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A Revised Filing System: Recommendations and Innovations

Edward S. Adams,* Steve H. Nickles,** Susan Sande,*** and William R. Shiefelbein****

Many are familiar with the story of two law students who were on a mountain climbing trip in Alaska when they were approached by a ferocious grizzly bear¹ as they slept in their tent. Awakened by the noise outside the tent, the one law student calmly began putting on her running shoes. Quite astonished by her classmate's response to the situation, the other student reminded her that the bear could likely outrun either one of them—shoes or no shoes. With a hint of self-assurance in her voice, the fully-shoed student replied that, contrary to her classmate's assumption, she did not have to outrun the bear; instead, she merely needed to outrun *her*.

Although some might contend that this anecdote reveals a great deal about law students in the 1990s,² it also illustrates the situation faced by secured parties³ as they seek to avoid the effects of the bankruptcy bear. That is, secured parties seek to put themselves in the best position possible vis-a-vis other secured and unsecured creditors by filing⁴ before these parties so

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1. Wesley Loy, "Bearanoia" Has Alaskans Shooting Rather than Shooing, WASH. POST, Sept. 8, 1992, at A4. After a bear attack on two tourists in July of 1992, Alaskans and tourists, upon sighting a bear, have been shooting first and asking questions later. *Id.*

2. Daniel Gross, *Farewell to K Street: On the Lost Allure of Being a Corporate Lawyer*, WASH. POST, Jan. 24, 1993, at C1 (noting that after climbing 50% between 1985 and 1990, law school applications dropped in 1993 and 1994 amid reports of a tightening job market).

3. U.C.C. § 9-105(m) (1990). A secured party or secured creditor is a lender or seller in whose favor a security interest exists. *Id.*

4. *Id.* § 9-302(1). As a general rule, a financing statement must be filed to perfect a security interest. The appropriate place to file depends upon which

as to perfect their security interest⁵ in the debtor's collateral.⁶ Secured creditors are well aware of section 9-312(5)(a) of Article 9, which provides that "[c]onflicting security interests rank according to priority in time of filing or perfection."⁷ So too, they are equally familiar with section 9-301, which provides by negative implication that perfected secured creditors have priority over those parties having an unperfected security interest, as well as over unsecured creditors.⁸

The golden *first-to-file* rule, subject to exception on occasion,⁹ does not mean, of course, that secured creditors can magically avoid the effects of bankruptcy. It does, however, place them in a situation analogous to that of the law student who is prudent enough to put on her running shoes: It assures secured creditors priority such that, to the extent the bankruptcy bear eats anyone, it eats them last. This is almost, but not quite, as good as guaranteeing them that they will be left off the bankruptcy menu entirely.

Central to the operation of this priority rule is the notion of a public notice filing system by which secured parties can perfect their security interests. The significance for commercial transactions of the Article 9 filing system cannot be overstated.¹⁰ Millions of Article 9 filings are made each year throughout the

version of § 9-401 the state has enacted. *Id.* § 9-401. Once secured parties ascertain the proper office for filing, filing is simple. It requires only a financing statement and a nominal fee. *Id.* § 9-403(1).

5. *Id.* § 1-201(37). A "security interest" is "an interest in personal property or fixtures which secures payment or performance of an obligation." *Id.*

6. Peter A. Alces, *Abolish the Article 9 Filing System*, 79 MINN. L. REV. 679, 683 (1995).

7. U.C.C. § 9-312(5)(a).

8. *Id.* § 9-301.

9. See, e.g., *Sanyo Elec., Inc. v. Howard's Appliance Corp.* (*In re Howard's Appliance Corp.*), 874 F.2d 88, 94-95 (2d Cir. 1989) (re-ordering normal priority scheme pursuant to constructive trust theory); *General Ins. Co. of Am. v. Lowry*, 412 F. Supp. 12, 14-15 (S.D. Ohio 1976) (re-ordering normal priority scheme pursuant to equitable lien theory), *aff'd*, 570 F.2d 120 (6th Cir. 1978); *Producers Cotton Oil Co. v. Amstar Corp.*, 242 Cal. Rptr. 914, 926-27 (Ct. App. 1988) (supplementing normal priority scheme with an unjust enrichment theory); *Affiliated Foods, Inc. v. McGinley*, 426 N.W.2d 646, 647-48 (Iowa Ct. App. 1988) (re-ordering normal priority scheme pursuant to estoppel principles); *First Wyo. Bank, Casper v. Mudge*, 748 P.2d 713, 717 (Wyo. 1988) (re-ordering normal priority scheme pursuant to tortious interference with contractual relations theory).

10. A. Eric Kanders, Jr., Note, *Substitution of Proceeds Theory for U.C.C. § 9-306(5), or, the Expansive Life and Times of a Proceeds Security Interest*, 80 VA. L. REV. 787, 787 n.4 (1994) ("Though originally used only for occasional financing in specialized transactions or as a second-class alternative to traditional methods of business financing, secured commercial transactions have

United States, and millions of searches of the filing system are conducted both to identify and to verify the existence of Article 9 security interests in the subject debtor's collateral.¹¹ Literally, billions upon billions of dollars worth of collateral are encumbered by Article 9 filings in the United States.¹²

The present effort to revise Article 9 generally and, in particular, the Article 9 filing system, presents a unique opportunity to reexamine the wisdom of, as well as the difficulties with, a priority system that relies on public notice filing. Even more importantly, the revision process affords us a chance to proffer solutions to the problems that have arisen with the current, and, in many states, quite archaic, filing systems now in place. In this regard, this Article suggests specific statutory reforms that could minimize many of these problems. More ambitiously, however, this Article also suggests that reformers should change the system radically to take advantage of modern technologies and profit-driven market forces. To the extent filing remains a state-run enterprise, each state filing office should adopt a centralized, computerized filing system. Moreover, states should require filing offices to sell information in bulk at cost to private vendors who would then sell this information to the public.

In developing these suggestions, Part I of this Article explores the history of the Article 9 filing system. In particular, Part I focuses on the predecessors to Article 9 that sought to cure the "ostensible ownership problem"¹³ and those alternatives that the drafters of Article 9 considered before their adoption of a public notice filing system. Part II then explores the various filing systems and structures in place in the differing jurisdictions from a technological perspective. Part II also highlights various problems with the present Article 9 filing system and suggests specific recommendations for improving the efficiency of the present system. Finally, Part III formulates various models of filing systems that could supplant or, perhaps, operate in coordination with the existing and proposed state fil-

evolved into . . . one of the most vital tools in credit financing for nearly every type of significant business and consumer purchase in America.").

11. See, e.g., Lynn M. LoPucki, *Why the Debtor's State of Incorporation Should Be the Proper Place for Article 9 Filing*, 79 MINN. L. REV. 577, 606 n.101 (1995) (describing Westlaw's PH-VCC database, which contains index entries for UCC filings in 17 states).

12. Kanders, *supra*, note 10 at 787 n.4 (noting that secured commercial transactions have evolved into a multibillion-dollar industry).

13. Douglas G. Baird & Thomas H. Jackson, *Possession and Ownership: An Examination of the Scope of Article 9*, 35 STAN. L. REV. 175, 177 (1983).

ing systems. Part III also discusses new technological filing system models and suggests that the states require their filing offices to sell their information in bulk to private vendors.

I. A HISTORY OF THE ARTICLE 9 FILING SYSTEM

An unperfected security interest remains enforceable against a debtor.¹⁴ Perfection, however, is a condition for the enforceability of a security interest against third parties having claims to the collateral.¹⁵ A secured party perfects her interest by taking the "applicable steps" that Article 9 requires for perfection.¹⁶ In most cases, the only required step is filing a fi-

14. See U.C.C. § 9-201 ("Except as otherwise provided . . . a security agreement is effective according to its terms between the parties . . ."); *Dominion Bank v. Nuckolls*, 780 F.2d 408, 411-12 (4th Cir. 1985) (holding that failure to strictly comply with state filing requirements leaves the security interest in the collateral unperfected as against third parties, although the security interest remains valid and enforceable against the debtor); *H.D. Fitzpatrick v. FDIC*, 765 F.2d 569, 573 (6th Cir. 1985) ("An unperfected security interest under the Uniform Commercial Code is valid against the debtor . . ."); see also *In re Waldvogel*, 125 B.R. 13, 15 (Bankr. E.D. Wis. 1991) (holding that an unperfected security interest is valid against the debtor in bankruptcy but is subordinated to the claims of the bankruptcy trustee); *In re Pebsworth*, 121 B.R. 600, 601 (Bankr. N.D. Okla. 1990) (same); *In re Savage*, 92 B.R. 259, 261 (Bankr. S.D. Ohio 1988) (same).

15. Although a security agreement is enforceable not only between the parties to it, but also "against purchasers of the collateral and against creditors," U.C.C. § 9-201, this rule by its very terms is subject to exceptions created by Article 9's priority provisions. See, e.g., *id.* § 9-301 (creating priorities for lien creditors and transferees in bulk against unperfected secured parties).

16. *Id.* § 9-303(1). Taking the applicable steps, however, will not perfect a security interest that has yet to be created. Perfection by any means also requires action causing a security interest to attach pursuant to § 9-203(1). *Id.*; see also *Stowers v. Manon (In re Samuels & Co.)*, 526 F.2d 1238, 1247 (5th Cir.) (per curiam) ("The whole point of Article 9 is the continuity of perfected security interests *once they have properly attached . . .*"), *cert. denied*, 429 U.S. 834 (1976); *Savig v. Americana State Bank (In re Savig)*, 50 B.R. 1003 (Bankr. D. Minn. 1985) (holding that a secured party does not perfect its interest in after-acquired property until debtor acquires interest in property); *Davidson v. Arkansas River Valley Grain Drying Co-op. (In re Glass)*, 26 B.R. 166, 168 (Bankr. E.D. Ark.) (holding that issue of perfection is moot unless a security interest has attached), *aff'd*, 692 F.2d 55 (8th Cir. 1982); *Herringer v. Mercantile Bank*, 866 S.W.2d 390, 392 (Ark. 1993) (holding that a security interest becomes perfected when it has attached and when all the applicable steps required for perfection have been taken; if steps are taken before the security interest attaches, it becomes perfected at the time it attaches); *Food Service of America v. Royal Heights, Inc.*, 850 P.2d 585, 589 (Wash. Ct. App. 1993) (holding summary judgment improper where there is a dispute whether a security interest exists, even if both parties concede the appropriate steps were taken to perfect), *aff'd*, 871 P.2d 590 (Wash. 1994). Nevertheless, at least in the case of filing as a

nancing statement.¹⁷ The secured party thereby puts the world on notice of her interest (i.e., cures the ostensible ownership problem),¹⁸ which is generally valid against persons who thereafter deal with the collateral.¹⁹ Later claimants are unprotected by their actual ignorance of the security interest.²⁰ They could have learned of the interest by checking the public records.

Significantly, this filing system for giving public notice of security interests in personal property has not always existed. Recording acts providing for the filing of chattel mortgages and other security devices were uncommon in the United States until the second half of the nineteenth century.²¹ In the absence of a recording act and compliance with it, a debtor's creditors and purchasers of collateral could easily be misled by arrangements that permitted a debtor freely to hold and use property she did not own outright. Where there was no system for recording encumbrances on chattels, creditors or purchasers had no reliable

means of perfection, the applicable step may be taken before a security interest attaches to the collateral. U.C.C. § 9-402(1).

17. U.C.C. § 9-302(1) cmt. 1 ("[T]he general rule [is] that to perfect a security interest under this Article a financing statement must be filed."). To be effective, however, the financing statement itself must comply with the requirements of § 9-402 and must be filed in the place or places identified in § 9-401(1).

18. Baird & Jackson, *supra* note 13, at 186; William H. Lawrence, *The "Created by His Seller" Limitation of Section 9-307(1) of the U.C.C.: A Provision in Need of an Articulated Policy*, 60 IND. L.J. 73, 92-93 (1984); Charles W. Mooney, Jr., *The Mystery and Myth of "Ostensible Ownership" and Article 9 Filing: A Critique of Proposals to Extend Filing Requirements to Leases*, 39 ALA. L. REV. 683, 701-06 (1988); Peter L. Mancini, Note, *Bankruptcy and the UCC as Applied to Securitization: Characterizing a Mortgage Loan Transfer as a Sale or a Secured Loan*, 73 B.U. L. REV. 873, 890 (1993).

19. Importantly, however, even a perfected security interest is sometimes subordinate to other interests and claims. U.C.C. § 9-303 cmt. 1; *see, e.g., id.* § 9-307(1) (providing that a buyer of collateral in the ordinary course of business takes free of a security interest created by her seller even though the interest is perfected).

20. *United States v. Harrell's Stockyards, Inc.*, 652 F. Supp. 452, 454 (S.D. Miss. 1987) (noting that "purchaser's lack of actual knowledge of a properly perfected security interest has no bearing on the issue of liability"); *Tuloka Affiliates, Inc. v. Security State Bank*, 627 P.2d 816, 822 (Kan. 1981) (Prager, J., dissenting) (concluding that a bank's right of setoff becomes subordinate to a perfected security interest upon filing); *see also Bullock v. Roost (In re Gold Key Properties, Inc.)*, 119 B.R. 787, 790 (Bankr. D. Or. 1990) (holding that, although perfection of a security interest in land as well as in land sale contracts ordinarily requires registration in different records, filing with respect to land sale contract in the county real property records serves as sufficient notice of interest in land because the interests are closely related).

21. *See Garrard Glenn, The Chattel Mortgage as a Statutory Security*, 25 VA. L. REV. 316, 326-27 (1930) (tracing historical development).

means for discovering a secured creditor's interest, which therefore was a secret lien. For this reason, security arrangements that left a debtor in possession of the collateral generally were unenforceable against innocent third parties.²²

Thus, in the earliest days of American secured transactions law, taking possession of the collateral was often the only means by which a secured creditor could protect her interest in the collateral against the claims of others. This sort of security arrangement, the pledge, was simply a bailment for the purpose of securing an obligation, which required a debtor-pledgor to surrender physical control of the collateral to a secured creditor-pledgee.²³ Under this arrangement, someone thereafter acquir-

22. Courts, for example, enforced a pledge agreement against a debtor pledgor either by specifically enforcing the agreement or by imposing an equitable lien on the intended collateral, even though the property had not been delivered to the pledgee. WILLIAM B. HALE, *HAND-BOOK ON THE LAW OF BAILMENTS AND CARRIERS* § 31, at 121 (St. Paul, West 1896). "But, as against other persons, such as purchasers and creditors, who subsequently acquire rights in the property in good faith, the pledgee cannot claim the existence of a pledge, if there has been no delivery." *Id.*; see also ARMISTEAD M. DOBIE, *HANDBOOK ON THE LAW OF BAILMENTS AND CARRIERS* § 74, at 188-90 (1914) (concluding that courts will enforce a contract to deliver against the debtor but not against other creditors); PHILIP T. VAN ZILE, *ELEMENTS OF THE LAW OF BAILMENTS AND CARRIERS* §§ 273a-238 (1908) (noting that possession is required to give notice to subsequent purchasers in good faith). Courts similarly refused to enforce a chattel mortgage that left the mortgagor in possession of the collateral against an innocent third party who had no knowledge of the security arrangement. "[A] mortgage valid against creditors could only be made by a delivery of the property. It was essential that the custody and possession of the goods should be delivered to and retained by the mortgagee." 1 LEONARD A. JONES, *THE LAW OF CHATTEL MORTGAGES AND CONDITIONAL SALES* § 176 (Renzo D. Bowers ed., 6th ed. 1933). Courts considered leaving possession of the collateral with the chattel mortgager to be a fraudulent conveyance. See 1 GRANT GILMORE, *SECURITY INTERESTS IN PERSONAL PROPERTY* § 2.1 (1965); Glenn, *supra* note 21, at 324-29.

Many courts did not always take such a restricted view of conditional sales contracts, however. Even before states enacted recording statutes, a vendor who released goods to the debtor-buyer could, in a large number of states, enforce his reservation of title against everyone, including good-faith purchasers for value. See FRANCIS B. TIFFANY, *HANDBOOK OF THE LAW OF SALES* § 44, at 135-38 (2d ed. 1908); 2 SAMUEL WILLISTON, *THE LAW GOVERNING SALES OF GOODS AT COMMON LAW AND UNDER THE UNIFORM SALES ACT* §§ 324-326 (3d ed. 1948); Garrard Glenn, *The Conditional Sale at Common Law and as a Statutory Security*, 25 VA. L. REV. 559, 562-65 (1939); 2A U.L.A. §§ 47-48 (1924) (discussing the common-law incidents of the conditional sale). *But see, e.g.*, Gilbert v. National Cash Register Co., 52 N.E. 22, 25-26 (Ill. 1898) (refusing to enforce conditional sales contract against purchaser when vendor had allowed buyer to retain possession); Anchor Concrete Mach. Co. v. Pennsylvania Brick & Tile Co., 140 A. 766, 767 (Pa. 1928) (holding that "an innocent purchaser for value from a conditional vendee in possession acquires the title as against the vendor").

23. RESTATEMENT OF SECURITY § 1 cmt. 1 (1941).

ing an interest in the property could not justly complain of the pledgee's interest. Because the debtor lacked possession and control of the collateral, no reasonably alert party could have been misled about the true state of the debtor's title to the property. In other words, possession on the part of the pledgee cured the ostensible ownership problem:

The delivering of the property pledged by the pledgor to the pledgee, and the acceptance and continued possession of the property by the pledgee, is that which gives the world notice of the pledgee's interest and the extent of his rights to the property in his possession. These stand in the place and stead of the recording of a mortgage, or the filing of a lien, as it is a well-understood principle of law that possession of property is notice to all the world of all the rights and interests of the possessor of the property possessed.²⁴

On this basis, courts for centuries have generally enforced pledge arrangements against third parties.²⁵

Although a pledge was perhaps the most common form of pre-Article 9 security device, there were a wide variety of others. Chattel mortgages, for instance, were commonplace in the first half of the nineteenth century when "state legislatures passed statutes that enabled lenders to acquire certain nonpossessory interests in their debtor's property, provided that they recorded their interests in a public file."²⁶ As a general proposition, the

24. VAN ZILE, *supra* note 22, § 237a.

25. Indeed, the pledge is

of great antiquity, and laws governing such pawns or pledges are to be found among all the nations of ancient times. Thus, more or less elaborate provisions on this subject are found in the Israelitic code of Moses, the monumental Babylonian code of Hammurabi, and in other codes of the Orient.

