible nature of assets such as Internet domain names seems to blind courts to general property principles. Courts, by placing paramount importance on the physical manifestation of assets, seem to forget to address other property characteristics of those assets, such as whether and how they can be transferred and whether the owner of the asset can exclude others from it. This focus on intangibility leads to two problems. First, courts and scholars sometimes speak as though the various types of intangible assets should be placed in a single category, a tendency that causes courts to make broad statements about the application of legal principles to intangible assets. A second problem, related to the first, is that courts and some scholars tend to give new intangible rights the “intellectual property” label. Both of these tendencies have the potential to hinder the development of commercial law in that they cause lawyers and courts to ignore well-tested property analogies, thus prompting them to call for new rules to govern new assets.

152. Id. at 208. Judge Easterbrook has also criticized the impulse of scholars to reform property law in response to the challenges posed by the Internet. See Frank H. Easterbrook, Cyberspace Versus Property Law?, 4 Tex. Rev. L. & Pol. 103 (1999).
1. “Intangible Property” as a Discrete Asset Class

The growth of the Internet has reinvigorated property scholarship. Scholars have analyzed the property classification of several different types of electronic assets, including Internet domain names, computer systems, and assets in virtual worlds. Some of these authors have classified these types of property in broad terms, such as “cyberproperty” and “virtual property.” These classifications do not raise problems so long as the rules that the authors propose are limited to the specific types of rights on which they are focusing. For instance, in her article Defending Cyberproperty, Patricia Bellia proposes a framework for the legal treatment of a network resource owner’s attempts to prohibit unwanted access to his system. In formulating this framework, she analyzes cases that she describes as “cyberproperty cases,” all of which concern access to information in a computer system. Rights in computer systems implicate special considerations such as freedom of speech and information; thus, in formulating those rights, one must take those competing interests into account. Narrowly defining “cyberproperty” as including only those rights gives appropriate guidance to lawmaking institutions.

On the other hand, other authors imply that “cyberproperty” is a distinct asset type. Greg Lastowka, in Decoding Cyberproperty, expresses skepticism that digital code within a computer can or should be analogized to a form of property. Yet while he begins with a critique of applying property rules to network resources, his article also covers some of the cases dealing with Internet domain names, which, while comprised of computer code, are substantively different from information on a web site. Similarly, while Xuan-Thai Nguyen, in Cyberproperty and Judicial Dissonance: The Trouble with Domain Name Classification, focuses almost solely on Internet domain names, she notes that some of the domain name cases failed to “adequately appraise the nature of cyberproperty in general,” as though

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153. See, e.g., Bellia, supra note 107 (discussing property rights in computer systems); Carol M. Rose, The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems, 83 MINN. L. REV. 129, 146-53 (1998) (using “cyberproperty” to refer to rights in information available on the Internet); R. Polk Wagner, On Software Regulation, 78 S. CAL. L. REV. 457, 463 (2005) (using the term “cyberproperty” to describe the “appropriate entitlement regime for access to network-connected resources”).


156. Id. at 2194.


158. Id. at 44.


160. Id. at 185.
“cyberproperty” were a class of property rights that share important characteristics.

This overbroad classification of electronic assets is also evident in case law. Some of the decisions discussing the applicability of the tort of conversion to electronic assets display a tendency to classify intangible assets as a distinct category. While conversion cases are not creditors’ rights cases, some of the issues that must be resolved in the two categories of cases are similar. In both creditors’ rights and conversion cases, courts must determine who has exclusive possession or control of an asset. A series of New York cases, culminating in the New York Court of Appeals decision in Thyroff v. Nationwide Mutual Insurance Co., illustrates why focusing almost solely on the physical manifestation of an asset leads to decisions that do not give much guidance in fashioning rules for novel electronic assets.

Thyroff involved conversion. Conversion is an action that originally applied when a person dispossessed another of tangible personal property. The Restatement defines conversion as “an intentional exercise of dominion or control over a chattel which so seriously interferes with the right of another to control it that the actor may justly be required to pay the other the full value of the chattel.” This action applied only to tangible goods because only tangible goods could be lost or found. The tort of conversion was eventually extended to cover stock certificates, promissory notes and other intangible rights that are “merged in a document.” This merger doctrine recognizes that some intangible rights are embodied in paper documents in such a way that transfer of the document effects transfer of the right.

The plaintiff in Thyroff alleged conversion of electronic data stored on his computer. The plaintiff, Thyroff, had been an insurance agent for Nationwide, and when Nationwide terminated the agency relationship, it denied him access to Nationwide’s agency office automation system. By denying Thyroff access to the system, Nationwide denied Thyroff access to the information that he stored on the system, effectively seizing the data from him.

The Second Circuit began its analysis in Thyroff by asking whether a conversion claim may apply to “electronic data.” The court recognized the merger exception, but then suggested that it was “un-

162. Restatement (Second) of Torts § 222A(1) (1965).
164. Restatement (Second) of Torts § 242(2).
165. Id. § 242 cmt. a.
166. Thyroff II, 864 N.E.2d at 1273.
clear and unresolved” whether the merger exception applied to electronic data.168 The court then surveyed New York law, citing cases dealing with a wide range of intangibles, including a plaintiff’s time, an artist’s interest in a performance, and medical records.169 If one views intangible property as a discrete category, as the Second Circuit did, the cases were split. If one focuses on the differences among the types of assets involved, however, they are consistent.

One of the cases relied on in the Second Circuit’s opinion, Sporn v. MCA Records,170 was cited for the rule that an action for conversion “will not normally lie over intangible property.”171 Had the Thyroff court focused on the facts of Sporn, especially the nature of the rights alleged to have been converted, it might have been able to formulate a rule governing conversion of various types of electronic data. Sporn, a New York Court of Appeals case from 1983, addressed whether a master phonograph recording of a song could be converted. The defendant in Sporn had acquired the recording without the plaintiff’s permission and used it to republish the song.172 The court held that because the tangible recording had been misappropriated, the cause of action was for conversion of the tangible recording, not of the intangible intellectual property rights embodied in the recording.173 The recording at issue in Sporn was made in 1957, well before the age of digital music that can be easily copied without any change in quality. Therefore, what the defendant in Sporn had taken—the recording—was not important solely because it was tangible, but because, as the master recording, it could be used to make marketable copies of the song on it. Thus, the transfer of the master recording was the transfer of the value of the intellectual property embodied in the recording, and the recording, because it was tangible, could be converted. Without specifically mentioning the merger doctrine, the court adopted it. The statement in Sporn on which Thyroff relied, that “an action for conversion will not normally lie, when it involves intangible property,”174 was probably a reasonable statement at the time it was made for two reasons. First, in 1983, it was likely that the known universe of intangible rights consisted primarily of payment rights, which were often embodied in a tangible medium, and intellectual property. Second, the intangible right to which the court in Sporn was referring was the intellectual property right.