DOBIE, *supra* note 22, § 70, at 173-74 (footnotes omitted). The English common law of pledges itself is rooted in Roman law. See HALE, *supra* note 22, § 25, at 102-03 (discussing history of the law of pledges); JAMES SCHOULER, A TREATISE ON THE LAW OF BAILMENTS 166, 170 (Boston, Little, Brown & Co., 3d ed. 1897); Rucker Todd, *Brief Introduction to the Historical Development of the Pledge and Pawn*, 6 GA. B.J. 13, 19-20 (1943). The definitive comparison of the common law and civil law on the subject of pledges is in JOSEPH STORY, COMMENTARIES ON THE LAW OF BAILMENTS 253-322 (James Schouler ed., Boston, Little, Brown & Co., 9th ed. 1878).

26. DOUGLAS G. BAIRD & THOMAS H. JACKSON, SECURITY INTERESTS IN PERSONAL PROPERTY 35 (2d ed. 1987) contains an excellent summary and analysis of the history of pre-Article 9 security interests and informs much of this section. See also *R-F Fin. Corp. v. Summers*, 32 P.2d 312, 317-18 (Okla. 1934) (holding that filing of chattel mortgage serves as constructive notice to third party); Lawrence Bach, Note, *Trade Name Filing: Should it be Sufficient to Perfect a Security Interest Under U.C.C. Section 9-402?*, 35 CASE W. RES. L. REV. 51, 51 n.2 (1984). See generally 1 GILMORE, *supra* note 22, §§ 2.1-2.8 (discussing chattel mortgages); 1 JONES, *supra* note 22, § 176 (comparing chattel mortgages to other early forms of security interests).

chattel mortgage acts did not effectively provide public notice of nonpossessory liens. Because the filing systems were located in every county in a state, a secured party with an interest in a movable type of collateral might have had to file in hundreds of places to guarantee the effectiveness of the interest.²⁷ Moreover, because typical chattel mortgage acts required a filing that recorded all the details of the transaction, they were expensive and time-consuming to complete. Finally, chattel mortgage acts did not make all property available as collateral. In particular, these acts rejected after-acquired property clauses on the grounds that debtors could not grant an interest in collateral they did not already possess.²⁸

Another common form of pre-Article 9 security interest was the conditional sale.²⁹ Pursuant to this device, a seller wishing to extend credit would purport to retain title to the property until the debtor paid in full.³⁰ Of course, this created an ostensible ownership problem and state legislatures reacted by requiring a filing for these transactions.³¹ This reaction began the proliferation of filing systems as, "[u]nfortunately, most states created separate filing systems for conditional sales, so that any creditor

27. *Stewart v. Platt*, 101 U.S. 731, 736-37 (1879) (holding that chattel mortgage filed based on partnership's residency should have been filed based on residency of individual partners; mortgage therefore was void against creditors); see also Bach, *supra* note 26, at 51 n.1 (discussing UCC comments on the effects of many different filing systems). *But see* Keidan v. Universal C.I.T., Credit Corp. (*In re Mohammed*), 327 F.2d 616, 617-18 (6th Cir. 1964) (holding that chattel mortgage appropriately filed on automobile remained valid after the mortgagor moved into new county, even though mortgagee did not record in new county).

28. See Bruce A. Campbell, *Contracts Jurisprudence and Article Nine of the Uniform Commercial Code: The Allowable Scope of Future Advance and All Obligations Clauses in Commercial Security Agreements*, 37 HASTINGS L.J. 1007, 1017-18 (1986); David Frisch, *UCC Section 9-315: A Historical and Modern Perspective*, 70 MINN. L. REV. 1, 19 n.70 (1985); Richard A. Vance, *Protecting Security Interest in Equine Collateral Under the Clear Title Provisions of the Food Security Act of 1985*, 78 KY. L.J. 447, 450 n.15 (1990); Karen L. Able, Note, "Hot Goods" Liability: Secured Creditors and the Fair Labor Standards Act, 87 COLUM. L. REV. 644, 652-53 (1987); see also David Cohen & Albert B. Gerber, *The After-Acquired Property Clause*, 87 U. PA. L. REV. 635, 635-38 (1939) (reviewing general common-law distrust of after-acquired property clauses).

29. BAIRD & JACKSON, *supra* note 26, at 40. See also Amelia H. Boss, *Lease Chattel Paper: Unitary Treatment of a "Special" Kind of Commercial Specialty*, 1983 DUKE L.J. 69, 78-79 (discussing conditional sale transfers at common-law); Steve H. Nickles, *The Brendan Brown Lecture: Radical Reductionism in Debtor-Creditor Law*, 39 CATH. U.L. REV. 765, 778 (1990) (discussing pre-Code security devices).

30. BAIRD & JACKSON, *supra* note 26, at 40.

31. *Id.*

who wanted to determine whether property of his debtor was encumbered had to check two files rather than one."³² Despite the filing requirement, many sellers continued to use the conditional sale, primarily when financing industrial equipment. In this context, the conditional sale allowed the seller to take priority over an existing secured creditor with an interest in the debtor's after-acquired property. Courts upheld such a result "[b]ecause the seller never parted with 'title' to the goods, and, as such, the existing secured party could not assert an interest in them."³³ The secured party's interest was limited to the after-acquired property "owned" by the debtor.³⁴

Four other pre-Article 9 security devices are also noteworthy. In the first, a field warehousing arrangement, an "independent field warehousing company would fence off part of the manufacturer's property, post a few signs, and hire someone to run the warehouse."³⁵ The terms of the agreement would authorize the operator of the warehouse "to release the goods only when instructed by the person named in the documents of title"—the lender.³⁶ In short, the warehouse operator would act as the agent of the lender, and courts generally upheld the validity of these agreements as simply a version of a valid possessory security interest.³⁷

The second device, the trust receipt, was an outgrowth of letters of credit concepts. In the letters of credit arena involving import financing, courts held that a bank could "entrust" a debtor with possession of the bank's property (in the form of a negotiable document of title) for the purpose of selling the goods the document represented.³⁸ Professors Baird and Jackson observed that "[t]he transaction worked in part because the property that was entrusted to the debtor was property that the bank had acquired from the debtor's seller. As in the conditional sale, the debtor, or, so the reasoning went, never had title to the property."³⁹ In the trust receipt context, "[j]ust as the overseas seller sent a document of title to an import bank, the automobile manufacturer could send one to a finance company. The finance

32. *Id.*

33. *Id.* at 41.

34. *Id.*

35. *Id.* at 47.

36. *Id.*

37. *Id.*

38. *Id.* at 48.

39. *Id.* (citing Karl T. Frederick, *The Trust Receipt as Security*, 22 COLUM. L. REV. 395, 546 (1922)).

company would then entrust the document to the dealer, who would give the finance company a written receipt"—the trust receipt.⁴⁰ These transactions became quite common during the 1920s, although "some courts were unwilling to [permit them] because, in the absence of a statute creating a filing system, there was no way a creditor could cure the ostensible ownership problem."⁴¹

The third device, the factor's lien, developed out of a common practice in the textile industry.⁴² Textile factors, historically agents of the sellers, were a source of credit for small textile mills. The factors "made advances to their manufacturers and retained a lien on property they held for resale."⁴³ Over time, factors began to assert liens on manufacturers' inventories of textiles, "even though they no longer possessed the goods except constructively through arrangements similar to a field warehouse."⁴⁴ In 1911, New York enacted legislation "that granted factors the right to take an effective lien on their manufacturer's inventory but required that they post a sign at [the manufacturer's] plant and . . . make a special filing."⁴⁵ Factor's lien acts were passed in a number of other jurisdictions as well.⁴⁶ Gradually, moreover, "factors in the textile industry looked principally to accounts receivable as the security for (and the source of repayment of) loans they extended to manufacturers."⁴⁷

Finally, in the 1930s, a new type of security device emerged. Prompted by the desire of lenders to take security interests in their debtors' accounts receivable, lenders entered into revolving credit arrangements with their debtors whereby they would lend money to the debtors based on some percentage value of their

40. *Id.* at 49.

41. *Id.*; see also *In re Ford-Rennie Leather Co.*, 2 F.2d 750, 752-53 (D. Del. 1924); *In re A.E. Fountain, Inc.*, 282 F. 816, 828 (2d Cir. 1922) (regarding trust receipt as a chattel mortgage).

42. BAIRD & JACKSON, *supra* note 26, at 43; see, e.g., *Textile Banking Co. v. Widener*, 265 F.2d 446, 448 (4th Cir. 1959) (describing textile company's use of factor's liens); *In re Lincoln Indus.*, 166 F. Supp. 240, 243 (W.D. Va. 1958) (noting use of "an admittedly valid factor's lien"), *aff'd in part, rev'd in part*, 265 F.2d 446 (4th Cir. 1959).

43. BAIRD & JACKSON, *supra* note 26, at 44.

44. *Id.*

45. *Id.*

46. *Id.*; see also 1 GILMORE, *supra* note 22, at 138-42 (discussing increased popularity of factor's liens between 1940 and 1960).

47. BAIRD & JACKSON, *supra* note 26, at 45; see also 1 GILMORE, *supra* note 22, at 139-42 (noting relationship between textile industry's struggle during the Depression and development of security interests in receivables).

outstanding accounts receivable.⁴⁸ Baird and Jackson observed that, in practice, "[T]his revolving credit arrangement was often a long-term one, but the lender could quickly adjust for changes in the manufacturer's fortunes by adjusting the percentage of the accounts receivable the manufacturer could draw on."⁴⁹ By the 1950s then, most types of personal property could be used as collateral to secure loans. Because of the wide variety of security devices, however, it was likely that "half a dozen filing systems covering chattel security devices might be maintained within a state, some on a county basis, others on a state-wide basis, each of which had to be separately checked to determine a debtor's status."⁵⁰ Accordingly, the drafting of Article 9 was undertaken to address this lack of uniformity and to increase the efficiency of borrowing and lending with secured credit. As Grant Gilmore noted in this regard:

[G]radually changing attitudes toward filing as an effective method of giving a debtor's creditors notice of encumbrances on his property may well explain the unfortunate fact that the filing systems tended to proliferate, just as the security devices themselves did. When a new device reached statutory maturity, it was regularly covered by a new and independent filing system, kept in a different set of books in a different place by a different public official according to different principles from any of the previously established filing systems. It is quite probably true that the newer filing systems were improvements on the older ones in the sense that they were better designed to give actual notice to creditors. However, the very fact of proliferation made the filing system as a whole cumbersome, expensive to maintain and ineffective to serve its principal functions — that is, of providing creditors with an easily available method of checking on a borrower's financial status, while at the same time providing lenders who have made secured loans an easy and certain method of perfecting their security interests. The typical pre-Code pattern included separate filing systems for chattel mortgages, for conditional sales, for trust receipts, for factor's liens and for assignments of accounts receivable. In such a situation the expense and difficulty of making a thorough credit check are obvious. Since the filing requirements were themselves frequently obscure and tricky, the chances were good that a lender who, through his counsel, was familiar with one device would inadvertently go wrong in attempting to comply with another and fail to perfect his security interest.⁵¹

Article 9 sought to correct these problems by adopting a system based on centralized, uniform notice filing. Even at the time of Article 9's drafting, however, some viewed with suspicion the idea that a filing system could legitimize nonpossessory liens

48. BAIRD & JACKSON, *supra* note 26, at 45-46.

49. *Id.* at 46.

50. U.C.C. § 9-101 cmt.

51. 1 GILMORE, *supra* note 22, at 463.

in personalty. As Gilmore wrote, "[a] tradition going back for hundreds of years [continued to] stigmatize[] any security arrangement, outside the real property field, in which the debtor was allowed to remain in possession of the collateral."⁵² Moreover, "[j]udicial attitudes derived from this tradition naturally dictated the result that the statutes which established filing systems should be construed against the mortgagees who sought to take advantage of them."⁵³ Yet, as a result of the advent of the security devices detailed above, filing had become popularly accepted, by the time of the initial drafting of Article 9, as "not merely . . . an alternative to possession but as the exclusive method of perfection."⁵⁴ Filing weathered the attacks of traditionalists who insisted on possession as the proper means to perfect a security interest,⁵⁵ but the idea of filing also faced a serious challenge during the drafting process from another foe. During the drafting process, it was suggested "that modern techniques for the collection and communication of credit information . . . made filing systems unnecessary and obsolete."⁵⁶ As proponents of this view argued, lenders, in determining whether to extend credit, based their decisions on the debtors' own financial records, not public filings.⁵⁷ They did so, many argued, because the public records were by necessity incomplete; for example, the records did not disclose possession by the secured party or notations on certificates of title.⁵⁸ These critics of filing asserted that, "since [financial] statements [were] the best available . . . sources of comprehensive credit information, and since they [were] in fact regularly relied on in granting credit . . . they should . . . be made the basis of a truly modern system of creditor protection."⁵⁹ To protect lenders from misinformation, the proponents of such a system suggested that "appropriate safeguards [be] introduced to protect people misled by false or incomplete statements,"⁶⁰ such as penalties of fines or imprisonment for the dissemination or publication of false financial information.⁶¹

52. 1 *id.* at 462.

53. 1 *id.*

54. 1 *id.* at 463.

55. 1 *id.* at 462 (noting that filing was viewed as "a less desirable alternative").

56. 1 *id.* at 463.

57. 1 *id.*

58. 1 *id.* at 463-64.

59. 1 *id.* at 464.

60. 1 *id.*

61. 1 *id.* at 464 n.5.

Early in the process of drafting Article 9, the Reporters actually submitted just such a proposal based on debtor financial records rather than public filings.⁶² Central to the proposal was a duty it placed on the secured party to use due diligence to see that the debtor's financial records made full disclosure of any security interest.⁶³ If the secured party failed in this duty, creditors and purchasers misled by this failure had the right to recover any loss caused by their good faith reliance.⁶⁴ The proposal was short lived because, in Gilmore's words, "the Reporters were unable to convince anyone of the soundness of their position."⁶⁵

An important element of discussion that emerged from this debate, however, was the notion that the principal problem with the filing systems to date was their diversity. As the drafters ultimately concluded, "[t]o the extent that it was possible to replace the congeries of separate filing systems, mostly maintained on a local or county basis, with a unified system, maintained on a state-wide basis, . . . [a] new unified system . . . [might] do the job that the existing systems had failed to do."⁶⁶ Thus, "the 'one big filing system' philosophy became the official Code position."⁶⁷ In practice, however, Article 9 did not succeed in creating one unified filing system. Part II explores the various filing systems and structures currently in place in the differing jurisdictions from a technological perspective, highlights various problems with these systems, and offers specific recommendations for improving them.

II. EXISTING FILING SYSTEMS AND PRESENT DIFFICULTIES

A. THE ROLE OF COMPUTERS IN EXISTING FILING SYSTEMS

The initial drafters of Article 9 based the filing system on the all-paper manual information technology of the time. Because state filing systems today are simply overloaded, states have increasingly moved towards computerization.⁶⁸ To date,

62. 1 *id.* at 464.

63. 1 *id.*

64. 1 *id.*

65. 1 *id.*

66. 1 *id.* at 464-65.

67. 1 *id.* at 465.

68. Most of the following four paragraphs is derived from Report of the Uniform Commercial Code Article 9 Filing System Task Force to the Permanent Editorial Board's Article 9 Study Committee (May 1, 1991) [hereinafter Filing System Task Force], in PERMANENT EDITORIAL BOARD FOR THE UNIFORM

Alabama, Arizona, California, Colorado, Florida, Idaho, Iowa, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New York, New Mexico, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, and Wyoming have adopted computerized filing systems of one form or another.⁶⁹ Moreover, California, Colorado, Georgia, Illinois, Maryland, North Dakota, and Utah combine manual and computerized systems,⁷⁰ and Arkansas, Delaware, Oklahoma, West Virginia, and Wisconsin are moving from manual to computerized systems.⁷¹ Only Indiana, Kentucky, New Hampshire and Rhode Island continue to rely on a traditional manual system.⁷²

Most computerized states either employ a microcomputer or a mainframe that also performs other state functions such as recording election results and maintaining corporate records.⁷³ In the majority of states, a keyboard operator enters filings into the system. A few states employ, or are considering employing, optical character readers for input. Optical character readers read data from a financing statement into the computer without keyboarding. A significant problem with current optical character readers is that, to assure a high degree of accuracy, they require the documents to be filed on special forms. This can be quite inconvenient for users. A final important technique used for inputting data is employed in British Columbia, where parties file financing statements electronically at remote terminals in their offices. The secured party retains the original document, and the computer at the central registry generates an additional hard copy, which is mailed to the secured party as verification that its financing statement is properly on file. The filing office collects its fee by deducting from a deposit made by the secured party as a condition to being able to file in this manner. At present, only Iowa has tested such a system in the United States.⁷⁴

COMMERCIAL CODE, PEB STUDY GROUP, UNIFORM COMMERCIAL CODE ARTICLE 9: REPORT app. [hereinafter PEB REPORT].

69. *Id.* at 115-18.

70. *Id.* at 115.

71. *Id.*

72. *Id.*

73. *Id.* at 20. Much of the analysis in this section is informed by *id.* at 20-21.

74. See, e.g., IOWA ADMIN. CODE r. 721-6.1 to 6.9 (1990) (providing for electronic filing). The regulations for the Iowa system are included in full as Appendix A.

In conducting searches, most states employ software written in-house. The search software typically searches only for exact matches between information provided by the search request and that on the financing statement. Usually, however, human operators intervene to conduct their own searches for similar names—meaning by implication that search accuracy depends upon the abilities of the individual operator. In many states, users can conduct unofficial on-line searches as well. Minnesota, Texas, and Utah all permit on-line searching directly by the customer. Many jurisdictions also are exploring an optical disk technology that “potentially affords great increases in the speed of retrieving documents . . . [b]y allow[ing] digitalized ‘pictures’ of the documents to be stored in a computer memory.”⁷⁵ This means, for example, that a filing office can transmit a copy of a filed financing statement directly to a customer’s fax machine without ever generating a hard copy in the filing office. The still-excessive cost of this technology, however, has limited its widespread adoption. Appendix B summarizes in greater detail the pertinent characteristics of the various filing systems in place.

B. CURRENT FILING PROBLEMS

A variety of problems confront the existing filing system. This section outlines some of the more significant of these problems and details statutory and policy recommendations for addressing them within the current Article 9 framework.⁷⁶ Part III, by contrast, develops broader systemic innovations that would radically streamline the filing system through privatization and heavy use of modern communication and computer technologies.

1. Reform of the Signature Requirement For Financing Statements

Perhaps the most common reason filing officers reject a financing statement is some perceived defect in the signatures

75. *Filing System Task Force*, *supra* note 68, at 21.

76. *See generally* PEB REPORT, *supra* note 68, at 88-90 (discussing filing systems). Many of these recommendations were articulated in an earlier article co-authored by Professors Adams and Nickles, which appeared in the Missouri Law Review. Edward S. Adams & Steve H. Nickles, *Amending the Article Nine Filing System to Meet Current Deficiencies*, 59 Mo. L. Rev. 833 (1994). Copies of the full text of the PEB REPORT are available from the authors or the National Conference of Commissioners on Uniform State Laws, 676 North St. Clair, Suite 1700, Chicago, IL 60611.

submitted by the filing party. Currently, section 9-402(1) includes the signature of the debtor among the formal requisites of a "sufficient" financing statement.⁷⁷ Article 9 also provides, however, that certain kinds of financing statements require only the secured party's signature.⁷⁸ Nonetheless, courts have consistently held that financing statements lacking the debtor's signature are fatally flawed.⁷⁹

This Article recommends the adoption of information systems technology that not only would render Article 9's paper-based filing system obsolete,⁸⁰ but would also raise serious questions about the propriety of a technical signature requirement that fatally flaws so many filings. Already, Iowa⁸¹ and British

77. U.C.C. § 9-402(1).

78. *Id.* § 9-402(2) (stating that a financing statement filed to perfect a security interest in certain types of collateral may be effective if "signed by the secured party instead of the debtor").

79. JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 22-18, at 1032 (3d ed. 1988) ("We have found no case in which a court found a financing statement without the debtor's signature to be effective."); *see, e.g.*, *Lyn-Dee Dairy Farm, Inc. v. Schafsma (In re Lyn-Dee Dairy Farm, Inc.)*, 97 B.R. 95, 97 (Bankr. M.D. Fla. 1989) ("[F]ailure to include debtor's signature on the financing statement results in an unperfected security interest . . ."); *Ledford v. Thorp Fin. Servs. (In re Joyce)*, 52 B.R. 45, 47 (Bankr. S.D. Ohio 1985) ("[A]lthough sometimes harsh, the statutory requirement that a financing statement be signed by a debtor is mandatory."); *Guardian State Bank v. Lambert*, 834 P.2d 605, 608 (Utah Ct. App. 1992) ("[In] the vast majority of cases . . . failure to comply with signature requirements is not a minor error and such failure renders the financing statement invalid."); *see also* *USI Capital & Leasing v. Medical Oxygen Serv., Inc. (In re Medical Oxygen Serv.)*, 36 B.R. 341, 344 (Bankr. N.D. Ga. 1984) (collecting cases); *Southwest Bank v. Moritz*, 277 N.W.2d 430, 435 (Neb. 1979) (collecting cases). *But cf.* *Fedders Fin. Corp. v. Borg Warner Acceptance Corp. (In re Hammons)*, 438 F. Supp. 1143, 1153 (S.D. Miss. 1977) (holding that where debtor is a partnership, failure of one partner to sign financing statement did not render the financing statement defective), *rev'd on other grounds*, 614 F.2d 399 (5th Cir. 1980).

80. Patricia Brumfield Fry, *X Marks the Spot: New Technologies Compel New Concepts for Commercial Law*, 26 LOY. L.A. L. REV. 607, 611 (1993) ("Every piece of paper that is retained, because it is required by law or because of uncertainty about legal requirements, reduces the efficiencies made possible by the use of new technologies.")

In 1991, as noted above, the UCC Article 9 Filing System Task Force reported that the majority of jurisdictions have computerized at least part of their filing and search systems. Filing System Task Force, *supra* note 68, § 59, at 115. Only a handful of jurisdictions do not plan to computerize portions of their filing and search systems in the near future. *Id.*

81. IOWA CODE § 554.9402 (1994) ("The Secretary of State may adopt rules for the electronic filing of a financing statement."); IOWA ADMIN. CODE r. 721-6.1 to 6.9 (1990) (establishing electronic filing rules).

Columbia⁸² provide for the electronic transmission of filing statement information; no paper document is ever submitted. To provide the filing system with the greatest flexibility to adapt to these advances and to promote the ease and convenience of filing for those relying on the system, reform of Article 9 should eliminate signature requirements as requisites of filed financing statements and subsequent filings relating thereto.

Because the Article 9 filing system was conceived as a "notice system," which would lead searchers to further sources of information,⁸³ elimination of the signature requirement would not significantly undermine present filing systems. A financing statement without a signature would still provide notice. Admittedly, both the drafters of Article 9 and the courts have recognized that signature requirements serve an important authentication function,⁸⁴ requiring a debtor's signature theo-

82. Personal Property Security Act, S.B.C. ch. 36, § 1 (1989), *amended by* S.B.C. ch. 11, § 1(e) (1990) (Can.) (amending the term "financing statement" to mean, *inter alia*, "data authorized under the regulations to be transmitted electronically directly to the computer database of the registry").

83. J.K. Merrill & Son v. Carter, 702 P.2d 787, 792 (Idaho 1985) ("Notice is one of the fundamental purposes of the Article 9 filing system."); ROBERT HENSON, SECURED TRANSACTIONS UNDER THE UNIFORM COMMERCIAL CODE § 4-5 (2d ed. 1979) ("The purpose of a financing statement is simply to give notice to the world that designated parties have entered into a secured transaction covering described collateral. The details must be learned from the parties."); *see also* Magna First Nat'l Bank & Trust Co. v. Bank of Ill., 553 N.E.2d 64, 66 (Ill. App. Ct. 1990) ("[T]he purpose of the financing statement is to put third parties on notice."); Interstate Steel Co. v. Ramm Mfg. Corp., 438 N.E.2d 1381, 1385 (Ill. App. Ct. 1982) ("The purpose of a financing statement is to put creditors on notice that further inquiry is prudent."); Merchants Nat'l Bank v. Halberstadt, 425 N.W.2d 429, 432 (Iowa Ct. App. 1988) ("[T]he financing statement is designed to warn subsequent creditors . . ."); *In re* Maple Contractors, 411 A.2d 1186, 1190 (N.J. Super. Ct. App. Div. 1979) ("The primary purpose of a financing statement is to put a searcher on notice . . ."); Pinkerton's, Inc. v. John A. Roebling Steel Corp., 450 A.2d 1336, 1338 (N.J. Super. Ct. Law Div. 1982) ("The primary purpose of a financing statement is to put a searcher on notice that an underlying security agreement may be outstanding."); Hobart Corp. v. North Cent. Credit Servs., 628 P.2d 842, 844 (Wash. Ct. App. 1981) ("The purpose of a financing statement is to give notice to the world that the designated parties have entered into a secured transaction.").

84. *Sommers v. International Business Machs.*, 640 F.2d 686, 691 (5th Cir. 1981) ("When a debtor 'signs' . . . a financing statement, he does so with a present intention to authenticate . . ."); *Ledford v. Thorp Fin. Servs. (In re Joyce)*, 52 B.R. 45, 47 (Bankr. S.D. Ohio 1985) ("The absence of the debtor's signature cannot properly be construed as a minor error inasmuch as the stated purpose of the signature is not notice to third parties, but rather to authenticate the statement.") (citing *In re Industrio Transistor Corp.*, 14 U.C.C. Rep. Serv. (Callaghan) 522 (Bankr. E.D.N.Y. 1973)); *USI Capital & Leasing v. Medical Oxygen Serv. (In re Medical Oxygen Serv.)*, 36 B.R. 341, 344 (Bankr. N.D. Ga. 1984) ("[T]he debtor's signature is necessary to authenticate the financing state-

retically reduces unauthorized filings.⁸⁵ However, an alternate authentication system that accounts for the realities of evolving information management technology could be adopted. Such a system already exists in British Columbia, where debtors receive a copy of financing statement information filed under the debtor's name.⁸⁶ Debtors in British Columbia may terminate unauthorized filings unless the secured party obtains a court order stating that the filing should remain on record.⁸⁷ A slightly abbreviated procedure could be adopted in the United States. Under such a system, the filing offices would provide debtors with copies of filed financing statements, perhaps using copies that the filing offices would require secured parties to provide. Such a system could also provide that an aggrieved party could clear the record and receive damages for slander of credit or title. Finally, it may be advisable to provide all parties named in financing statements (both debtors and secured parties) with filing information, so as to provide sufficient notice of the contents of the public record to the affected parties.

At a minimum, this Article recommends that Article 9 be revised to accommodate and encourage the electronic transmission of symbols indicating a debtor's or secured party's consent to the filing of a financing statement. Many commercial statutes presume that commercial transactions are accompanied by

ment."); *In re Carlstrom*, 3 U.C.C. Rep. Serv. (Callaghan) 766, 771 (Bankr. N.D. Me. 1966) (emphasizing the importance of the signature requirement). *But see* *Ferdinand J. Snow Co. v. Waldick Aero-Space Devices (In re Waldick Aero-Space Devices)*, 71 B.R. 932, 937 (D.N.J. 1987) (deciding that copy of equipment lease attached to otherwise complete financing statement is sufficient to authenticate debtor's typewritten name on the statement); *J.K. Merrill & Son*, 702 P.2d at 795 (holding photocopy of signed security agreement attached to unsigned financing statement is sufficient to perfect security interest).

85. WHITE & SUMMERS, *supra* note 79, § 22-18, at 1032-34. Professor Freyermuth, in his commentary, suggests that our recommendation may increase "the number of unauthorized and abusive filings." R. Wilson Freyermuth, *Comments on A Revised Filing System*, 79 MINN. L. REV. 957, 958 (1995). As he asserts, eliminating the signature requirement would "make it easier for parties to make unauthorized and abusive filings." *Id.* We question whether individuals making these unauthorized filings, such as prisoners in Professor Freyermuth's example, *id.* at 958 n.4, are, or are more likely to be, deterred by the signature requirement. Unauthorized filings will always occur; the question in our minds is whether the benefits of a system that does not require signatures outweighs its potential costs.

86. A secured party must, within 20 days, provide the debtor with a copy of the financing statement or the verification statement issued by the registry. Personal Property Security Act, S.B.C. ch. 36, § 43(14) (1989), *amended by* S.B.C. ch. 11, § 14(c) (1990) (Can.).

87. Personal Property Security Act S.B.C. ch. 36, § 50 (1989).

pieces of paper that may be physically "signed."⁸⁸ Implicit in Article 9's requirement that debtors "sign" financing statements, for example, is the presumption that some tangible document exists that the debtor can mark.⁸⁹ The Code provides for no means of authenticating documents that are transmitted electronically, although at least one jurisdiction, Iowa, has sought to address this problem administratively.⁹⁰ Under the electronic filing system promulgated by the Iowa Secretary of State, a debtor may send a written authorization to a secured party allowing it to transmit a symbol indicating its "intent to authenticate the electronically filed document."⁹¹ Revisers of Article 9 should consider the Iowa model as an alternative to total elimination of the signature requirement.

2. Reform of Provisions Requiring the Name of the Debtor On Financing Statements

Article 9's requirement that financing statements include the name of the debtor⁹² has also proved the root of some of its most persistent difficulties. Because financing statements are indexed alphabetically according to the name of the debtor,⁹³ the debtor's name as written becomes the only means to locate par-

88. Fry, *supra* note 80, at 610-11. Explicit and implicit references to paper records in many commercial statutes abound because

[t]he drafters, like the rest of the legal profession, could not know how electronic technologies might impact commercial law until there was experience with some commercial applications. It is unremarkable, then, that existing provisions of the UCC are replete with assumptions of the existence of pieces of paper, whether explicit or not.

Id.

89. Under the Code, a document is "signed" if it contains "any symbol executed or adopted by a party with present intention to authenticate a writing." U.C.C. § 1-201(39) (1990). Some early cases construed § 1-201(39) quite strictly. *See, e.g., In re Kane*, 1 U.C.C. Rep. Serv. (Callaghan) 582, 587 (E.D. Pa. 1962) (stating that "'signed' means an actual signature manually produced by a writing instrument in the hand of the signer in direct contact with the document being executed"). Most recent decisions have relaxed the requirements substantially. *See e.g., Save-on-Carpets v. Jarratt (In re Save-on-Carpets)*, 545 F.2d 1239, 1240 (9th Cir. 1976) (typewritten signature sufficient); *J.K. Merrill & Son v. R.G. Carter*, 702 P.2d 787, 795 (Idaho 1985) (photocopied signature sufficient); *Strevell-Paterson Fin. Co. v. May*, 422 P.2d 366, 366 (N.M. 1967) (lack of signature not fatal).

90. IOWA ADMIN. CODE r. 721-6.1 to -6.9 (1990).

91. *Id.* r. 721-6.5(554).

92. U.C.C. § 9-402(1).

93. *Id.* § 9-403(5); *see also* 9 WILLIAM D. HAWKLAND, UNIFORM COMMERCIAL CODE SERIES § 9-402:08 (1991) (noting that the Article 9 indexing system is based on debtor's name).

ticular financing statements.⁹⁴ Filings are too often difficult or impossible to locate because of variations in the spelling or punctuation of a debtor's name,⁹⁵ use of a debtor's trade name,⁹⁶ changes in the debtor's individual or business name,⁹⁷ or the number of debtors filing under particularly common names.⁹⁸ Whether such financing statements remain effective generally turns on whether the debtor's name, as it appears on the financing statement, meets the standard of section 9-402(8), which provides that "[a] financing statement substantially complying with the requirements of this section is effective even though it contains minor errors which are not seriously misleading."⁹⁹

94. WHITE & SUMMERS, *supra* note 79, § 22-18, at 1034.

95. See *In re Gustafson*, 14 U.C.C. Rep. Serv. (Callaghan) 231, 232 (Bankr. W.D. Okla. 1973) ("Gustafson" misspelled as "Gustavsen"); *In re Vaughan*, 4 U.C.C. Rep. Serv. (Callaghan) 61, 62 (Bankr. W.D. Mich. 1967) ("Vaughan" misspelled as "Vaught").

96. See *Covey v. Hollis Eng'g (In re Covey)*, 66 B.R. 459, 462 (Bankr. D.N.H. 1986) (filing under trade name ineffective); *Pearson v. Salina Coffee House*, 61 B.R. 538, 540 (D. Kan. 1986), *aff'd*, 831 F.2d 1531 (10th Cir. 1987) (same). But see *National Bank v. West Texas Wholesale Supply (In re McBee)*, 714 F.2d 1316, 1321-22 (5th Cir. 1983) (filing under trade name effective); *Brushwood v. Citizens Bank (In re Glasco, Inc.)*, 642 F.2d 793, 796 (5th Cir. 1981) (same). See generally Michael Schinner, *Examining the Integrity of a Notice Filing System: Are Financing Statements Filed Solely Under a Debtor's Trade Name Sufficient to Perfect a Security Interest Under U.C.C. Section 9-402?*, 94 COM. L.J. 175 (1989) (discussing difficulties of filing under debtor's trade name); Julianna J. Zekan, *The Name Game—Playing to Win Under § 9-402 of the Uniform Commercial Code*, 19 HOFSTRA L. REV. 365 (1990) (same).

97. Section 9-402(7) provides that a change in a debtor's name rendering the financing statement "seriously misleading" remains effective for four months after the change. U.C.C. § 9-402(7). Even a lender conducting a thorough and reasonable search could find itself without priority over a secured party if that party had recently filed under the debtor's old name. See, e.g., *Huntington Nat'l Bank v. Tri-State Molded Plastics (In re Tyler)*, 23 B.R. 806, 807 (Bankr. S.D. Fla. 1982) ("Tri-State Molded Plastics, Inc." changed to "Tri-State Moulded Plastics, Inc."). See generally Jay L. Westbrook, *Glitch: Section 9-402(7) and the U.C.C. Revision Process*, 52 GEO. WASH. L. REV. 408 (1984) (arguing that the four-month period in § 9-402(7) should be carefully addressed in the revision process).

98. In just such a case involving a title search, the Ninth Circuit held a tax lien filed under a party's full legal name effective even though subsequent mortgagees failed to locate the lien because they knew the party under his middle and last names, both common. *United States v. Polk*, 822 F.2d 871, 876 (9th Cir. 1987). The debtor argued that the "[c]ounty records had so many entries under the name of 'Polk' that someone searching diligently under 'Bruce Polk' would be unlikely to notice entries under 'Roy Bruce Polk'." *Id.* at 872-73.