168. Id. at 405. The court based this observation on the Ninth Circuit’s holding in Kremen v. Cohen, 337 F.3d 1024 (9th Cir. 2003). See infra notes 210-26 and accompanying text.

169. Thyroff I, 460 F.3d at 405-07.


171. Thyroff I, 460 F.3d at 402 (quoting Sporn, 448 N.E.2d at 1325).

172. Sporn, 448 N.E.2d at 1325.

173. Id. at 1328.

174. Id. at 1327.
Today, however, it is unreasonable for courts to adopt that statement when there are many types of intangible assets, such as domain names, that are not shareable.

Another case cited in Thyroff is a trial court case, Shmueli v. Corcoran Group. The plaintiff in Shmueli, like the plaintiff in Thyroff, alleged conversion of business records maintained on her computer. The opinion evidences an apparent desire on the part of the court to establish parity between electronic and paper records, in a way that appears similar to the approach taken in the electronic transactions acts discussed in the introduction to this Article. The bulk of the Shmueli opinion seems to merely focus on the difference between tangible and intangible assets and at one point, the court notes that a “virtual” record can become a “literal” record “by the mere expedient of a printing key function.” At the end of its conversion discussion, however, the court states that the plaintiff protected the materials by an access code. Unfortunately, the opinion appears to miss the significance of the access code. If the person with the access code has dominion over the information, then someone who wrongly appropriates that access code has likely committed conversion, as she has exercised dominion over the property of another. Password protected electronic materials, like domain names, are not shareable assets and therefore should be the proper subjects of a conversion action.

Finding a lack of clarity in New York law, the Second Circuit certified the conversion question in Thyroff to the New York Court of Appeals, which answered that electronic records can be the subject of a conversion action. To support its holding, the Court of Appeals stressed the value of intangible data in the modern economy, stating that a “document stored on a computer hard drive has the same value as a paper document kept in a file cabinet.” The court then questioned whether there was any reason “in law or logic” why creation of a document on a computer should be treated any differently from creation of a document with pen, ink and paper. While the court correctly noted that ownership of stock in a corporation can be transferred without the use of any paper, thus perhaps rendering superfluous the merger requirement for conversion, it failed to explain why the data at issue in the case should be treated as analogous to

176. Id. at 873.
177. Id. at 874.
178. Id. at 877.
180. Id.
181. Id.
corporate stock. In its concluding paragraph, the court held that “electronic records that were stored on a computer and were indistinguishable from printed documents [are] subject to a claim of conversion in New York.”

Had the Second Circuit focused on aspects of the electronic data apart from the intangibility of the data, it might have been able to rule on the conversion question without certifying the question to the New York Court of Appeals. In its opinion, the Second Circuit explained that in New York there are several elements to a conversion claim. To satisfy the first element, the plaintiff must show that the defendant’s assumption of ownership or the right of ownership was unauthorized. To satisfy the second element, the plaintiff must show that the unauthorized exercise of ownership was over the plaintiff’s goods. A plaintiff satisfies the third element by showing that the exercise of ownership was to the exclusion of the owner’s rights. The court found that two of these elements were met, but that it could not find the defendant liable for conversion if the action did not extend to electronic data. As a result, it seems that what the defendant did—assert ownership rights in assets that did not belong to it—was less important than the physical manifestation of the asset that it took without authorization. Because the Second Circuit focused on the physical nature of the asset, it looked to the New York Court of Appeals to clarify the law.

Cyberproperty is not a discrete asset class, nor is it a term that can be used to coherently describe a set of rights that persons have with respect to electronic assets comprised of computer code. Two authors, David Nelmark and Joshua Fairfield, have recognized this and have drawn an important line: the line between intangible intellectual property and other intangible property. Both Nelmark and Fairfield explain that not all intangible rights are alike, and both define virtual property as intangible property that is exclusionary, that is, intangible property that can be possessed, or controlled, by one person. Nonexclusionary, or nonrivalrous property must be in-

182. Id.
184. Id.
185. Id.
186. Id. at 405.
188. Fairfield, supra note 107.
189. Nelmark, supra note 187, at 5.
190. Fairfield, supra note 107, at 1053-54. Fairfield defines “virtual property” as intangible property that is rivalrous, persistent and interconnected, and further describes it as “code . . . designed to act more like land or chattel than ideas.” Id. at 1049.
tangible, but not all intangible property is nonrivalrous. An Internet domain name is an example of such property.

New York’s case law illustrates why focusing on “tangible” as a category or on “electronic data” as a category is not very helpful. Such focus areas confuse rather than clarify the law. In the intellectual property arena, intangibility has relevance primarily because several individuals can “use” the intangible intellectual property at the same time. But, as noted above, not all intangible rights are shareable.

The distinction between property that is exclusionary and property that is not is a crucial one for judges to keep in mind, because the distinction will prevent them from falling into the habit, which I will illustrate below, of classifying all intangible rights that are not payment rights as “intellectual” property. This habit is a harmful one because it directs judges and lawmakers to look to intellectual property law rather than property law generally for rules to govern electronic assets.

2. Intangible Assets as Intellectual Property

We see the tendency to place new intangible rights into the category of intellectual property in case law and scholarship. In some respects, this tendency is understandable. Intellectual property is intangible, so if we are looking for a known category into which we can place new intangible rights, intellectual property appears to be the correct one. This is particularly true when applied to domain names, as domain names can incorporate trademarks. In addition, courts appear to create new intellectual property rights from time to time,191 thus expanding the already unclear definition of intellectual property.