99. U.C.C. § 9-402(8). Though courts have disagreed about the appropriate application of the seriously misleading standard, one test determines names to be "seriously misleading unless a reasonable searcher would find the financing statement or would be put on notice to inquire elsewhere about it." *Emerson Quiet Kool Corp. v. Marta Group, Inc. (In re Marta Group, Inc.)*, 33 B.R.

Under this section, courts have, in some circumstances, held that financing statements filed under a debtor's misspelled name,¹⁰⁰ trade name,¹⁰¹ or previously used name¹⁰² were not "seriously misleading." Because of such decisions, a prudent searcher, to increase the likelihood that her search will not miss effective filings, must request information on all the names under which the debtor in question may have transacted busi-

634, 639 (Bankr. E.D. Pa. 1983); *see also* WHITE & SUMMERS, *supra* note 79, § 22-18, at 1036 (arguing for a reasonably diligent searcher test). What is reasonable turns on a variety of factors. *Compare* *Huntington Nat'l Bank*, 23 B.R. at 810 (determining a filing to be ineffective because computer search failed to locate statements containing previous spelling of debtor's name) *and* *District of Columbia v. Thomas Funding Corp.*, 593 A.2d 1030, 1032 (D.C. 1991) (considering that "it would not be obvious to the beholder that 'silvermine' is merely a misspelling of 'silverline'") *with* *Unsecured Creditors Comm. v. Marepcon Fin. Corp. (In re Bumper Sales, Inc.)*, 907 F.2d 1430, 1435 (4th Cir. 1990) (noting that use of secured party's trade name less troubling than use of debtor's trade name and thus not seriously misleading); *Star Automotive Warehouse v. Spears (In re Thriftway Auto Supply, Inc.)*, 159 B.R. 948, 952 (W.D. Okla. 1993) (listing the distinctiveness of the names at issue and the type of index used as factors to consider), *aff'd*, 39 F.3d 1193 (10th Cir. 1994) *and* *Starbuck v. Esparza (In re Esparza)*, 821 P.2d 1216, 1221-22 (Wash. 1992) (en banc) (holding a filing effective despite misspelling because pronunciation of debtor's true name and that of the misspelling were the same).

100. *See, e.g., In re Gustafson*, 14 U.C.C. Rep. Serv. (Callaghan) 231, 236 (Bankr. W.D. Okla. 1973) (filing effective because misspelled name "publicly accepted" as debtor's name); *Beneficial Fin. Co. v. Kurland Cadillac-Oldsmobile*, 293 N.Y.S.2d 647 (Sup. Ct. 1968), *rev'd on other grounds*, 300 N.Y.S.2d 884 (App. Div. 1969) (misspelling of debtor's first name as "Shelia" instead of "Sheila" not seriously misleading); *American City Bank v. Western Auto Supply*, 631 S.W.2d 410, 416-18 (Tenn. Ct. App. 1981) (misspelling of a debtor's name did not render financing statement seriously misleading); *Esparza*, 821 P.2d at 1221-22 (filing effective because misspelling pronounced the same as legal name).

101. *See, e.g., National Bank v. West Texas Wholesale Supply (In re McBee)*, 714 F.2d 1316, 1321-22 (5th Cir. 1983) (filing under trade name effective); *Brushwood v. Citizens Bank (In re Glasco)*, 642 F.2d 793, 796 (5th Cir. 1981) (same).

102. It is important to remember that a financing statement filed under a name no longer the legal name of the debtor may, pursuant to § 9-402(7), remain effective even when the change renders the financing statement seriously misleading. Under § 9-402(7), such a financing statement is effective with respect to collateral covered at the time of filing and during the four months after the name change. U.C.C. § 9-407(7). Courts have upheld the effectiveness of financing statements under such circumstances. *See, e.g., In re Pubs, Inc.*, 618 F.2d 432, 440 (7th Cir. 1980) ("[T]he filing remained effective . . . even though a search of the records under 'Pubs' would not have disclosed the security interest . . ."); *Hutchen v. First Nat'l Bank (In re Taylorville Eisner Agency)*, 445 F. Supp. 665, 669 (S.D. Ill. 1977) ("[T]he filed statement remains effective with respect to collateral transferred by the debtor regardless of the knowledge or consent of the secured party."). *See generally* Westbrook, *supra* note 97 (discussing the four-month "glitch" in § 9-402(7)).

ness.¹⁰³ These additional searches strain the capacity of the filing system, complicate business transactions, and often prove expensive to searchers. The increasing role of computers further complicates the search process; filings that may have been picked up in a manual, "hands on" search by a filing officer are often missed in a computerized "exact match" search system.

Revisers of Article 9 could lessen this problem in several ways. For instance, they could amend sections 9-402(1) and (7) to require that financing statements include the correct legal name of the debtor or debtors.¹⁰⁴ At the same time, they should amend section 9-402(8) to provide that failure to use the correct legal name (as opposed, for instance, to a trade name) is "seriously misleading" and therefore renders a financing statement ineffective. Amendments to the Official Comment of section 9-402, as well as administrative regulations promulgated at the state level, could help reveal to secured parties the proper course of action in determining the true legal name of the debtor.¹⁰⁵

Alternatively, revisers of Article 9 could amend section 9-402(8) to provide that courts consider an erroneous debtor's name "seriously misleading" where a search conducted in accordance with the practices and technologies employed by the jurisdiction has failed to locate the financing statement containing the error.¹⁰⁶ Such a rule would remain true to the underlying

103. See Zekan, *supra* note 96, at 446 ("[A] search should also be conducted in the trade name or names known to the searcher and in the legal name(s) the debtor has used within the previous five years."); Filing System Task Force, *supra* note 68, at 24 ("[T]he attorney ordering the search must . . . for good measure order searches under any likely variations on that name.").

104. Trade names by which a debtor may commonly be known should not operate to put third-parties on notice of a security interest and, therefore, need not be included on the financing statement. The use of a trade name as the debtor's name on a financing statement should render the financing statement ineffective unless use of the trade name is *not* "seriously misleading."

105. Searchers could, for example, obtain the legal names of corporations and partnerships by consulting the Secretary of State's office where the debtor is incorporated or does business. A significant problem remains with respect to determining the legal names of a number of types of entities, including trusts, estates, unincorporated associations, joint ventures, and oral or unnamed partnerships, which are not published in a public record. Presently, there is no uniform practice for identifying these entities, and the same entity may be identified on competing financing statements in a variety of ways; none is plainly "wrong" under existing standards. This Article further recommends, therefore, that a consistent methodology by which such entities may be identified be established.

106. At least one court has relied on this line of reasoning to hold a financing statement ineffective. In *Huntington Nat'l Bank v. Tri-State Molded Plastics (In re Tyler)*, 23 B.R. 806 (Bankr. S.D. Fla. 1982), the court's determination that a debtor name error was "seriously misleading" turned on the fact that a

ing notice rationale of Article 9's filing system, as a jurisdiction's search system would still pick up financing statements containing minor errors in the debtor's name.¹⁰⁷ Revisers of Article 9 could also lessen the problem of debtor-name identification by expanding the use of taxpayer identification numbers (TINs)¹⁰⁸ to identify debtors on financing statements. In recognition of the problems associated with the Code's current organizational system, more than a dozen jurisdictions now request debtors' TINs as part of their filing information.¹⁰⁹ These states use debtors' TINs as supplemental identifiers to facilitate the search process and have reported few, if any, problems with the use of such systems. In addition, computer searches for TINs, which consist merely of strings of numbers, are easy to work with and simple to program.

Nonetheless, although the use of TINs as an indexing mechanism has proven successful in a number of jurisdictions, amending Article 9 to require inclusion of TINs as part of the required filing information would be a controversial step. Individuals who provide TIN information, as well as those who subsequently copy the information to other documents or media, could inadvertently transpose the string of numbers making up the TIN. Guarding against this possibility would require the institution of potentially costly internal checking procedures to ensure accuracy before filing. In addition, confirmation of the TINs provided by debtors may prove difficult because many debtors have multiple TINs.¹¹⁰ Further complicating matters, the merger or acquisition of a corporation may lead to confusion as to the proper TIN to include on a financing statement. Fi-

search, conducted by the jurisdiction's filing officer on its computer system, failed to locate the erroneous financing statement. *Id.* at 810.

107. An issue remains as to the point in time at which the standard should be applied—at the time of the initial filing or at the time a third party actually ran a search. This Article urges reforms that require filing officers to disclose their search logic and make it available to the public. This information alone would shed significant light on the issue of whether a particular manifestation of a debtor's name is seriously misleading to searchers.

108. The Internal Revenue Service uses two types of TINs: Social Security numbers, to identify individual persons and estates, and employer identification numbers, to identify corporations, partnerships, trusts, and other non-individual persons. Treas. Reg. § 301.6109-1(a)(1) (1993).

109. See Filing System Task Force, *supra* note 68, at 93 (listing states).

110. A sole proprietor will have two TINs: a social security number and an employer identification number. MICHAEL I. SALTZMAN, IRS PRACTICE AND PROCEDURE § 4.02[3] (1981).

nally, federal privacy laws could prove troublesome if individuals are required to provide their Social Security numbers.¹¹¹

In light of these problems associated with an indexing system based on TINs, this Article recommends using the TIN as a supplemental identifier to facilitate the search process, as well as the production of a revised financing statement form to accommodate such a recommendation. To further protect filing parties, this Article also recommends that Article 9 be amended to provide that courts not construe the absence of a TIN, or an error in the TIN, to be seriously misleading when determining the sufficiency of a financing statement.

3. Clarification of the Scope of Section 9-402(8)'s "Minor Error" Language

In addition to creating problems associated with the adequacy of debtor names in financing statements, the "minor error" language contained in 9-402(8) has proven to be a source of numerous difficulties concerning its range of applicability. A strict and literal reading of this section suggests that the concept of "minor error" applies only to financing statements.¹¹² Indeed, courts have held that section 9-402(8) applies only to original financing statements and does not apply to other filings relating thereto.¹¹³ Given that the "minor error" concept was in-

111. See 5 U.S.C. § 552a note (1988) (prohibiting governmental denial of "any right, benefit or privilege . . . because of [an] individual's refusal to disclose his social security account number" unless disclosure is required by federal law); see also *Yeager v. Hackensack Water Co.*, 615 F. Supp. 1087 (D.N.J. 1985) (applying statute).

112. U.C.C. § 9-402(8) provides that "[a] financing statement substantially complying with the requirements of this section is effective even though it contains minor errors which are not seriously misleading."

113. Some courts have held that § 9-402(8) does not apply to termination statements. See, e.g., *Crestar Bank v. Neal (In re Kitchen Equip., Inc.)*, 960 F.2d 1242, 1248 (4th Cir. 1992) (explaining that there is no basis for applying § 9-402(8) to termination statements). Most courts have held, however, that continuation statements are so similar to financing statements that § 9-402(8) should apply. See, e.g., *Kruckenberg v. First Nat'l Bank (In re Kruckenberg)*, 160 B.R. 663, 670 (D. Kan. 1993) (holding that § 9-402(8) should be applied to continuation statements); *FDIC v. Victory Lanes*, 158 B.R. 617, 621 (E.D. Va. 1993) (explaining that § 9-402(8) applies to continuation statements because continuation and financing statements serve essentially the same purpose); *Armstrong v. Adam (In re Adam)* 96 B.R. 249, 251 (Bankr. D.N.D. 1989) ("[M]inor errors which are not seriously misleading will not invalidate a financing statement or a continuation statement."); *Vincent Gaines Implement Co. v. United States (In re Vincent Gaines Implement Co.)*, 71 B.R. 14, 16 (Bankr. E.D. Ark. 1986) (stating that laws applying to errors in financing statements should apply to continuation statements); *In re Edwards Equip. Co.*, 46 B.R.

tended to "discourage the fanatical and impossibly refined reading of such statutory requirements in which courts have occasionally indulged themselves,"¹¹⁴ it is somewhat ironic that the concept itself should be given such a narrow reading.

Accordingly, this Article recommends the clarification of section 9-402(8) to resolve any unintentional ambiguity with respect to application of the "minor error" concept to filings other than original financing statements. In particular, this Article suggests that the "minor error" standard should apply to all Article 9 filings. In addition, this standard should embrace all other methods of perfecting an Article 9 security interest, including means outside the parameters of the Article 9 filing requirements.¹¹⁵

4. Reform of the Filing Offices' Methods of Time-Noting Finance Statements

A fourth prominent difficulty with the current filing systems is that they do not use a uniform methodology for time-noting financing statement information. Article 9 currently requires filing officers to "mark each statement with a file number and with the date and hour of filing," a system intended to establish priority between conflicting security interests.¹¹⁶ This language and the time-noting systems that derive from it, however, wholly fail to account for the increase in filings directed to state

689, 691-92 (Bankr. W.D. Okla. 1985) (stating that a financing statement and a continuation statement are "inextricably intertwined" so that § 9-402(8) should apply to continuation statements).

114. U.C.C. § 9-402 cmt. 9.

115. Courts are split over whether § 9-402(8) applies to state motor vehicle acts. *Compare* *Wheels, Inc. v. Otasco, Inc.* (*In re Otasco, Inc.*), 111 B.R. 976, 990 (Bankr. N.D. Okla. 1990) ("Section 9-402(8) applies of its own force only to financing statements . . .") with *In re Microbrand Co.*, 135 B.R. 2, 4 (Bankr. S.D.N.Y. 1991) ("State motor vehicle acts may be read in light of U.C.C. § 9-402(8)."). Courts have generally agreed that § 9-402(8) applies to errors involving certificates of title. *See, e.g., Load-It, Inc. v. VTCC, Inc.* (*In re Load-It, Inc.*) 774 F.2d 1077, 1079 (11th Cir. 1985) (*per curiam*) (stating that substantial compliance is sufficient to perfect an interest in motor vehicles); *In re Circus Time, Inc.*, 641 F.2d 39, 44 (1st Cir. 1981) (stating that goals of perfection may be effectuated through substantial compliance); *Webb v. First Am. Nat'l Bank* (*In re Webb*), 106 B.R. 517, 520 (Bankr. E.D. Tenn. 1989) (stating that § 9-402(8) should govern mistake made in noting liens on titles). Other extra-Article 9 methods of perfection include, for example, the Federal Aviation Act, 49 U.S.C. § 1403 app. (1988) (providing for the registration of aircraft) and the Federal Copyright Act, 17 U.S.C. § 205 (1988) (providing for the recording of copyrights).

116. U.C.C. § 9-403(4).

filing offices,¹¹⁷ new modes of transmittal of financing statement information (including those alluded to in this Article),¹¹⁸ and variations in filing office procedure in assigning a time to financing statements as they arrive.¹¹⁹

Many of the problems with the existing time-noting system arise from the assumption that mailed documents arrive in the order that filers sent them to the filing office. Armed with this assumption, filing offices typically time-mark documents at the moment of receipt at the filing office.¹²⁰ Even the most cursory review of the day-to-day operations of state filing offices, however, reveals that this assumption is flawed, because mail typically arrives at filing offices daily in one large batch.¹²¹ If competing documents arrive on the same day or are processed in the same batch, many time-noting systems allow the first document randomly selected from the day's mail batch to enjoy an arbitrary priority advantage.¹²² At least one jurisdiction, Alabama, is seeking to eliminate this arbitrary advantage by assigning a fixed time to all mail received during one day.¹²³ This system would fail, however, to provide a means for determining priorities among documents arriving during the same day where one is assigned an earlier file number giving it priority.

Another problem with the current time-noting system is its failure to account for the several jurisdictions that now allow filing by fax, modem, or other forms of electronic transmittal.¹²⁴ Again, the lack of uniform procedures for time-noting documents affords different filers arbitrary advantages depending on the filer's mode of transmittal. In filing offices where, for example,

117. A recent UCC committee report noted that many filing offices are "besieged by the overwhelming number of filings of financial statements." Electronic Messaging Service Task Force of the Committee on the UCC, *The Commercial Use of Electronic Data Interchange - A Report and Model Trading Partner Agreement*, 45 BUS. LAW. 1645, 1715 (1990).

118. See *supra* notes 69-75 and accompanying text (describing the various state filing systems).

119. See Filing System Task Force, *supra* note 68, at 93 (listing filing office procedures of various states).

120. A financing statement is "filed" when either the statement is presented for filing accompanied by the appropriate fee or when the filing officer accepts it. U.C.C. § 9-403(1). Despite this definition of "filed," the filing officer's time mark determines the "time" of the filing. *Id.* § 9-403(4).

121. Often, mail within each batch is opened and processed during that day and, in some cases, the next. The time marked on the documents, therefore, is not usually the time of receipt but rather the time at which the document, randomly selected from the mail batch it arrived with, is opened and processed.

122. U.C.C. § 9-403(4).

123. Filing System Task Force, *supra* note 68, at 95.

124. IOWA ADMIN. CODE r. 721-6.1 to -6.9 (1990).

times are marked as the mail is opened, a document arriving with the morning mail but opened late in the day may receive a later time mark than that of a document arriving by fax hours after the morning mail.¹²⁵ The increased use of new filing technologies will invariably complicate this problem.¹²⁶

In light of the foregoing, this Article contends that a uniform system for time-noting financing statement information must be developed to ensure consistency in the manner filing officers process documents. The details of the particular system adopted to promote uniformity are not as critical in this regard as the adoption of a uniform system that clearly establishes priority rights.

5. Reform to Establish Statutory Performance Standards for Filing Offices

Another factor that has substantially affected the efficiency and reliability of each jurisdiction's filing system is the quality of the service that its filing office renders. For example, the time it takes to "process" a financing statement,¹²⁷ such that a filing officer can find the statement in a search, varies dramatically across jurisdictions.¹²⁸ Performance problems plague searches conducted by filing offices¹²⁹ and have prompted an increasing number of lenders and their attorneys to contract with private

125. Filing System Task Force, *supra* note 68, at 93 (table detailing treatment of hand-delivered filings by jurisdiction).