The category of intellectual property is itself a misleading category. Intellectual property is an umbrella term used to describe a number of ways in which the law protects ideas. The ideas themselves, however, are categorized according to functional lines and are dissimilar in many ways. For instance, copyright law protects an author’s rights in her original works; trademark law protects a person’s use of a word or mark to identify the goods or services that he provides. One important unifying concept in intellectual property law is that the public domain deserves protection.192 Ideas that are traditionally protected as intellectual property are nonrivalrous, that is,


many people can use them at once, and it is difficult to exclude others from the protected ideas. As a result, copyright law protects not only the creator’s right to exploit her creation, by granting the creator rights such as the publication and performance right, but also the public’s right to use that creation through doctrines such as fair use and first sale. Intellectual property laws also limit the “owner’s” rights in a temporal way. There are statutory time limits on the duration of copyrights and patents, and a trademark is entitled to protection only so long as the mark is used in commerce. When someone wrongfully uses an idea protected by intellectual property laws, the action is one for infringement, in which a court will enjoin the wrongful user from using the protected idea. There is no mechanism for returning the idea to the author, because ideas are nonexclusionary.

A number of authors have placed domain names into the category of intellectual property. For instance, authors who have written on the classification of domain names for the purposes of secured transactions and bankruptcy have argued that their recommendations would facilitate the use of “domain names along with other intellectual property as collateral.” In their article Taxing the New Intellectual Property Right, Xuan-Thao Nguyen and Jeffrey Maine consistently refer to the domain name as a “new form . . . of intellectual property right,” a characterization announced in the title of their article. Jacqueline Lipton asks in one article whether domain names are “a form of intellectual property or [other] quasi property.” Simply labeling a domain name as intellectual property is not harmful in itself; in fact, all of the above-mentioned authors focused on rules governing domain names and not other types of electronic

194. 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.01 (Supp. 2006).
197. Id. at 2 (emphasis added). These authors also characterize domain names as intellectual property in their book, INTELLECTUAL PROPERTY TAXATION: PROBLEMS AND MATERIALS 18 (2004). Professor Nguyen has made this reference in a number of other articles. See, e.g., Xuan-Thao Nguyen, Intellectual Property Financing: Security Interests in Domain Names and Web Contents, 8 TEX. WESLEYAN L. REV. 489, 504 (2001) (concluding that “[p]erfection of security interests in domain names and web contents is an important process in intellectual property financing”).
assets in their articles. The problem, however, is that the more courts and commentators reflexively give emerging intangible assets the intellectual property label, the less likely it is that courts will look beyond the category of intangible property in formulating their rules for new forms of electronic assets.

This misclassification is evident in the case law. Umbro, discussed above,199 dealt with a creditor’s rights in generic domain names. The trial court held that Umbro could garnish the domain names. In its decision, however, it fell into a common trap. Rather than simply characterizing the domain names as “property” that could be subjected to garnishment, it characterized them as “intellectual property.”200 In doing so, the court cited to a patent case and to an article about judgment creditors’ rights in intellectual property.201 Reasoning like this unnecessarily complicates a creditor’s enforcement of its rights in an intangible asset. As I will explain in the next Part of this Article, our law has long substituted constructive possession for manual possession when an asset cannot be easily manually possessed. Had the court characterized the domain name as property, lawyers relying on the decision could then find some way to take possession or control of it. By characterizing it as intellectual property, however, the court directed lawyers to consult the far more complex rules regarding enforcement of judgments in intellectual property rights. As a result, the Virginia Supreme Court pointed out in Umbro that intellectual property rights generally cannot be taken by creditors using procedures such as execution or seizure.202

As explained above, however, intellectual property rights are not analogous to domain names in one significant respect: no one has exclusive control over a copyrighted work or trademark, while the domain name registrant has exclusive control over the use of its domain name. The domain name system was developed so that individuals could find web sites without being forced to remember the numeric IP addresses of a large number of computers.203 When a person registers a domain name with a registrar such as Network Solutions, the registrar links the name to the IP address of the registrant’s computer.204 The name can be associated with only one IP address; if it could be associated with many, the domain name system

199. See supra notes 136-43 and accompanying text.
201. Id.
204. Id.
would not work.\textsuperscript{205} Therefore, by gaining control of the registration, a person gains control over the valuable asset, the Internet domain name. Thus, the treatment of domain names as intellectual property can lead to a wrong result.

The court in \textit{Dorer v. Arel}\textsuperscript{206} also made a logical misstep by automatically assuming that in order for the domain name at issue to be protected as property, the domain name had to be intellectual property. As explained above, the \textit{Dorer} court distinguished domain names that are eligible for trademark protection from those that are not. The court explained that holders of names in the former category clearly have property rights in those names, but that domain names that do not qualify for trademark protection arguably consist only of contract, not property rights.\textsuperscript{207} By looking at intellectual property as the default category for intangible property, the court made a statement that makes no sense from a market perspective. Generic names can be freely bought and sold for large amounts of money, but names that are trademarks cannot be sold without the goodwill of the business to which they are associated. From the creditors’ rights perspective, marketability is perhaps the most important aspect of a property right. The idea behind creditors’ remedies is to seize and sell an asset in order to satisfy a debt. Therefore, while Article 9 of the U.C.C. defines collateral in property terms, any right that a debtor can exchange for money should be considered a property right for commercial law purposes.

In formulating their rules to govern electronic assets, courts are looking to the wrong analogy. By analogizing electronic assets only to other forms of intangible assets, courts are missing basic property law principles that are unrelated to the physical manifestation of assets. In the next Part, I will discuss another mistaken analogy, the perfect analogy to the tangible that some lawmaking bodies want to find.

\begin{center}
\textbf{C. If It’s Intangible, Can We Make It Look Tangible?}
\end{center}

Thinking about the Internet by reference to the physical world is fine, if for no other reason than that courts must apply a host of physical-world laws to the Internet. But blind application of the metaphor to reach a particular result obscures more than it illuminates.\textsuperscript{208}

Mark Lemley, who wrote the above statement, and other scholars have questioned the tendency of courts to analogize cyberspace to a

\begin{footnotes}
\item[205] Id.
\item[206] 60 F. Supp. 2d 558 (E.D. Va. 1999).
\item[207] See supra notes 131-33 and accompanying text.
\end{footnotes}
place. Much of the criticism in these “cyberspace as place” articles centered on the extent to which property metaphors led to an undesirable privatization of information. In this Part, I will discuss a related analogy, the “electronic asset as thing” analogy. While it is only natural to compare new rights to known rights, a perfect analogy to the tangible is almost nonsensical where electronic assets are concerned. The Ninth Circuit’s reasoning in Kremen v. Cohen illustrates this problem, as do the rules in Article 9 of the U.C.C. applicable to control of electronic chattel paper. The slavish adherence to the tangible right as the prototypical property right is not only inaccurate, but also harmful to the development of rules governing electronic assets. This is so because the perfect analogies that I describe in this Part are too specific to be applied to new electronic assets as they emerge, potentially leading to wasteful litigation.