126. Filing officers are the first to concede that the current time-noting system is inadequate. As Everett Wohlers, the Idaho Deputy Secretary of State, explains:

[Section] 9-403 calls for marking a paper document with the date and time of filing. New filing technologies will not conform to the underlying assumption of paper documents. The revised law must . . . specify what constitutes the time of filing of an electronically transmitted image or data stream, e.g. the moment it appears in the computer or FAX machine queue or the time it is reviewed and accepted by the filing office staff. If it is the moment the document appears in the computer or FAX queue, the date and time to be assigned to documents transmitted during non-business hours such as 11 p.m. or weekends must be defined.

Memorandum from Everett Wohlers, Idaho Deputy Secretary of State (Nov. 8, 1992) (on file with authors).

127. "Process" time is the time required to record and index the financing statement in the public records and return an acknowledgement to the secured party.

128. Filing System Task Force, *supra* note 68, at 59.

129. See *Mobile Enter., Inc. v. Conrad*, 24 U.C.C. Rep. Serv. (Callaghan) 1031, 1033 (Ind. App. 1978) (reporting a search that failed to disclose a prior financing statement, which caused subsequent secured creditor to accept worthless security interest); Dwight M. Fawcett & Robert F. Hugi, *Hidden Liens: A*

search companies to ensure a quick turn-around time in the filing and search process.¹³⁰

Those who rely on Article 9's filing system are acutely concerned about the reliability and certainty of the system.¹³¹ Accordingly, this Article recommends that individual jurisdictions establish and maintain statutory performance standards for filing officers. Already, most states that have enacted central indexing systems¹³² have also enacted statutory deadlines for the indexing of financing statements.¹³³ These deadlines apply not only to original financing statements, but to all related filings, including continuations, terminations, and amendments.¹³⁴ The filing officers in these jurisdictions, who are involved in the reform process, have reported few, if any, problems with meeting their respective deadlines.

Of course, the relative size of a jurisdiction and its attendant workload will influence the establishment of appropriate standards. Accordingly, the statute should, while establishing minimal expectations of timeliness, allow states to enact per-

Trap for the Unwary, 106 BANKING L.J. 212, 215 (1989) ("As many as 20 percent of the search reports contain an error of some kind . . .").

130. Some states have counties that do not perform UCC searches at all. In those states, prospective creditors must hire a local service company to perform the searches. See U.C.C. GUIDE, INC., THE UNIFORM COMMERCIAL CODE FILING GUIDE (1994). In New Jersey several counties do not perform UCC searches. 3 *id.* at NJ-1091-1. In Maine only one county performs UCC searches; people must contact a legal service company to search UCC records in all other counties. 2 *id.* at ME-1093-1. In Kentucky many counties do not perform UCC searches. 2 *id.* at KY-0493-1. In Georgia only a few counties perform UCC searches. 1 *id.* at GA-0194-1. Likewise, in Arkansas only a few counties perform UCC searches. 1 *id.* at AR-0793-1.

131. *In re Flagstaff Food Serv. Corp.*, 16 B.R. 132, 136 (Bankr. S.D.N.Y. 1981) (finding evidence that filing officer received financing statement sufficient to render a filing effective despite failure of filing officer to index the statement). Courts have held that the risk of filing office error rests with the party making the search. See, e.g., *Barton v. IIT Diversified Credit Corp.* (*In re Skinner*), 22 U.C.C. Rep. Serv. (Callaghan) 1286, 1292 (W.D. Mich. 1977) (holding that "secured party does not bear the risk of improper indexing by filing officer"); *Barkley Clark, Secured Transactions*, 43 BUS. LAW. 1425, 1476-77 (1988) (discussing filing officer liability for filing errors).

132. See, e.g., GA. CODE ANN. § 11-9-407(3) (1994) (central indexing system effective July 1, 1994); LA. REV. STAT. ANN. § 10:9-403(4) (West 1993) (master index with Secretary of State); MINN. STAT. § 336.9-411 (1994) (statewide computerized filing system); NEB. REV. STAT. § 52-1501 (1993) (central index with Secretary of State); N.D. CENT. CODE § 41-09-46(3) (1983 & Supp. 1993) (computerized central notice system).

133. See, e.g., GA. CODE ANN. § 11-9-407(3) (24 hours); LA. REV. STAT. ANN. § 10:9-403(4) (second business day); NEB. REV. STAT. § 52-1312(2) (day of receipt); N.D. CENT. CODE § 41-09-46 (1983 & Supp. 1993) (one working day).

134. See, e.g., N.D. CENT. CODE. § 41-09-46.

formance standards that accommodate the unique demands of each state's filing system. These performance standards should encompass all aspects of the filing process, including indexing statements, returning acknowledgments of filed statements, and preparing and returning searches and copy requests.

In the past, state filing officers have expressed several concerns about these recommendations. Adoption of statutory performance standards for filing officers, they have noted, may give rise to a new action in tort against a filing officer for failure to comply with the statutory performance standards if, for example, a financing statement is not indexed by the statutory deadline.¹³⁵ This concern is easily eliminated by providing in the amendments that revised performance standards do not give rise to any liability other than that already existing under state law.¹³⁶ Filing officers also worry that a lack of financial support from state legislatures may prevent filing offices from attaining these enhanced performance levels.¹³⁷ These concerns can be mitigated by coupling performance mandates with filing and search fee structures that will adequately fund staffing and equipment needs.¹³⁸ Finally, circumstances beyond the control of a filing officer, such as equipment or computer failure, may

135. See *Scot Lad Foods, Inc. v. Secretary of State*, 418 N.E.2d 1368, 1372 (Ohio 1981) ("[T]he negligent performance by one of the state's officers of his ministerial duty may have . . . technically subjected the state to liability even though not actionable by virtue of sovereign immunity."). Arguably, a filing officer's failure to perform the duties for which the filing fee pays in part gives the harmed party a contract claim. The Michigan Supreme Court, however, denied this argument in *Borg-Warner Acceptance Corp. v. Department of State*, 444 N.W.2d 786, 188-89 (Mich. 1989).

Liability for errors is already a concern for filing officers. In *Borg Warner Acceptance Corp. v. Secretary of State*, 731 P.2d 301 (1987), for example, the Kansas Supreme Court upheld a \$70,622 judgment in favor of a secured party because the Kansas Secretary of State's employees were negligent "in responding to [plaintiff's] UCC search requests by failing to provide information as to [a prior] financing statement." *Id.* at 305.

136. A number of states already limit the liability of filing officers by statute. See, e.g., HAW. REV. STAT. § 490:9-409 (1985) (liable only for "willful negligence"); KAN. STAT. ANN. § 84-9-407(3) (Supp. 1992) (liable only for "willful misconduct"); MINN. STAT. § 336.9-412 (1994) (immunity for "errors in or omissions from information provided from the computerized filing system"). Other non-statutory concepts of governmental immunity may protect filing officers from liability as well. See Clark, *supra* note 131, at 1477.

137. In recent years, across-the-board budget cuts have caused an inability of some filing officers to perform satisfactorily under existing statutory mandates.

138. North Dakota was successful in creating a dedicated fund consisting of all filing fees collected, to implement and maintain its UCC filing system. N.D. CENT. CODE § 41-09-42.1 (Supp. 1993).

prevent compliance with these standards. Recognizing the importance of encouraging adoption of emerging information systems technology, this Article recommends that states establish safeguards to protect filing officers who are truly unable to perform their duties due to conditions beyond their control.¹³⁹

6. Clarification of the Filing Officers' Appropriate Role in the Review of Financing Statements

Although Article 9 provides that financing statements are effective only when filed in compliance with its requirements,¹⁴⁰ it is silent as to whether filing officers have a right or, in fact, a duty to ensure such compliance.¹⁴¹ Most creditors and attorneys view the role of filing officers as ministerial; the legal effect of documents in their care is a matter for the courts, not filing officers, to discern.¹⁴² Filing officers, however, while acknowledging their custodial role, also view themselves as responsible for ensuring that the documents in their care comply with applicable statutes.¹⁴³ Because of Article 9's silence on the issue, many filing officers scrutinize financing statements and reject those

139. A system for excusing a filing officer's inability to meet statutory deadlines could be molded after the system established in Article 4 relating to bank deposits. Under § 4-109(1), a collecting bank acting in good faith "may waive, modify, or extend time limits imposed or permitted by this [Act] for a period not exceeding two additional banking days" without penalty. U.C.C. § 4-109(1). Longer delays are excused in the event of "interruption of communication or computer facilities, suspension of payments by another bank, war, emergency conditions, failure of equipment or other circumstances beyond the control of the bank . . . [so long as] the bank exercises such diligence as the circumstances require." *Id.* § 4-109(2).

140. Financing statements are "sufficient" only if filed in accordance with the formal requirements of § 9-402(1).

141. Section 9-403(1) provides that filing is accomplished by "[p]resentation . . . of a financing statement and tender of the filing fee or acceptance of the statement by the filing officer." U.C.C. § 9-403(1). The Official Comments to Article 9 indicate that § 9-403(1) was intended to resolve confusion about the time at which a filing gives constructive notice. *Id.* § 9-403 cmt. 1. Article 9 provides no guidance as to when "acceptance . . . by the filing officer" should occur.

142. Indeed, filing officers in several states make no substantive inquiry into the adequacy of filing. Filing officers will accept statements in these states if the debtor's name can be indexed, the filing can be copied or microfilmed, and the filing fee is correctly computed. *See* 1 U.C.C. GUIDE, INC., *supra* note 130, at CO-0494-1 (Colorado); 1 *id.* at CT-0193-1 (Connecticut); 3 *id.* at NH-0494-1 (New Hampshire).

143. Filing officers in many jurisdictions reject filings for a failure to pay required filing fees, omission of appropriate signature or required substantive information, and failure to comply with local filing guidelines. Jan Whitehead Swift, *The UCC Filing System and the Need for Reform*, 26 UCC L.J. 283, 286 n.15 (1994) (citing UCC GUIDE, INC., *supra* note 130).

that fail to meet particular substantive¹⁴⁴ and procedural¹⁴⁵ requirements. As jurisdictions adopt new information systems technology to process financing statements, the procedural and technical demands placed on filers are likely to cause rejection rates to rise.¹⁴⁶ This development would be particularly troublesome to those who extend credit nationwide; determining the procedural and substantive filing requirements of one of the over 4300 filing offices nationwide already proves a daunting task in the absence of uniform standards.

To restore uniformity and remain true to Article 9's concept of notice filing, Article 9 should be amended to precisely define a filing officer's scope of review. Although there is general agreement that a financing statement should not be accepted if it cannot be properly indexed, the requirements for acceptance of a financing statement should be clearly stated and kept to a minimum.¹⁴⁷ For instance, a filing office should not reject a filing for its failure to use that office's favorite form. Filing offices could, however, charge higher fees for filings that fail to comply with local technical and procedural requirements. In the event that a new filing regime retains signature requirements,¹⁴⁸ new guidelines must be adopted to eliminate confusion and nonuniformity

144. Filing officers in New Jersey, for example, will reject financing statements that lack the local address of the debtor or collateral, fail to include the name and title of each signator printed under their respective signatures, or, where a power of attorney signs for a debtor, fail to attach documentation supporting the signator's power of attorney. 3 U.C.C. GUIDE, INC., *supra* note 130, at NJ-1091-1.

145. Oregon filing officers, for example, state that "documents must be printed or written on at least 20 pound opaque bond paper not larger than 8½" by 14", in at least 8 point type." 4 *id.* at OR-0494-1. Such technical requirements are typical and vary substantially across jurisdictions.

146. Optical scanners, for example, function properly only when the forms scanned are prepared in accordance with the technical demands of the equipment. Already, jurisdictions using automated filing systems require that filings conform to a complicated list of requirements. See, e.g., IOWA ADMIN. CODE r. 721-6.4 (1990) (detailing requirements for electronically filed financing statements).

147. As detailed above, Article 9 requires that, at a minimum, financing statements contain the names of both the debtor and secured party, as well as the address of the secured party, and be accompanied by the appropriate fee. U.C.C. § 9-402(1) (1990). Follow-up filings, including amendments, continuation statements, and termination statements, must be submitted by the secured party or a successor in interest and should contain the file number of the original financing statement. See *id.* §§ 9-402(4), 9-403(3), 9-404(1).

148. See *supra* notes 77-91 and accompanying text (recommending that Article 9 dispense with signature requirements and adopt an alternate authentication system).

regarding the acceptability of facsimile signatures and electronic manifestations of consent.¹⁴⁹

7. Reform of the Means by Which Secured Parties Establish and Extend the Life of Financing Statements

Financing statements are currently effective for five years from the date the statement is filed.¹⁵⁰ Secured parties may extend the life of a financing statement by filing a continuation statement during the six-month period prior to expiration.¹⁵¹ This system has proven costly to secured parties, who must monitor the timing of outstanding financing statements in order to file continuations within the six-month window. In addition, Article 9 provides that, upon lapse, financing statements may be removed from the index.¹⁵² If the filing office keeps photographic records of statements, then the office may destroy the removed statements immediately.¹⁵³ If the filing office maintains only original documents, then the office may destroy the statements one year after the lapse.¹⁵⁴ The destruction of lapsed filings in this manner has been a matter of concern in bankruptcy proceedings and other related litigation.¹⁵⁵

149. Many rejections occur because a filing officer will accept only original documents and original signatures, and will further require that financing statements include corporate titles, powers of attorney, and the debtor's name typed below the signature line. See 1 U.C.C. GUIDE, INC., *supra* note 130, at CA-1094-1 (California's requirements); 2 *id.* at IL-0792-1 (Illinois' requirements); 2 *id.* at ME-1093-1 (Maine's requirements).

150. U.C.C. § 9-403(2). A handful of states provide for longer periods of effectiveness. See, e.g., ARIZ. REV. STAT. ANN. § 47-9403(B) (1988 & Supp. 1994) (six years); MD. CODE ANN., COM. LAW. I. § 9-403(2) (1992 & Supp. 1993) (12 years); S.D. CODIFIED LAWS ANN. § 57A-9-403(2) (1988) (five years and 60 days).

151. U.C.C. § 9-403(3) (1990).

152. *Id.*

153. *Id.*

154. *Id.* In fact, many filing officers routinely destroy filings and computer records in less than Article 9's one year requirement.

155. See, e.g., *In re Callahan Motors, Inc.*, 538 F.2d 76, 76 (3d Cir. 1976) (holding that creditor who unknowingly filed premature continuation statement could file a motion to reclaim after filing officer destroyed his filing and continuation statements without notifying him of his submission's noncompliance); *Lyn-Dee Dairy Farm, Inc. v. Schafsma (In re Lyn-Dee Dairy Farm, Inc.)*, 97 B.R. 95, 97 (Bankr. M.D. Fla. 1989) (holding that creditor's security interest lapsed and could be avoided by trustee where creditor failed to file continuation statement); *Vincent Gaines Implement Co. v. United States (In re Vincent Gaines Implement Co.)*, 71 B.R. 14, 16 (Bankr. E.D. Ark. 1986) (holding that misstated document number was not seriously misleading so as to render continuation statement ineffective); *Reilly v. McCracken (In re Brickyard, Inc.)*, 36 B.R. 569, 574 (Bankr. S.D. Fla. 1983) (holding that while creditor's security in-

To remedy these difficulties, Article 9 should be amended to allow secured parties to "buy" the term of effectiveness of a financing statement under a system similar to that already in place in British Columbia. Under the British Columbia system, filings are effective for whatever period of time is indicated on the financing statement.¹⁵⁶ Moreover, a revised Article 9 should permit secured parties to file a financing change statement, similar in function to a UCC continuation statement, at any time during the effectiveness of the financing statement. Such a financing change statement would extend the effectiveness of the financing statement for whatever period the change statement indicates.¹⁵⁷

As jurisdictions make the transition to computerized filing and indexing systems, the integration of flexible time limits for financing statements into new filing systems should not prove difficult. To the extent that such a change results in increased expenses to filing offices, they could charge fees commensurate with the financing statement duration requested by the secured party.

8. Clarification of the Effect of a Termination Statement

Currently, Article 9 does not specifically state the effect of filing a termination statement.¹⁵⁸ Clearly, the filing of an effective termination statement renders the financing statement to which it refers ineffective.¹⁵⁹ Confusion exists, however, as to whether, under some circumstances, a termination statement is

terest was originally perfected, it became unperfected when he failed to file continuation statement before his filing statement lapsed upon expiration of five-year period).

156. Personal Property Security Act, S.B.C. ch. 36, § 44(1) (1989) (Can.) ("[A] registration under this Act is effective for the period of time indicated on the financing statement . . .").

157. *Id.* § 44(2) ("[A] registration may be renewed by registering a financing change statement at any time before the registration expires . . .").

158. See U.C.C. § 9-404. Section 9-404 does require that a termination statement contain a statement "to the effect that [the secured party] no longer claims a security interest under the financing statement." U.C.C. § 9-404(1). When the secured party presents the termination statement to the filing officer, the officer must note the termination statement in the index and dispose of the original financing statement and related documents as if the filing statement had lapsed. *Id.* § 9-404(2).

159. See, e.g., *J.I. Case Credit Corp. v. Foos*, 717 P.2d 1064, 1066 (Kan. Ct. App. 1986) ("[T]he effect of Case's improvident filing of a termination statement" was to render Case's security interest "at that moment no longer perfected."); *Palatine Nat'l Bank v. Olson*, 366 N.W.2d 726, 731 (Minn. Ct. App. 1985) ("[I]t is clear as a matter of law that the termination statement released only the security interest.").

actually necessary to destroy an underlying security interest. A significant question remains, for instance, as to whether a termination statement must be filed to give effect to the termination of an underlying security interest by a bankruptcy court.¹⁶⁰ Accordingly, this Article recommends that section 9-404 be amended to clarify that the filing of a termination statement operates only to terminate the effectiveness of the filed financing statement and is not necessary for the termination of underlying security interests.

9. Inventory of Non-Article 9 Statutory Liens to Determine Which Should Be Included in a New, Broader Filing System

Finally, although Article 9's uniform system for providing public notice of security interests significantly benefits creditors, a wide variety of property claims, most notably other non-possessory state statutory and federal liens, are not currently part of the UCC's filing system. The development of a uniform system for providing public notice of such liens would prove invaluable to creditors seeking to ascertain the creditworthiness of borrowers or to identify claims having priority over the creditors' own. Of course, despite the desirability of an integrated filing and indexing system, it is not clear whether such a system is feasible. This Article recommends, therefore, that an inventory be taken of the various statutory liens that currently exist at the state and federal levels to determine whether their inclusion under the Article 9 filing system is warranted.

III. SYSTEMIC FILING SYSTEM INNOVATIONS AND RECOMMENDATIONS

The specific recommendations noted above, without radically altering the basic Article 9 framework, would improve the filing system significantly. This Part envisions more radical reform. It formulates various models of filing systems that could supplant or, perhaps, operate in coordination with the existing and proposed state filing systems. This Part also discusses in

160. See, e.g., *Republic Acceptance Corp. v. Salmen* (*In re Apollo Travel, Inc.*), 567 F.2d 841, 844 (8th Cir. 1976) (holding that debtor's payment of main indebtedness secured by collateral prior to bankruptcy automatically terminated creditors underlying security interest); *In re IDK Logging, Inc.*, 116 B.R. 788 (Bankr. E.D. Wash. 1990) (holding that creditor's perfected security interest became unsecured after creditor filed termination statements prior to Chapter 7 filing).

greater detail new technological filing system models and suggests that states require filing offices to sell their information in bulk to private vendors.

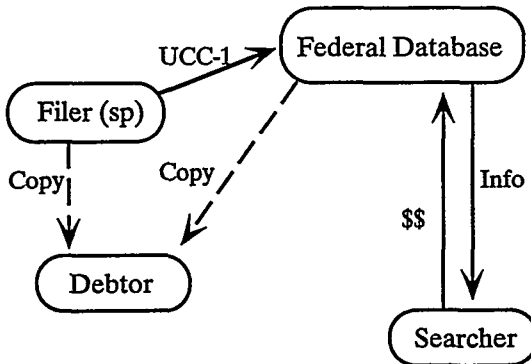
A. POSSIBLE FILING SYSTEM MODELS

The number of possible filing system models is virtually limitless. Detailed below are 9 possible models. The advantages and disadvantages of each are noted in Table A at the conclusion of this section.

1. Federalization

To ensure uniformity throughout all filing jurisdictions and to promote universal access to all filing information, a federal system could be adopted. Under this paradigm, either secured parties would file directly with a federal office (Figure 1), as is the case with aircraft,¹⁶¹ or secured parties could file with the existing state or local filing offices, which would then transmit the information to a federal database for storage and retrieval. In either case, the federal database would serve as a one-stop shopping location for all Article 9 filing information throughout the nation.

Figure 1: FEDERALIZATION



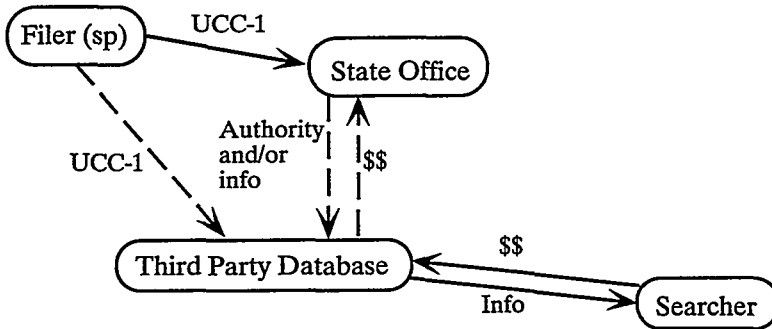
161. See Federal Aviation Act of 1958, 49 U.S.C. §§ 1403(a)-(h) (1988) (establishing Federal Aviation Administration filing system for recording of documents evidencing title and security interests in civil aircraft).

2. State Variations

a. License

The states could license their authority over filing to private vendors, who would compete for licenses under a competitive bidding process. A licensing model would relieve states of the costly burden of maintaining a modernized filing system in this age of fiscal austerity and yet allow them to realize revenue from Article 9 filings (Figure 2). The private vendors would then be responsible for maintaining the filing system consistent with the parameters established above.

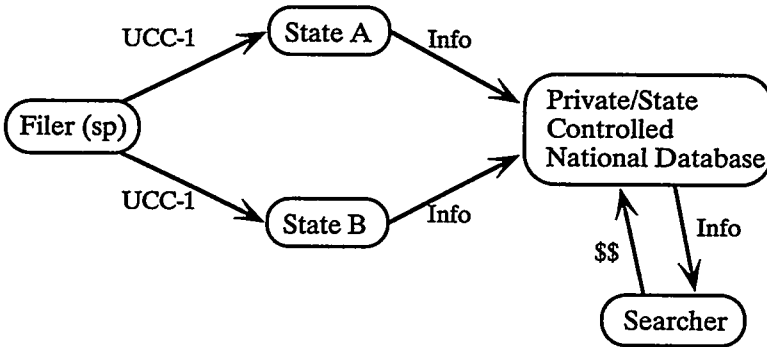
Figure 2: LICENSE



b. Nation-Wide Database

Another possible state model would involve networking state databases into one nationwide database. This reform would ease searching by providing searchers with a one-stop shopping location. This could be accomplished in a number of ways. For instance, states could continue to maintain their own facilities for inputting information into the files, but could network their databases for retrieval purposes. Alternatively, they could forward their filing information to one nationwide, state- or private-maintained database for both storage and retrieval purposes (Figure 3).

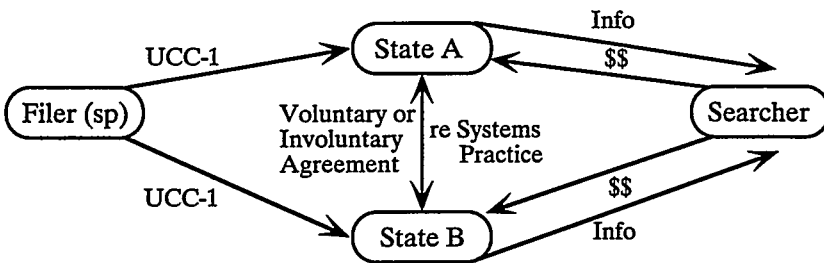
Figure 3: NATION-WIDE DATABASE



c. *Uniform Filing Systems*

The implementation of uniform administrative and filing practice rules throughout all jurisdictions would be a less radical alternative to a nationwide database but would nonetheless promote uniformity in both the filing and searching of financing statements (Figure 4). This relatively costless step would ensure that both filers and searchers could rely on uniform rules and procedures throughout all jurisdictions, thus reducing filing costs.

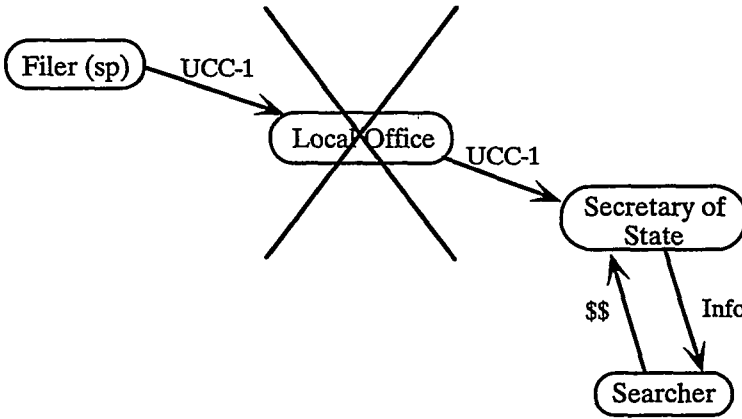
Figure 4: UNIFORM FILING SYSTEM



d. *Centralized Filings*

Perhaps the least progressive alternative to the current state filing systems would be elimination of local filing offices (Figure 5). These costly offices serve little useful purpose (existing primarily for historical reasons) and are a chief source of the lack of system uniformity.

Figure 5: NO LOCAL FILING



3. Privatization

A final set of alternative filing systems would involve better harnessing the private sector to improve filing administration. Under these models, secured parties could file directly with a private vendor, who would then forward the information to the appropriate state record-keeping office (Figure 6); secured parties could file with a state filing office, which would then forward information to the private vendor (Figure 7), or secured parties could file with a private database established to supplant the existing state filing offices, without further official oversight by state or local government filing offices (Figure 8).

Figure 6: PRIVATIZATION—A

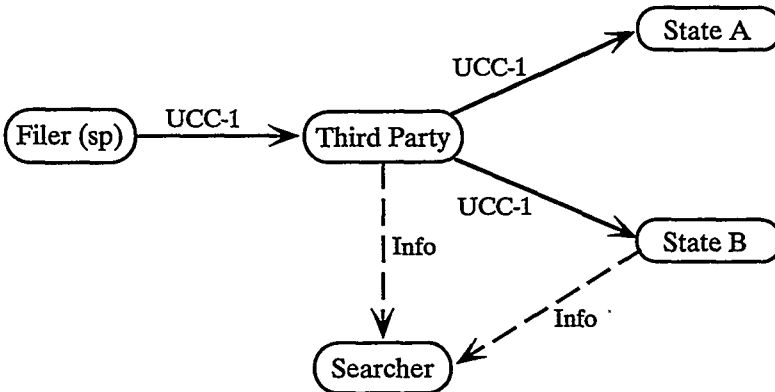


Figure 7: PRIVATIZATION—B

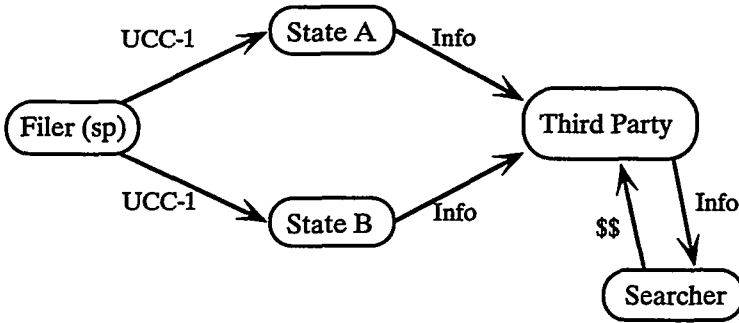
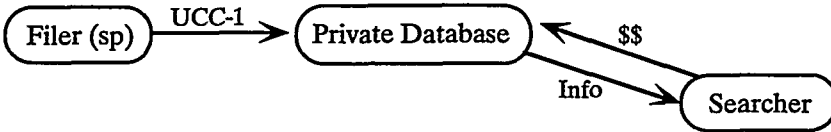


Figure 8: PRIVATIZATION PLUS



The advantages and disadvantages of each potential model are summarized in Table A below.

TABLE A

	Uniformity	Low Cost	Ease of Use	Politically Possible	Consistent With Present Practices	Technical Implementation Effort
Federalization	+	unclear	+	unclear	somewhat	moderate
State Variations						
License	unclear	+	+	unclear	—	+
Nation-wide Database	+	+	+	probably	somewhat	—
Uniform System	+	unclear	+	difficult	—	moderate
Centralized Filings	—	+	+	probably	somewhat	+
Privatization	+	probably	+	difficult	somewhat	moderate
Privatization Plus	+	+	+	unclear	somewhat	moderate

B. TECHNOLOGY'S ROLE

Technology can play a prominent role in making the filing process more effective by improving how filings are made, searched, and retrieved. This section outlines technology-related issues concerning the current filing process as well as options for improvement using today's technology. Importantly, any of the filing options previously noted can implement the new technologies discussed below. Their use does not depend on where the filings take place, whether the filing repository is centralized, or whether the system is privatized.

In today's changing business environment, filing offices face several challenges for addressing the requirements imposed by "first in time" priority rules. As noted above, the business hours that the filing offices maintain limit the ability of businesses to file. Business by facsimile and modem is quite common, and, thus, requirements that secured creditors file on paper during government business hours can be restrictive. Reducing the cost, effort, and time involved in filing is necessary to enhance the efficiency of filing.

Searching for notice of prior filings can also be difficult under the current environment, particularly when checking across filing jurisdictions. With more than 4300 filing offices,

the process of checking the appropriate filing offices to determine with due diligence for prior liens on collateral can be quite cumbersome. In addition, the quality of search results varies across jurisdictions due to variations in how information is stored in manual and computer-based systems and in how the information is searched and retrieved.¹⁶² The lack of documentation describing how the searches are actually performed can further impede the efforts of the searching party to obtain the best possible results.

Backup and recovery procedures for the filing records are also critical issues. One impediment to adopting the more advanced technological processes described below is the tendency to have higher expectation and acceptance standards for new systems than for existing processes. In particular, when using computer technology, concern about computer system failure often exists. However, computerized systems typically have procedures for system backups that are stored on tape and kept off-site. Paper records, by contrast, frequently are not kept in duplicate at another site. In any event, those who fear modernization should take comfort from the fact that for many years businesses have used electronic means to exchange critical information in areas such as wire funds transfers.¹⁶³

Guaranteeing the security, integrity, and timeliness of data delivery, as well as system openness, are the keys to evaluating potential changes to the filing environment. Three options are presented below and evaluated against these criteria.

1. Electronic Data Interchange

Electronic Data Interchange (EDI) uses standardized messages for exchanging information electronically. The various business messages (e.g., original filings, continuation statements), called transaction sets, are defined by their data content. The system assigns each data element (e.g., debtor name, collateral description) specific characteristics that govern its usage (e.g., required or optional, number of characters allowed). This standardization allows for clear, efficient transmission of information.

162. Variations in spacing and punctuation can affect the results of a search. For example, names such as IBM could also be listed as I.B.M. or I B M. AT&T could also be listed as A.T.&T., AT & T, ATT, or AT and T. In addition, inconsistent results are obtained when clerks index and search using different rules or when different computer indexing and search algorithms are used.

163. See U.C.C. Article 4A (governing consumer wholesale wire transfers).

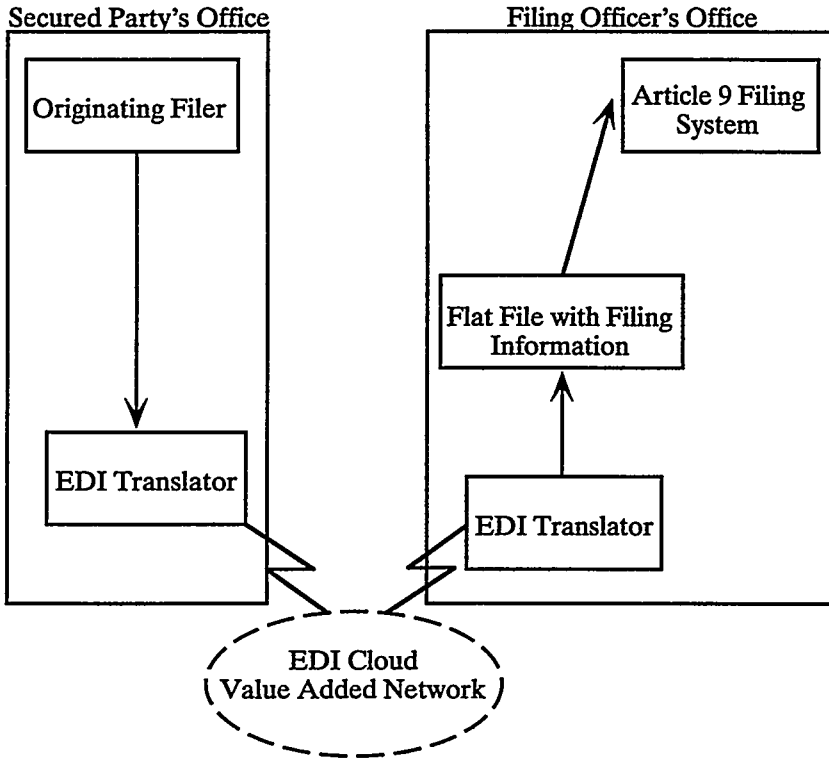
To manage and coordinate the use of these transaction sets, a standards governing body, the American National Standards Institute X12 Committee (ANSI X12), oversees changes to the standards. Another organization that will play an increasing role in overseeing EDI standards is the United Nations Electronic Data Interchange for Administration, Commerce and Transport (UN/EDIFACT),¹⁶⁴ an international standards-governing body focusing on EDI transactions. UN/EDIFACT began by resolving international trade and shipping transactions issues, but is now absorbing a similar responsibility for all EDI transactions in the increasingly global business community.

EDI allows flexibility in the look and feel of the actual application software, which can ask for and present information in an infinite number of ways. Once a user enters information into the application, the EDI translator software reformats the information into EDI messages. These messages are sent to a value-added network (VAN)¹⁶⁵ for transport to the receiving party (i.e., the filing office for the filing, the filer for confirmation). Once the message reaches the receiving party's system, their EDI translator reformats the information for the application at the receiving site. Senders and receivers need not use the same application software; each party can use a different software package as long as it includes an EDI translator. Figure 9 illustrates EDI components.

164. See DATA INTERCHANGE STANDARDS ASSOCIATION, INC., DISA 1994 PUBLICATIONS CATALOG 2 (1994).

165. A value-added network (VAN) is a "communications network that provides services beyond normal transmission, such as automatic error detection and correction, protocol conversion and message storing and forwarding. Telenet and Tymnet are examples of value-added networks." ALAN FREDMAN, THE COMPUTER GLOSSARY 725 (1989).