The electronic asset at issue in Kremen was the sex.com domain name, said to be the most valuable domain name up to that time. The facts of Kremen are truly astonishing. In 1994, Gary Kremen registered sex.com to his business, Online Classifieds. Stephen Cohen, a con man who had spent time in prison for impersonating a bankruptcy lawyer, tricked Network Solutions into transferring sex.com to him. He did so by sending Network Solutions a letter that he claimed to have received from Online Classifieds. The letter claimed that the company had fired Kremen and that it was abandoning the sex.com domain name. The letter also purported to authorize Cohen to use the name. On the basis of this paper letter, sent through Cohen because the “author,” Online Classifieds, claimed to have no Internet connection, Network Solutions transferred the name to Cohen.

Kremen sued Cohen, and the court ordered Cohen to return sex.com to Kremen. The court also awarded Kremen $65 million in damages. Kremen was unable to collect anything from Cohen because Cohen had removed his assets and himself from the country.

209. Id.; see also Hunter, supra note 105, at 442 (explaining that “the Cyberspace As Place metaphor leads to undesirable private control of the previously commons-like Internet”).
210. 337 F.3d 1024 (9th Cir. 2003).
212. 337 F.3d at 1026.
213. Id.
214. Id.
215. Id. at 1027.
216. Id.
217. Id.
218. Id.
219. Id.
Unable to collect from Cohen, Kremen turned to Network Solutions, bringing an action for conversion of the domain name.\textsuperscript{220} The District Court held for Network Solutions, noting the “imprudence of superimposing the archaic principles governing the tort of conversion onto the nebulous realm of the Internet.”\textsuperscript{221} The Ninth Circuit reversed, relying in part on the Restatement of Torts, which, as explained above, allows an action for conversion when someone prevents the exercise of intangible rights that are merged in a document.\textsuperscript{222}

In his \textit{Kremen} opinion, Judge Kozinski wanted to treat electronic and tangible assets as equivalents for the purpose of a conversion action. In holding that Network Solutions could be liable for the conversion of the sex.com domain name, he stressed that “there is nothing unfair about holding a company responsible for giving away someone else’s property . . . .”\textsuperscript{223} Yet in finding that a domain name registrant can bring an action for the conversion of a domain name, the court engaged in mental gymnastics that rendered its holding applicable to domain names only and not to other electronic assets.

The court recognized that the law of conversion had developed to provide that some types of intangible rights could be the subject of a conversion action and pointed to the merger doctrine.\textsuperscript{224} As explained above, this provision applies to rights traditionally transferred by negotiation, such as payment rights (promissory notes) and investment securities.\textsuperscript{225} Because the economic value of such rights was typically transferred by negotiation, that is, by manually transferring the paper, converting the paper in which the right was embodied could constitute conversion of the right itself. When applied to negotiable instruments and shares of paper stock, the rule that intangible rights that are merged in a document can be the subject of a conversion action makes sense. The court was unwilling to discard the merger requirement, first stating that California retains a “vestigial merger requirement,” but then noting that the fact that data is “stored in electronic form rather than on ink and paper is immaterial.”\textsuperscript{226}

While the court in \textit{Kremen} was sympathetic to the plight of owners of valuable intangible assets, it was unwilling to extend the tort of conversion to \textit{all} intangible rights. As a result, the Ninth Circuit

\textsuperscript{220.} \textit{Id.}
\textsuperscript{222.} \textit{Kremen}, 337 F.3d at 1030-31.
\textsuperscript{223.} 337 F.3d at 1035.
\textsuperscript{224.} \textit{Id.} at 1031.
\textsuperscript{225.} See notes 164-65 and accompanying text.
\textsuperscript{226.} 337 F.3d at 1033-34.
curiously found that an Internet domain name is merged in a document, the domain name system (DNS).\textsuperscript{227}

What is curious about this holding is that the DNS itself is not only intangible, but distributed among a number of places.\textsuperscript{228} The role of the DNS is to help Internet users find specific websites and e-mail addresses. These websites and e-mail addresses, in turn, must be associated with a unique Internet Protocol, or IP number. By registering a name with a registrar such as Network Solutions, a domain name registrant ensures that her chosen name is associated with her computer’s IP address.\textsuperscript{229}

The main flaw in this decision is the attempt to make a perfect analogy to the tangible in a scenario in which tangibility plays no role. Tangibility is relevant to the law of negotiable instruments because the value represented by those instruments has long been conveyed by the transfer of physical possession of a piece of paper. In the world of Internet domain names, however, tangibility plays no role. The court appears to have missed the significance of the merger requirement. The merger requirement recognizes that exclusive control of some intangible rights is achieved by possession of a paper certificate. Therefore, the paper document should be less important as evidence of tangibility than as a vehicle for control. The court correctly refused to extend the tort of conversion to all intangible rights because not every intangible right is susceptible to exclusive control. The reason that the court was correct has nothing to do with any vestigial merger requirement. The DNS is important not because it looks like paper, but because it establishes a mechanism through which only one person can control the use of a domain name. The DNS itself is not even the appropriate analogy to the paper document. To convert a domain name, one does not “seize” the DNS in any way. One does exactly what Stephen Cohen did—notify the registrar that a new person is the owner of the registered name. The appropriate analogy would be to Network Solutions’ records, which are also intangible.\textsuperscript{230}

Judge Kozinski wanted to establish parity between tangible and intangible assets. By focusing only on the physical manifestation of

\textsuperscript{227} Id.
\textsuperscript{228} The domain name system is comprised of 13 “root servers,” all containing the same information: the Internet Protocol (“IP”) addresses of all of the top-level domain name registries, such as .com, .org and .net. Joining the root servers in the system are thousands of computers, known as “resolvers,” all containing information cached from the root servers. For a more detailed explanation of the DNS, see InterNIC DNS Explanation, supra note 203.
\textsuperscript{229} See id.
\textsuperscript{230} Domain name registration is completely electronic. See, e.g., NetworkSolutions, Domain Name Registration, http://www.networksolutions.com/domain-name-registration/index.jsp (last visited Nov. 1, 2007).
the domain name, however, he lost sight of some of the other qualities that render a domain name similar to assets that traditionally could be converted. Like tangible assets, a domain name is rivalrous. By causing Network Solutions to change the registration for sex.com, Cohen had effectuated transfer of the value of the name to the exclusion of the rightful owner, Kremen. Retaining the merger requirement, albeit in a diluted form, keeps the focus on tangibility and not on other important property qualities.

The court in Kremen stopped short of paving the way for a coherent approach to electronic assets. The message that the court sent is that intangible property can be converted only if one can find some document, in tangible or intangible form, to which it is related. The court might have done a better job contributing to the law of electronic assets by concentrating on the classic components of property rather than the distinction between tangible and intangible property.

An illogical attachment to the tangible can be found in even the most recent revisions of commercial statutes. One of the most glaring examples is Article 9’s definition of “control” over electronic chattel paper. Chattel paper, which is defined as a “set of records evidencing both a payment obligation and a security interest in or lease of goods,” is another example of an intangible set of rights that was traditionally reified in paper. As a result, the transfer of those rights, the payment right and the property interest, is effectuated by the transfer of the paper. The laws governing chattel paper recognized this fact, and Article 9 of the U.C.C. recognizes the significance of the paper in its priority provisions. The usual rule in Article 9 is that the first secured creditor to file a financing statement against or perfect its interest in collateral has “priority in the proceeds of that collateral,” but Article 9 provides different, nontemporal priority rules when the collateral consists of intangible rights traditionally reified in paper and thus conveyed by a transfer of paper. Tangible chattel paper falls into that category, so under Article 9, a creditor or purchaser who takes physical possession of the paper takes priority over all other security interests in that paper, even if another creditor had filed a financing statement before the possessing creditor took possession. This rule, which also applies to creditors who take negotiable instruments as collateral, recognizes business realities.

In the 1990s, the drafters of Article 9 decided to provide for a new type of collateral, electronic chattel paper. Providing for this type of collateral in Article 9 was certainly in the spirit of facilitating the ex-

232. Id. § 9-102(a)(11).
233. Id. § 9-322.
234. Id. § 9-330.
235. Id.
pansion of commercial practices, a policy stated in Article 1, but there was not yet a business practice involving electronic chattel paper on which to base the Article 9 rules. The drafters of both Article 9 and the Uniform Electronic Transactions Act recognized that electronic assets such as electronic chattel paper would probably come into existence, so they wrote provisions governing the transfer of these not-yet-existent assets.

Analogizing electronic chattel paper to tangible chattel paper, the drafters granted those in control of electronic chattel paper priority over those creditors who merely perfect their security interests by filing a financing statement. If electronic chattel paper will be used in commerce the same way that tangible chattel paper is used, this basic concept is fine. “Control” first appeared in the U.C.C. with the 1994 revision of Article 8, which governs investment securities. The drafters of Article 8 were forced to recognize the realities of the securities markets, in which millions of securities are transferred every day. To incorporate existing business practices, the drafters of Article 8 developed a definition of control designed to be flexible enough to encompass different methods of holding and transferring securities. An Official Comment to Article 8 of the U.C.C. clarifies the control concept by emphasizing the purpose that control serves, explaining that “obtaining control means that the purchaser has taken whatever steps are necessary, given the manner in which securities are held, to place itself in a position where it can have securities sold without further action by the owner.” In Article 8, “control” is an umbrella term that applies to certificated, or tangible, and uncertificated, or intangible, securities, replacing but encompassing “possession.”

In Article 9, however, the drafters chose to define control of electronic chattel paper by analogizing control to manual possession, granting the creditor control if the creditor has control over the “single authoritative copy” of the electronic chattel paper. The “single authoritative copy” must be unique, identifiable, and unalterable. In the tangible world, the single authoritative copy is the original,

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236. *Id.* § 1-103.
238. *U.C.C.* § 8-106. The revision of Article 8 and the different methods of holding and transferring securities are explained in detail in Schroeder, *supra* note 80.
240. *See id.* § 8-106.
241. *Id.* § 9-105.
242. *Id.*
marked as such.243 In the intangible world, however, no such thing exists, because computers can make perfect copies of electronic information.244 It would be unreasonable to require that the computer code making up the electronic chattel paper be unique, unalterable, and identifiable. An American Bar Association committee charged with giving guidance for compliance with the electronic chattel paper provisions pointed out that requiring code to be unique “would be tantamount to requiring that the molecules making up the paper and ink dots must be unique, identifiable and unalterable.”245

The drafters of Article 9 wanted the market for electronic chattel paper systems to develop, and intended for their rules to facilitate such development.246 By narrowly defining “control” in terms of an analogy to the tangible that does not make sense, however, they may have delayed the use of electronic chattel paper in commerce. The term “control” without further definition might have sufficed, but then it would have been up to the market, and to courts, to determine when a party had control over the electronic asset. The drafters were in a bad position; as I have attempted to illustrate in this Part, courts have difficulty dealing with possessory rights in electronic assets.

The problems illustrated in this Part arise from our tendency to view the electronic assets of the Internet age as truly novel assets to which modern rules must apply. As a result, when courts look for rules to govern these assets, they tend to look only to rules governing other intangible assets and not to those governing property generally. When courts and other lawmaking bodies decide that intangible assets can be treated like tangible assets, they attempt to draw a perfect analogy, which often does not make sense. As I will discuss in the next section, however, courts have been adapting the concept of possession to novel assets and transactions for centuries.