Figure 9: EDI COMPONENTS



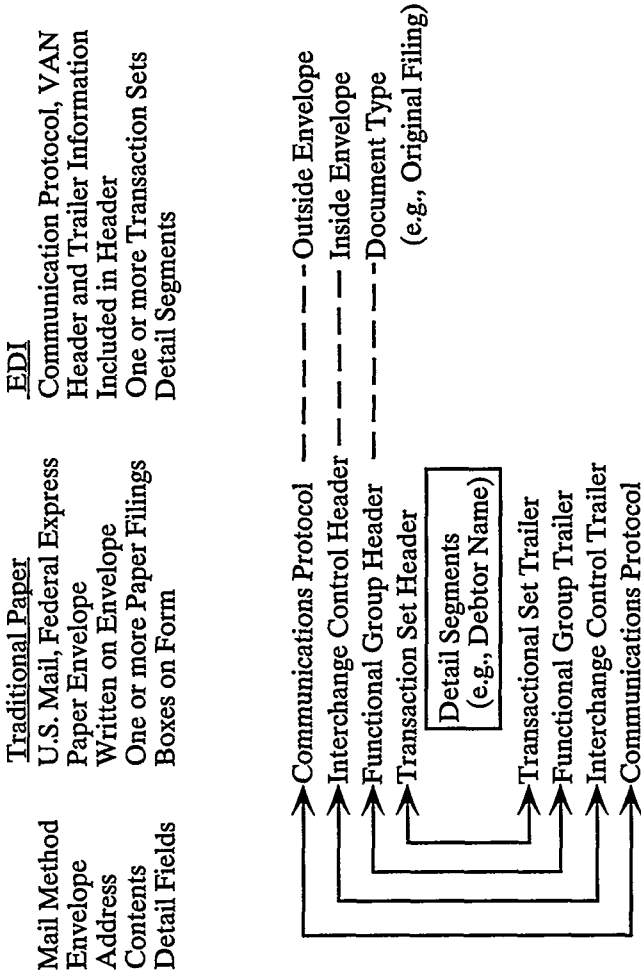
EDI has some basic concepts that serve as the electronic equivalents of the envelope, address, forms, and form content involved in traditional paper filing. Figure 10 illustrates the relationship between the paper and EDI environments.¹⁶⁶

The Commercial Finance Association (CFA) has expended considerable time and effort in obtaining ANSI X12 approval for EDI transaction sets that will improve EDI's usefulness in business settings. As part of that effort, a transaction set has been defined to manage Article 9 filings. EDI X12 Transaction Set 154 can transmit original filings, amendments to previous filings, assignments of previous filings, continuations of previous filings, and terminations of previous filings.¹⁶⁷ For each of these

166. See DATA INTERCHANGE STANDARDS ASSOCIATION, INC, *supra* note 164, at 5-7.

167. COMMERCIAL FINANCE ASSOCIATION EDI TASK GROUP, ELECTRONIC DATA INTERCHANGE: 154 - UNIFORM COMMERCIAL CODE FILING, UCC FILING,

Figure 10: EDI CONCEPTS



situations, a confirmation is automatically generated and returned to the filing party. The confirmation includes an electronic copy of the filing, the file number that was assigned on acceptance of the filing, and the date/time stamp of receipt.

Under this system, filings can be made twenty-four hours a day, seven days a week. The hours are limited only by what the filing office adopts as its filing and searching hours of availability. The date/time stamp has been defined in hours, minutes and seconds, nearly eliminating the possibility of simultaneous filings.¹⁶⁸ Transaction Set 154 also incorporates search requests and search results as part of the EDI process. This allows the system to handle electronically all of the Article 9 filing functions.

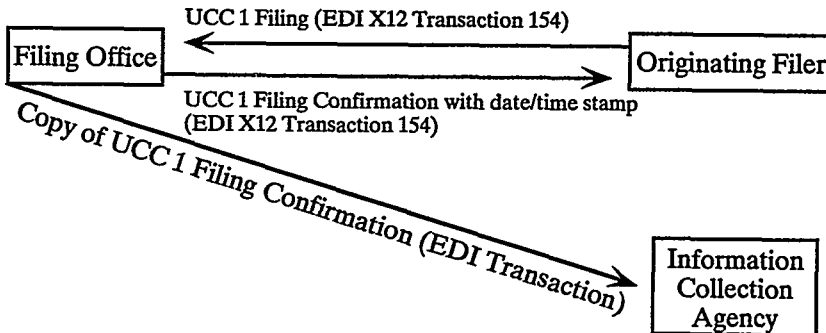
Another significant advantage of the EDI filing process over the paper process is its ability to perform initial validation of the filing prior to sending it to the filing office. Using this feature, EDI can reduce the number of rejected filings. Improving the percentage of filings accepted helps the filing party and reduces the manual workload at filing offices. As a test of the feasibility of electronic filing through EDI, the Commercial Finance Association worked with the Secretary of State's filing office in Iowa to set up the first Article 9 filing EDI project in the nation. Several parties participated in the project, including two major filers of Article 9 documents in Iowa and a major information provider¹⁶⁹ that currently purchases filing information from the state in bulk. Figure 11 illustrates the transactional relationship of the parties involved.

SEARCH, AMENDMENT, ASSIGNMENT AND CANCELLATION, VERSION 1.0, ANSI VERSION 3040 xvi-xxv (1994).

168. See *supra* notes 120-123 and accompanying text (discussing problems with existing time-noting system).

169. "Information provider" as used in this context refers to a private sector company that re-markets the filing information through its own product or service.

Figure 11: UCC ALPHA TEST PROJECT



Among its other virtues, the tested system provided real-time electronic acknowledgments to filers and, in addition, copied filed information for the subscribing information provider. Iowa and the CFA found the test to be a success. The state of Texas is now undertaking a pilot project to implement an EDI electronic filing system in its environment.

2. Proprietary Online Environment

Another electronic filing and searching option is for individual filing offices to develop home-grown online services. These services typically involve dialing into a central computer system at the filing office and either entering information online or sending an electronic file prepared to filing office specifications. As with EDI, this environment also allows basic information on the filing to be checked prior to delivery and would also enable filing offices to expand their hours of availability. Importantly, however, a proprietary online environment does not address the problem of variation among the individual filing offices; it would still be possible to have more than 4300 different filing and search request systems. Private enterprise could attempt to develop software that would modify the information for submission to each filing office's system, but with wide variations possible, it is unlikely that a party seeking to develop and maintain such software could receive a satisfactory return on her investment.

British Columbia uses a proprietary electronic filing and search system called BC Online,¹⁷⁰ which was developed by BC Systems, a government-owned software and communications

170. Bill Pearson, Presentation at the Article 9 Filing Project Technical Advisory Group Meeting (Feb. 11, 1994) (on file with authors).

company. The province already had a government-run dial-up computer network in place to link its remote offices. Any resident of British Columbia could dial a local number and, with appropriate authorization, connect to one of the government-run services. BC Online builds on this existing infrastructure by providing an online service to filing parties.

BC Online provides several benefits. Filing and searching hours have been extended by four and one-half hours. The system validates the filing information as it is entered into the system. Finally, filing and searching charges have been reduced due to lower overhead and processing costs at the filing office.

BC Online also addresses several difficult legal issues. The system keeps records of the identity of searchers and the search results returned to them, assisting in two areas. First, the availability of records assists in disputes over the actual search result that was returned to the requester. Second, it alleviates many privacy concerns by keeping a record of information provided about an individual or a company and to whom it was provided. Finally, to eliminate the debtor-signature requirement, the system automatically generates a paper notice of filings, which is mailed to the debtor. The debtor can then dispute a questionable filing and seek resolution in a more timely manner.

3. Internet and Other Distributed Systems

Some have suggested that Internet and its cross-server searching capabilities may solve existing multi-jurisdictional problems. From a legal standpoint, the use of Internet would seem unlikely because it lacks a party responsible for the integrity, security, and timeliness of information moving through the network. In addition, the servers that provide searching have limitations that would affect the processing of the filings.

Servers such as Archie¹⁷¹ only search the names of computer files, not the files themselves. Moreover, the indexes on this type of server are updated only periodically and are not timely enough to provide adequate notice of filing. Newer servers, such as WAIS servers, can issue search requests across servers and return the results with relevance ranking. The speed of these systems, however, is affected by the number of servers to be checked and the amount of traffic that is on the Internet when the request is made. Because the majority of filings and searches are done during normal business hours when the In-

171. ED KROL, *THE WHOLE INTERNET USER'S GUIDE & CATALOG* 155 (1992).

ternet is the slowest, the response time of the system may not be adequate. Again, the lack of a responsible party will raise questions of integrity.

Developing a wide area network¹⁷² that could link the computerized filing repositories would be a significant technical challenge given the differing levels of technical sophistication involved and the significant amount of monetary resources required. The authors are not aware of any filing office that is undertaking an electronic filing project of this nature.

4. Summary of the Benefits of Electronic Filing

As detailed above, there are many benefits to moving toward an electronic filing environment. Electronic filing could enhance the accuracy of records because a secured party could submit information directly into the system without the need for a clerk's interpretation or rekeying. Elimination of rekeying would also speed processing and reduce costs. Electronic filing is administratively flexible; it is compatible with a filing system that maintains many local filing offices or with a system that uses only one central state office. It would also enable filing offices to easily expand their hours of availability through an "electronic office." Electronic filing would assist in the distribution of filing information to private vendors. Distribution to private information providers would eliminate the need to rely solely on the individual filing office to maintain and retrieve records. Private information providers would also be more likely than state filing offices to provide single source options for searching and verifying filing information across several jurisdictions. Such a system could also provide for the automatic return of confirmation notices for each type of transaction. Finally, electronic filing information would be easier than paper back up to protect against accidents or disasters. For all these reasons, a well-organized electronic filing system would achieve better consistency for the filing process and higher quality search results than the current, largely paper-driven system.

It is important to remember, however, that the quality of the data is only as good as the weakest portion of the system. For example, if a filing office accepts EDI transactions but truncates the debtor's name after twenty-five characters, some of the quality of the data may be lost to subsequent searchers on the system.

172. In communications, a wide area network (WAN) is a network that interconnects geographical boundaries. FREEDMAN, *supra* note 165, at 750.

C. THE PRIVATIZATION OF FILING

In addition to recommending the increased use of technology to solve many of the existing filing problems, this Article also suggests the elimination of state monopolies over the "publication" of Article 9 financing statements. States should provide private vendors with complete and up-to-date access to filing information, and private vendors should be able to sell this information to the public. At the same time, states should provide assurances to private vendors that the filing information that the states provide to them is accurate. Alternatively, the states should insulate these vendors from liability for dispensing false or incorrect information. Under the current system, a state filing officer is often only liable for dispensing incorrect information if the officer was grossly negligent. To prevent state filing offices from enjoying an unfair competitive advantage, private vendors should enjoy the same level of protection as state filing officers. Such protections would encourage private vendors to increase their presence in the Article 9 area to the benefit of all information consumers.¹⁷³

At its core, the Article 9 filing system serves two important functions: 1) It provides notice of security interests in a debtor's collateral (it is a source of information); and 2) it provides a secured party with priority both inside and outside of bankruptcy

173. Professor Freyermuth takes issue with our recommendations in this section. Freyermuth, *supra* note 85, at 962-63. He advances the notion of a filing system "safety net" to protect users of the system from the possibility that at some point private entities may choose not to provide the service. *Id.* We believe the obvious response to this possibility is "so what!" That is, we recognize that a private provider may decide to cease providing services, but it would do so only if the service was no longer desired, *i.e.*, no one was willing to pay for it any longer. If that is the case, so be it. The market will have decided the service is no longer valued.

We also regret Professor Freyermuth's contention that we must explain to state legislatures where they can "recoup" the \$400 million of lost revenue they would suffer if the system were privatized. *Id.* at 962. It is no argument for the existence of the current system to recognize that states profit from it, and that to dismantle it would cost the states these profits. One can hardly justify the existence of state programs merely because they generate revenues. Otherwise, states would produce cars, electricity, gas, etc. The analysis should not focus on lost revenue, but on who is the most efficient information provider. The question is simple: Can someone else do the states' job better? If the answer is yes, that entity should provide the service. Moreover, we believe a system could be arranged whereby the private information provider could pay a licensing fee to the states. This would address many of the concerns expressed so aptly by Professor Freyermuth. Indeed, greater filing efficiencies may lead to a reduction in the cost of filing, thereby increasing the number of filings and overall revenues to the benefit of the states.

if it files to perfect its interest ahead of other claimants (it is a claim-staking device). On the information front, few would suggest that the filing system is a perfect substitute for an independent credit inquiry. The filing system merely provides a searcher with the name of the secured party and debtor, their addresses, the types and items of collateral, and the date and time of filing. Often, as Professor Alces has masterfully detailed, this limited information is enough.¹⁷⁴ Indeed, in its current form, the filing system does serve to provide prospective creditors with information about the status of the debtor's assets, who has claimed an interest in those assets, and the relative priority of those claims. Of course, this notice rationale for the existence of the filing system presumes that the filing system accurately, effectively and efficiently (at low cost) disseminates this information. To the extent the filing system fails to provide this information in a manner consistent with these requirements, its informational justification loses its force. This raises a central question: can the present filing system be justified on an informational basis only? Or, alternatively, what change or changes to the present system might be made to enhance its ability to provide useful information to prospective creditors, thus legitimizing the system's existence?

The present state of technology allows state and local filing offices to provide a multitude of information (i.e., the amount of the underlying obligation, the terms of the underlying obligation, etc.) to prospective creditors if the financing statement forms are amended to accommodate or require such information. Computer databases can store significantly more data than conventional, paper-based storage facilities and at a much lower cost. At present, however, no serious plans exist to increase the informational or data requirements of a financing statement.¹⁷⁵ If anything, the trend is in the other direction—toward the notion that Article 9 is merely a notice-filing system that provides prospective creditors with at most a very broad description of the type of collateral encumbered, the names and addresses of

174. Alces, *supra* note 6, at 994-701 (arguing that the Article 9 filing system need not provide more than basic information about the debtor's assets in order to be a valuable source of information).

175. Cf. Lynn M. LoPucki, *Computerization of the Article 9 Filing System: Thoughts on Building the Electronic Highway*, LAW & CONTEMP. PROBS., Summer 1992, at 5, 30-31 (1992) (outlining three types of information that searchers of the Article 9 filing system need, and positing that computerization of the filing system could deliver these data).

the relevant parties, and the date on which the filing became effective.

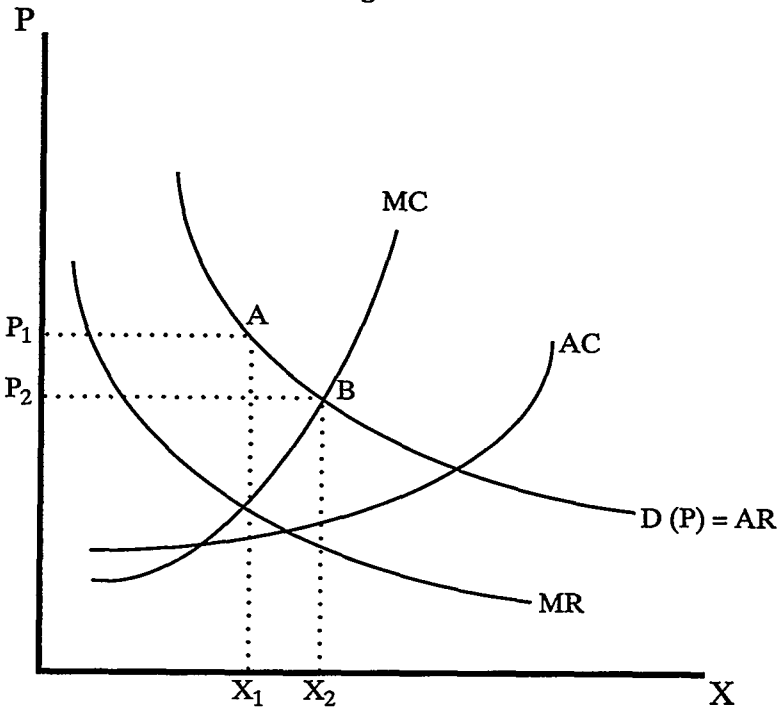
Still, technology, combined with the profit motive, can play a valuable role in improving the informational quality of even a bare-bones notice-filing system. Under the present systems, searchers and filers obtain filing information primarily through direct contact with the filing office. The repository of filing information under this paradigm is the government filing office. Third party databases containing relevant filing information also exist, of course. Problematically, however, these databases are neither complete, from a national perspective, nor often up to date. Many "official" filing offices refuse to provide private vendors with bulk filing information, or only do so with considerable lag time—often over a month or more after a given filing is made, thus significantly decreasing the value of the information. If, however, the states would allow private firms full and timely access to filing information, then these private firms would have both the technical ability and the financial incentive to disseminate this information in a timely and cost-effective manner.

Essentially, government filing offices operate as monopolies with respect to filing information. In economic terms, a monopoly exists when an industry consists of only one firm—as is the case with filing offices, which often serve as the only official and timely repository of filing information. A primary characteristic of a monopoly is that it acts as a price maker in its decisionmaking rather than a price taker. In other words, the demand curve facing the monopolist is the industry demand curve.¹⁷⁶ Monopoly power leads to a misallocation of resources in the economy—i.e., welfare losses. To identify the source of this misallocation, consider this simple case. Assume that an identical filing system could be provided in either a monopolistic government-run format or a competitive industry, both having the same cost curves.¹⁷⁷ Figure 12 illustrates the cost-revenue situation in this context.

176. JAMES P. QUIRK, *INTERMEDIATE MICROECONOMICS* 288-311 (2d ed. 1983) informs much of the economic analysis used in this text.

177. There are good reasons to believe that this assumption is problematic, as monopolies often arise because of cost advantages that are due to the scale of their operations.