IV. THE HISTORICAL ROLES OF POSSESSION AND TANGIBILITY

Absent from the judicial opinions discussed in Part III of this Article is any analysis of traditional property principles. The law of creditors’ remedies is property law; in order for a creditor to have rights in a debtor’s asset, the debtor himself must have a property right in that asset. The creditor must be able to transfer it to a third

244. Id. at 725.
245. Id. at 739.
246. U.C.C. § 9-105 cmt. 4.
party in order to realize the value of that asset. In this Part, I will illustrate that the application of those principles is not governed by the tangibility or intangibility of assets and that courts and other lawmaking bodies will make better decisions about emerging electronic assets if they look not to cases and other authority addressing rights in other intangible assets, but to the whole range of property cases that analyze the problem of obtaining possession or control over assets, tangible and intangible, that cannot easily be grabbed.

The concept of possession has a long history as a centerpiece of property law. Possession is said to establish first ownership of a right, a concept applied to rights over assets in the wild, such as animals and natural resources. Possession can also signal lesser rights in assets, such as security interests. The transfer of possession is a significant event, as it signifies the transfer of value. This concept is embodied in fraudulent transfer laws, which allow courts to unravel transfers of assets that are not accompanied by the transfer of possession or control. Possession is also a critical component of the law of gifts, and it is often said that if an item can be manually transferred, it must be manually transferred so that the donor feels “the wrench of delivery.” For the purpose of this Article, it is necessary to identify why possession is an important component of creditors’ remedies and from there decide the acts that should constitute possession.

The U.C.C. does not define “possession.” In National Safe Deposit Co. v. Stead, the Supreme Court noted that “both in common speech and in legal terminology, there is no word more ambiguous in its meaning than possession.” Because there is no definition of possession in the U.C.C., it is necessary to define the term in the context of the purposes that possession serves. Within Article 9, possession serves two main purposes. The first purpose is the notice function.

250. U.C.C. § 9-313.
252. See DUKEMINIER ET AL., supra note 114, at 157; Philip Mechem, The Requirement of Delivery in Gifts of Chattels and of Choses in Action Evidenced by Commercial Instruments, 21 ILL. L. REV. 341, 348 (1926). The Restatement recognizes symbolic delivery for all types of personal property, whether or not the property is capable of manual delivery. RESTATEMENT (THIRD) OF PROP.: WILLS AND OTHER DONATIVE TRANSFERS § 6.2 (2003). This point shows that in property, tangibility has little importance.
253. 232 U.S. 58, 67 (1914).
9 by taking possession of collateral. The purpose of perfection is to give notice to the whole world that someone other than the debtor may have a property interest in the collateral. The effectiveness of possession as notice in this context has been analyzed by many.

For the purpose of Article 9 remedies, possession serves a control function. A creditor who repossesses a tangible asset then has the right to sell that asset to satisfy the debt secured by that asset. In order for the creditor to realize the value of the asset, therefore, there must be some method by which the creditor can obtain the ability to transfer it. For certain intangible assets, as explained in Part II of this Article, the creditor can collect the asset by notifying the person obligated on the asset, or payment right, to make payment to the creditor.

This control function of possession is inextricably linked to the notice function. According to Carol Rose, possession can be equated with some kind of statement. In the world of tangible assets, we assume that the person in manual possession can transfer the value of the asset. This common assumption supports some of the justifications for the notice function of possession. If the world knows the identity of the possessor and therefore the owner, transaction costs will be reduced and the asset in question will be more easily transferable. Clear notice also reduces ambiguity and thereby minimizes disputes. The notice function therefore facilitates the control function by telling the world the identity of the person with the ability to transfer the value of the asset in question. Viewing the purposes of possession enables us to determine the acts necessary to constitute possession under the remedies provisions of Article 9 of the U.C.C. and state judgment collection statutes.

While in Article 9 of the U.C.C. the term “possession” appears to be equated with manual possession, possession in property law has not historically been so confined. The casebook cases involving the acquisition of title by capture are replete with language that is relevant in today’s disputes over electronic assets. Many first-year prop-

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256. See supra note 6.
257. Rose, supra note 247, at 77-79 (discussing the rules of adverse possession, under which, in order to obtain title to land by adverse possession, an adverse possessor must possess land in an open and notorious manner so that the true owner is put on notice to protect his rights).
258. This assumption is codified in several places in the U.C.C. For instance, certain bailees to whom goods are entrusted have the power to transfer good title to those goods to good faith purchasers for value. U.C.C. § 2-403(2).
259. Rose, supra note 247, at 81.
260. Id. at 81-82.
ertly casebooks devote a large part of their beginning coverage to the concept of possession. While the assets in question in the casebook coverage tend to be tangible, the concepts relating to the control of those assets need not be limited to physical property that can be picked up and moved around.

Two well-known cases involving the capture of wild animals, *Pierson v. Post* and *Ghen v. Rich*, illustrate the two functions of possession that are important to creditors’ remedies. Whether the asset in question is tangible, however, is irrelevant to the concept of capture, a point that is clear even in these cases. The definitions of possession in these opinions are noteworthy for several reasons. First, in neither case is an actual manual taking necessary—in fact, in either case such an act would have been nearly impossible. This is a point that has particular resonance in the world of electronic assets because it is of course impossible to manually grasp such assets. The impossibility of grasping such assets is not, however, necessarily related to the lack of a tangible manifestation of the asset.

Both the control and notice functions of possession are evident in *Pierson*. From that case, we learn that mortal wounding combined with continued pursuit constitutes control sufficient to allow the person asserting such control to maintain an action for the deprivation of that control. The control function seems obvious from the opinion, as the court holds that acts that deprive the wild animal of its natural liberty, rendering escape impossible, are sufficient to constitute possession for the purpose of establishing property rights. This conception of possession recognizes that anyone who deprives a wild animal of its natural liberty can then appropriate the animal to his own use and then presumably transfer the value of that animal. As Carol Rose points out, however, the *Pierson* opinion also supports the notice function of possession by requiring an act that “manifests an unequivocal intention of appropriating the animal to his individual use.” Depriving an asset of its natural liberty does not, however, necessarily mean taking the asset in one’s hands.

From *Ghen v. Rich*, we learn that first possession need not even be by an act that deprives an asset of its liberty. In *Ghen*, the wild asset involved was a whale, and the dispute was between the person who killed the whale and the person who found the whale on the...

263. 3 Cai. 175 (N.Y. Sup. Ct. 1805).
264. 8 F. 159 (D. Mass. 1881).
265. *Pierson*, 3 Cai. at 178.
266. See Rose, supra note 247, at 76.
267. *Pierson*, 3 Cai. at 178 (emphasis added).
268. 8 F. 159 (D. Mass. 1881).
beach and appropriated it to his own use.\textsuperscript{269} In a sense, killing did not deprive the whale of its natural liberty, because once the whale was shot with a bomb lance, it would sink to the bottom of the ocean and then several days later would float to the surface.\textsuperscript{270} As a result, a person other than the person who killed the whale could easily take it, which is what occurred, thus triggering the lawsuit.

The court in \textit{Ghen} looked to the customs in the whaling industry in Provincetown and found that according to industry usage, the person who killed the whale in the same manner as the plaintiff established an ownership right in the whale.\textsuperscript{271} Not all industry usages would pass muster under the court's reasoning, but the custom established in \textit{Ghen} required the "only act of appropriation that [was] possible in the nature of the case."\textsuperscript{272} This reasoning should not be limited to tangible assets, however. It should apply to all assets that are not susceptible of manual possession.

When intangible rights are involved, the people involved in the relevant business will necessarily define the acts that constitute possession. This is already the case in the domain name business; the person who can transfer the asset is the person whose name is in the registrar's records.\textsuperscript{273} Participants in the businesses that use electronic chattel paper are also defining control of that asset.\textsuperscript{274} While some have criticized the practice of defining possession by custom, they do so primarily because custom does not give notice to the entire world of the claimant's possession.\textsuperscript{275} This criticism has relevance when we look to first possession as a method of establishing title, but when we are talking about creditors' remedies against electronic assets, the title has already been established by contract. In the remedies and repossesssion context, however, it is probably not necessary to give the entire world notice of a change in control of the asset. As is currently the case in the real estate business, where recording is deemed to give notice to the whole world of the ownership of real property, systems for recording the transfer of ownership of electronic assets will likely be developed.

Gift cases from the early twentieth century also illustrate that the corporeal manifestation of an asset does not have great importance in property law. In a series of law review articles published in 1926 and 1927, Philip Mechem discussed the delivery requirement as ap-

\textsuperscript{269.} \textit{Id.} at 160.
\textsuperscript{270.} \textit{Id.} at 159.
\textsuperscript{271.} \textit{Id.} at 160.
\textsuperscript{272.} \textit{Id.} at 162.
\textsuperscript{274.} See generally Hallendorff & Jerbic, \textit{supra} note 243.
\textsuperscript{275.} Epstein, \textit{supra} note 247, at 1231; Rose, \textit{supra} note 247, at 85.
plied to gifts of chattels. 276 Many of the points that Mechem made in those articles are as relevant today with respect to electronic assets as they were in the 1920s with respect to gifts of tangible assets. For instance, he notes that it is nearly impossible, and perhaps not very helpful, to define the term “delivery.” 277 The concept of delivery, as applied to gifts, would seem to be inextricably related to the concept of possession, but as Mechem illustrated in his three articles, courts did not uniformly apply a delivery requirement that mandated a manual transfer of physical possession (“manual tradition” in his parlance). In proposing a coherent approach to delivery and possession, he identified manual tradition as the preferred method of delivery sufficient to complete a gift and then defined adequate delivery short of manual tradition in terms of the functions that manual tradition serves. 278

Courts have been called upon to opine on the validity of gifts in the absence of manual delivery for hundreds of years. These cases do not necessarily turn on the tangible or intangible nature of the right given; rather, they turn on the means of control or on indicia of ownership. In the 1920s Mechem recognized that a gift of a thing is not a transfer of the thing, but that the gift is a transfer of rights in the thing. 279 This view is in accordance with the commonly understood definition of property as the relationships among persons with respect to things or resources. 280 At the beginning of the twentieth century, questions regarding delivery of gifts arose in several contexts including gifts of choses in action and gifts of chattels that could not be easily manually possessed.

The analysis in the first category of cases recognized the fact that some intangible rights were reified in paper such that delivery of the paper constituted delivery of the right. 281 Courts then began to recognize that choses in action that were not reified could also be transferred as gifts, but there was disagreement on the method of transfer of those types of rights. In some cases, the courts held that delivery

277. Mechem, supra note 252, at 342.
278. Id. at 354. Mechem lists three functions of the delivery requirement: “(a) make[] vivid and clear to the donor the act he is doing, (b) make[] unequivocal to contemporary witnesses, if any, the nature of the act done, and (c) give[] to the donee, subsequently to the alleged gift, something which may serve as at least presumptive evidence of the truth of his claim.” Id.
279. Id. at 346.
280. See supra notes 99-100 and accompanying text.
of such an intangible right could only be effected by a written instrument;\textsuperscript{282} in others, the courts dispensed with the writing requirement, finding a valid delivery when there were sufficient facts to show not only the intention of the donor to make the gift but also the acceptance by the donee.\textsuperscript{283} In the latter group of cases, courts were careful to recognize the evidentiary nature of the delivery requirement and stressed that when the intentions of the parties are clear, such intentions should not be thwarted by an arbitrary physical delivery requirement.\textsuperscript{284}

Another group of cases discussed by Mechem dealt with gifts of livestock. Here, Mechem illustrated the courts’ reliance on business practices in fashioning their delivery requirements. As a result, in a case involving a gift of cattle to minor children, \textit{Coke & Reardon v. Ikard},\textsuperscript{285} the court found sufficient delivery where donor branded the cattle with separate marks and recorded those marks, as required by statute, in the names of the donee children.\textsuperscript{286} In analyzing \textit{Coke & Reardon}, Mechem made several points that have been echoed by modern commentators. The first is that where cattle and other livestock are involved, the concept of possession is somewhat illusory. In his description of the spectrum of possession, he explains that when a calf is being branded, it is probably in the possession of the person wielding the branding iron, but once it is out on the range, it is in the “possession” as the term is commonly understood, of no one.\textsuperscript{287}

Another point that is worth noting about livestock cases is that in some of them, a governing statute provided that title to livestock transferred with sale of the mark, while in others,\textsuperscript{288} the courts simply noted that branding, being a method of permanent identification, was practically the only way to evidence title.\textsuperscript{289} Accordingly, courts and legislatures rendered the livestock fungible by recognizing that ownership is a right and that the right of ownership can be transferred in any way practicable. As I will discuss below, the ability of the American legal system to render assets fungible is recognized as one of our system’s great triumphs.\textsuperscript{290}

Just as today, courts deciding cases dealing with the nature of electronic assets attempt to analogize them to tangible assets, yesterday’s courts tried to fashion concepts of delivery and possession to fit cases in which those concepts were inapplicable. Other courts and

\begin{itemize}
\item \textsuperscript{282} Adams, 178 P. at 500.
\item \textsuperscript{283} Ogdon, 145 N.E. at 516.
\item \textsuperscript{284} Id.; Devol v. Dye, 24 N.E. 246, 248 (Ind. 1890).
\item \textsuperscript{285} 87 S.W. 869 (Tex. Civ. App. 1905).
\item \textsuperscript{286} Id. at 869-70.
\item \textsuperscript{287} Mechem, Delivery II, supra note 276, at 483.
\item \textsuperscript{288} See, e.g., Coke & Reardon, 87 S.W. at 869-70.
\item \textsuperscript{289} See, e.g., Dodge v. Jones, 14 P. 707, 709 (Mont. 1887).
\item \textsuperscript{290} See infra note 299 and accompanying text.
\end{itemize}
the commentators of the day noted the absurdity of trying to fit business practices that did not rely on physical possession into narrowly defined categories of physical possession.\textsuperscript{291} Mechem described the courts’ penchant for describing all sorts of acts as delivery as “an example of the judicial inclination to force anything and everything into some existing pigeon hole.”\textsuperscript{292}

In the creditors’ remedies context, possession is important to the creditor’s ability to transfer the asset in question and thus realize the value of it. Under the U.C.C. and other state creditors’ rights laws, tangibility plays an important role in the transfer. Under traditional property law, however, it is the law’s ability to transform the concrete into the abstract that facilitates transfer of assets. For instance, property law does not speak of land as land, but rather of estates in land. An estate in land, such as a leasehold, is an intangible right. Courts have historically standardized estates so that these estates could be more easily sold.\textsuperscript{293}

Viewed in this light, our legal treatment of electronic assets is paradoxical. While legal scholars and economists have long separated the concept of property from individual items of property, today’s legal institutions tend to focus on the physical attributes of individual items of property in developing rules to govern creditors’ rights in electronic assets. As a result, our ability to transform a tangible asset into an intangible right seems to have disappeared when the underlying asset is intangible.

One particularly good explanation of the importance of separating the concepts of possession and control from that of tangibility is found in Hernando de Soto’s \textit{The Mystery of Capital}.\textsuperscript{294} In this book, de Soto argues that capitalism is successful in the West but unsuccessful in developing countries because Western countries have a viable system of “[p]roperty representation [that] enable[s] people to think about assets not only through physical acquaintance but also through the description of their latent economic and social qualities.”\textsuperscript{295} As an example of how countries such as the United States effectively represent the economic concept of property, de Soto uses the land title system.

De Soto’s use of the land title system in the United States as the paradigm representational system illustrates how our system has effectively converted tangible items into intangible concepts to facili-

\begin{footnotesize}
\begin{enumerate}
\item[291.] \textit{Id.}
\item[292.] Mechem, \textit{Delivery II, supra} note 276, at 483.
\item[293.] \textsc{Dukeminier et al.}, \textit{supra} note 114, at 183.
\item[294.] \textsc{Hernando de Soto, The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else} (2000).
\item[295.] \textit{Id.} at 51 (emphasis added).
\end{enumerate}
\end{footnotesize}
tate the transfer of the economic value of those items. He notes that when a house is transferred, nothing physically changes hands.296

The contention that our system has transformed tangible items into intangible concepts is only partially correct, however. Even in the area of real estate transfer, American law retains a vestigial paper delivery requirement. When a house is transferred, people think of the deed as being transferred. Indeed, the deed must be delivered from the seller to the buyer in order for the transfer of title to take effect.297

De Soto also claims that successful Western property systems prosper by making property “fungible.”298 We render items of property fungible by our representational system that places items (by items I mean real and personal property) into standard categories. These standard categories allow buyers and financiers to assess the economic value of the assets in question.299 The foregoing is an accurate depiction of our current property scheme only to a point. To continue with the commercial law example, Article 9 of the U.C.C. adopts a representational system to publicize security interests in all types of assets, tangible and intangible.300 This representational system is the filing system. We generally do not have a representational system for ownership of tangible personal property, because ownership of that type of property is commonly transferred by manual delivery.

The cases and commentary discussed in this Part show that generally, we have no problem viewing property as an abstraction when tangible assets are involved. Strangely, when the asset itself is somewhat abstract, we have difficulty viewing the rights in the asset in the same abstract way. The cases discussed in Part III show this tendency and the commentary discussed in Part III gives some of the likely reasons for our inability to view intangible assets as assets to which traditional property rules should apply,301 but as I have tried to illustrate, the idea of tangibility as tangibility has no relevance to property law.

V. CONCLUSION

Adapting laws made in an earlier time, when communications were face-to-face and letters were written on paper and signed in ink, to today’s transactions, which are increasingly electronic, can be a

296. Id. at 50.
297. SINGER, supra note 99, at § 11.4.1.2.
298. DE SOTO, supra note 294, at 56-58.
299. Id.
301. See supra notes 102-06 and accompanying text.
great challenge. In commercial law, such adaptation is necessary, because it would be senseless to revise the Uniform Commercial Code every time a novel form of asset is developed. After all, the U.C.C. was originally drafted in a flexible manner so that it could encompass modern transactions with some judicial interpretation.

In order for courts to adapt commercial law to transactions in electronic assets, they should keep in mind general property principles. Courts have been refashioning concepts of possession for hundreds of years, and it is a small conceptual jump from determining control over a wild fox to finding control over a domain name. The failure to keep these general principles in mind will inevitably lead to Judge Easterbrook’s “Law of the Horse,”302 a law that is not only shallow, but one that is unable to adapt to new forms of assets as they develop.

302. See Easterbrook, supra note 151, at 208.