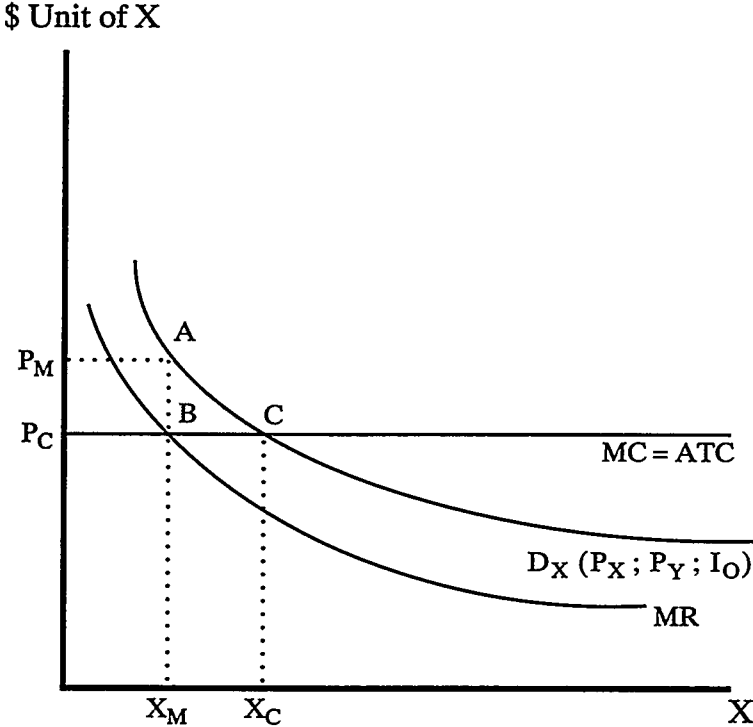
Figure 12



In this case, the monopoly maximizes profits by choosing the price-output combination $A=(x_1, p_1)$, where $MR=MC$. Under competition, the market price and output are set at the point where the industry supply curve (the MC curve) crosses the demand curve, which means that the competitive industry chooses the price-output combination at point $B=(x_2, p_2)$. Monopoly power restricts output (x_1 is less than x_2)—in this case the service provided by the filing offices—and increases price (p_1 is greater than p_2). Additionally, profits are greater under a monopoly than under a competitive system, because at A profits are maximized, given the demand curve $D(p)$. Because output is lower under monopoly than under a competitive system, inputs are restricted as well. Thus, the distribution of income under a monopoly shifts in the direction of higher profits for the monopoly firm's owners—the state bureaucracy—with smaller earnings within the industry for the capital and labor inputs used in producing the industry's outputs. Monopoly control of the industry distorts price, output, and the distribution of income, as compared to a competitive industry with the same costs. In doing so, monopolies produce welfare losses.

To understand welfare losses in this scenario, assume that there are constant costs for a monopoly industry producing good X . A measure of the welfare loss that is due to the monopoly is the area of triangle ABC in Figure 13 below.

Figure 13



In Figure 13, the demand curve $D_x(p_x, p_y, I_0)$ is the consumer's compensated demand curve with p_y constant and the level of indifference I_0 constant as well. Constant costs imply the straight line $MC=ATC$ curve. Under a monopoly, the monopolist sets price and output at point $A=(p_M, X_M)$, whereas under competition, firms set price and output at point $C=(p_C, X_C)$. At A , consumer's surplus is the area underneath the demand curve from p_M upward. But at A , profits (the area of rectangle $p_M ABp_C$) also go to the consumer. At C , under competition, there are no profits, and consumer's surplus is the area under the demand curve from p_C upward. It follows that area ABC is a measure of the loss to the consumer from monopoly power in industry X , so long as p_y and I_0 are held constant. That is, ABC is the difference between the consumer surplus area under competition and the

surplus area under monopoly, which is equal to the consumer surplus plus the producer surplus (profits) that accrue to consumers. To estimate this amount in the instant case, one must primarily consider the elasticity of the demand curve; the more elastic the curve, the smaller area *ABC* is.

Even assuming that existing state filing systems result in welfare losses, if there were no barriers to entry, then clearly the states' monopoly power would be purely a short-run phenomenon. If the monopolist sets prices above the competitive level (i.e., \$15 for a computer search and printout of filings made under the debtor's name, XYZ Corporation) and restricts output to maximize profits, then the resulting excess profits would create incentives for entry into the industry, until price is forced down to the long-run competitive level where price (*p*) equals the minimum of the long-run average cost (*AC*).

Monopoly power, such as that exhibited by the states, can persist only if there are natural or artificial barriers to entry into the industry. Natural barriers arise because of the industry's technological characteristics. Artificial barriers stem from society's social, political, or economic institutions. A natural monopoly arises when there are increasing returns to scale in an industry, over a wide range of output levels. Because of these increasing returns to scale, a firm facing competitive input markets can undercut any firm producing a smaller output level, because per-unit costs decrease as output increases. Thus, with increasing returns, the monopoly firm can charge prices that generate excess profits without entry occurring. The monopolist also can squeeze a prospective entrant by lowering price in the short run until the entrant takes losses; the monopolist then returns the price to the monopoly level once the entrant has been forced out. More problematic in the case of the filing system is that the state can offset any losses it might suffer on filing system operations with other revenues.

The most common examples of natural monopolies are public utilities, such as electric power companies, natural gas pipelines, telephone companies, and water and gas companies. Generally, the state imposes regulatory controls on natural monopolies, or a government body owns and operates them—as in the filing system case. In the case of privately owned monopolies, government imposes these controls to reduce the welfare losses that arise when monopolistic pricing and output-setting takes place. These controls are necessary because, even in the long run, market forces cannot always eliminate monopoly

abuses. In the instant context, the filing system is operated by the states. Importantly, however, state operation does not reduce the welfare losses, because states seeking to maintain their monopoly profits have limited access by creating artificial barriers to entry. In short, the fox is in the hen house and has no intention of leaving. Indeed, the fox not only enjoys an intractable advantage over competitors because of its natural monopoly status but has also gone a step further and locked the doors from the inside, thus denying (or at least limiting) access to potential competitors.

The monopoly profits that states generate from their filing systems are significant. Estimates suggest that the collective costs of running the various state and local filing systems exceed \$500 million annually, while the revenues derived from these operations exceed well over \$900 million annually.¹⁷⁸ Of course, few would contend that states actively compete against other entrants into the market by lowering their prices. The point of a monopoly is that they need not actually do so. Their natural monopoly status as well as artificial barriers to entry prevent challenges to state preeminence. As a result, all the systems' users pay a much higher price than required. The information costs of the filing system, in other words, are higher than they need be because states are realizing monopoly profits.

How do we solve this dilemma? One possibility is that we reduce artificial barriers to entry by requiring states to provide private vendors with complete and timely filing information at a price equal to the states' costs of obtaining that information. If private parties are allowed access to the state databases, they are likely to develop the same effective and timely delivery systems for Article 9 searches that they have developed for other "public records" such as statutes and court opinions. The cost for developing such systems would be, in fact, quite minimal. The major online research services already provide search options for handling plurals, possessives, equivalencies, root expansion, wildcards, insignificant words, and so on. A creditor could use "database monitoring" features, such as Westlaw's WestClip service, to continually poll Article 9 databases for comparison to a list of debtor names. Attorneys, moreover, could coordinate their Article 9 searches with more comprehensive background checks in related Dow Jones and Dun & Bradstreet databases.

178. Paul M. Shupack, *On Boundaries and Definitions: A Commentary on Professor Baird*, 80 VA. L. REV. 2273, 2273 n.1 (1994).

Using scanning technology, vendors could quickly and accurately bring paper and microfilm jurisdictions online, providing the full text of financing statements (including collateral descriptions), rather than simply indexes. Importantly, computerized jurisdictions provide only an index primarily because they have to enter the data manually. Manual data entry has a ninety to ninety-five percent accuracy rate. That rate can now be matched or bettered by commercial scanning technology, especially when scanning forms such as UCC-1s.

If this technology exists, and if there is money to be made in the Article 9 filing context, we might ask why current online Article 9 databases cover fewer than twenty states and reflect a lag time of up to one month. By contrast, court opinion databases cover all fifty states. Electronically distributed court opinions are loaded to online services the same day they are received, and in some cases within twenty minutes. Hard copy court opinions received through the mail are scanned and loaded within one to three days.

The problem does not lie in the private sector, but in the network of rules, policies, and practices relating to the publication of financing statements that assures that states retain a continued monopoly. Court opinions serve as a useful analog here. States generally do not publish court opinions. Rather, they allow publishers to bid for designation as the state's "official" publisher. By giving every publisher equal access to court opinions, the states encourage losing publishers to compete against the official publisher. As a result, there are more than 140 providers of full-text state and federal caselaw in more than 500 sources. This multitude of information sources has greatly reduced access costs.

Accordingly, this Article recommends that, in addition to the recommendations currently under discussion, the Drafting Committee consider new rules and amendments that will encourage the widespread, instantaneous publication of financing statements by private vendors, including:

1. A requirement that filing offices make Article 9 filing data available to publishers;
2. The establishment of a periodic bidding process for designating a vendor as the state's "official" private filing, repository, and search system; and

3. The establishment of certification standards and procedures for the accuracy rate of scanned and keyboarded data and for official search logic.¹⁷⁹

Additionally, this Article recommends that Article 9 be amended to provide private vendors with immunity from liability for erroneous filing information obtained from the appropriate state authorities. That is, private vendors should be insulated from liability with respect to errors that are the products of the state filing offices. Furthermore, this Article suggests that the Drafting Committee seriously consider extending to private vendors the heightened liability standard of "gross negligence" that many state officials enjoy for official actions in connection with filings. Such an amendment would provide private vendors with protection similar to that provided to many state officials, thus depriving monopolistic state filing offices of an important competitive advantage.

CONCLUSION

Central to a successful revision of Article 9 are amendments to the filing system that promote uniformity, recognize existing and likely technological advances, and end (or reduce) state filing system monopolies. Technology has brought within reach the possibility of a paperless, efficient, low cost, accurate filing system. Amendments to the filing system that complete the process of making this possibility a reality are now required.

179. See Alces, *supra* note 6, at 686 ("arguing that the law or regulations could provide greater certainty about what a search report must contain" and thereby determine the responsibility of the searcher for review of the report."); see also PEB REPORT, *supra* note 68, at 30-31:

Although thirty-four states reported that certified searches are prepared, only ten states responded that a certified search verifies that all statements on file in the debtor's name are included in the search report. The significance of a certified search in other states is unclear, with two [states] responding that the only significance of a certified search is that it contains the official seal of the Secretary of State's office, several reporting that certified searches are admissible in court, and two states responding that a certified search indicates that it was conducted by appropriate personnel.

APPENDIX A: Iowa Admin. Code

721—6.1(554) Electronic filing — definitions. In this chapter:

“Electronically filed document” means a financing statement, amendment, continuation statement, termination including a partial release, or assignment, filed pursuant to this chapter.

“Electronic filing” means the authorized electronic transmission of information required by the uniform commercial code and these rules, from a secured party to the secretary of state, for the filing in the office of the secretary of state of a financing statement, amendment, continuation statement, termination including a partial release, or assignment pursuant to Iowa Code section 554.9402, 554.9404, or 554.9405.

721—6.2(554) Electronic filing — authorized. A filing party may be authorized for electronic filing upon the written authorization of the secretary of state.

The secretary of state shall authorize a filing party for electronic filing if the filing party holds an account for the billing of fees by the agency, and if the agency determines, after appropriate testing in accordance with the agency’s specifications, that the agency is capable of receiving, indexing, and retrieving the data transmitted by the filing party. The secretary of state may suspend or revoke authorization for electronic filing when, in the secretary of state’s discretion, it is determined that a filing party’s transmissions are incompatible with the agency’s electronic filing system.

A request to be authorized for electronic filing shall be addressed to the Secretary of State, Business Services Division, Hoover State Office Building, Des Moines, Iowa 50319. Upon a request for authorization, the agency shall provide the filing party with necessary information on the record layout for the transmission, including record length, format, and other specifications necessary to test the filing party’s electronic filing capabilities.

721—6.3 (554) Standard form. Except as otherwise provided in this rule, an electronically filed document is in standard form for the purpose of fees imposed under the uniform commercial code.

An electronically filed document is in nonstandard form if a description of collateral is required and the description exceeds 250 characters in length, exclusive of characters used as standard collateral codes.

721—6.4(554) Contents of transmissions. Each transmission of one or more documents for electronic filing shall include identification of the filing party in a form approved by the secretary of state and the filing party's account number for the purpose of billing fees. Each electronically filed document shall be identified by a number assigned by the filing party in a form approved by the secretary of state. An electronically filed document that requires identification of a debtor shall contain the federal tax identification number or social security number of the debtor and shall indicate whether the debtor is an individual or an entity other than an individual. In addition, an electronically filed document shall contain all the information required by this rule.

6.4(1) An electronically filed original financing statement shall contain all the following information in designated, machine readable fields:

- a.* The code "1".
- b.* The name of the debtor.
- c.* The mailing address of the debtor.
- d.* The signature of the debtor.
- e.* The name of the secured party.
- f.* An address of the secured party from which information concerning the security interest may be obtained.
- g.* A statement indicating the types, or describing the items, of collateral. An identification number or serial number of a piece of equipment or other collateral may be transmitted in a field designated for that purpose provided that a description of the equipment or other collateral is also transmitted in an associated field. The statement indicating the types of collateral may consist of one or more of the standard collateral codes adopted in rule 721—6.6(554).

The name and address of an assignee may be transmitted in an electronically filed original financing statement.

h. If applicable, an indication that the debtor is a transmitting utility, or that the financing statement relates to a lien, pledge, or security interest incident to bonds issued under Iowa Code chapter 419.

6.4(2) An electronically filed continuation statement shall contain all the following information in designated, machine readable fields:

- a.* The code "A".
- b.* The name of the secured party of record.
- c.* The signature of the secured party of record.
- d.* The file number of the original financing statement.

6.4(3) An electronically filed partial release must contain all the following information in designated, machine readable fields:

- a. The code "B".
- b. The file number of the original financing statement.
- c. The name of the secured party of record.
- d. The signature of the secured party of record.
- e. A statement indicating the types, or describing the items,

of collateral that remain secured under the security agreement. An identification number or serial number of a piece of equipment or other collateral may be transmitted in a field designated for that purpose provided that a description of the equipment or other collateral is also transmitted in an associated field. The statement indicating the types of collateral may consist of one or more of the standard collateral codes adopted in rule 721—6.6(554).

6.4(4) An electronically filed assignment shall contain all the following information in designated, machine readable fields:

- a. The code "C".
- b. The name of the debtor.
- c. The name of the secured party of record.
- d. The signature of the secured party of record.
- e. The file number of the original financing statement.
- f. The date on which the original financing statement was filed.

g. A description of the collateral assigned. An identification number or serial number of a piece of equipment or other collateral may be transmitted in a field designated for that purpose provided that a description of the equipment or other collateral is also transmitted in an associated field. The statement indicating the types of collateral may consist of one or more of the standard collateral codes adopted in rule 721—6.6(554).

- h. The name and address of the assignee.

i. An indication as to whether the assignment is a full or partial assignment of collateral described in the financing statement.

6.4(5) An electronically filed termination statement shall contain all the following information in designated, machine readable fields:

- a. The code "D".
- b. The file number of the original financing statement.
- c. The name of the secured party of record.
- d. The signature of the secured party of record.

6.4(6) An electronically filed amendment to a financing statement, other than an amendment merely to change the name of the secured party, shall contain all the following information in designated, machine readable fields:

- a. The code "E".
- b. The file number of the original financing statement.
- c. A restatement of the financing statement in its entirety, incorporating all amendments into the financing statement, and including all information required by subrule 6.4(1), paragraphs "b" through "g".
- d. The name of the debtor.
- e. The signature of the debtor.
- f. The name of the secured party of record.
- g. The signature of the secured party of record.

6.4(7) An electronically filed amendment to a financing statement for the sole purpose of changing the name of the secured party shall contain all the following information in designated, machine readable fields:

- a. The code "F".
- b. The file number of the original financing statement.
- c. The name of the debtor.
- d. The new name of the secured party of record.
- e. The signature of the secured party of record.

721—6.5(554) Signature of debtor or secured party. An electronically filed document shall contain the signature of the debtor or secured party when required in these rules. The signature of the debtor or secured party shall be as follows.

1. For the signature of the debtor, the name of the debtor shall be transmitted in a field designated as the debtor signature fields. The transmission of the debtor's name in the debtor signature field shall indicate that the secured party maintains a writing signed by the debtor in which the debtor adopts the contents of the debtor signature field with the intent to authenticate the electronically filed document. The writing may be in the following form, although the form is not mandatory:

AUTHENTICATION OF ELECTRONICALLY FILED DOCUMENT

A. The secured party is authorized to transmit _____ to the secretary of state of Iowa for the purpose of authenticating an electronically filed document, described as follows:

<u>Document</u>	<u>Description</u>	<u>Date</u>
UCC1 financing statement	_____	_____
UCC3-A continuation	_____	_____
UCC3-B partial release	_____	_____
UCC3-C assignment	_____	_____
UCC3-D termination	_____	_____
UCC3-E amendment	_____	_____

B. I hereby adopt the symbol transmitted to the secretary of state of Iowa and designated in paragraph A, with the intent to authenticate the document described above, as required by the provisions of the Uniform Commercial Code, Iowa Code chapter 554.

_____ (name of debtor)
 _____ (signature)
 _____ (date)

2. For the signature of the secured party, a symbol designated as the secured party's signature shall be transmitted in the secured party signature field. The transmission of the symbol in the secured party signature field shall indicate that the secured party maintains a writing signed by the secured party in which the secured party adopts the symbol with the intent to authenticate the electronically filed document.

721—6.6(554) Standard collateral codes. For the purpose of electronic filing, a standard collateral code is a description of collateral that has been assigned a code and adopted by rule by the secretary of state. The secretary of state, in responding to a request for a paper copy of an electronically filed document shall print the full text of the statement corresponding to the code. Secured parties authorized for electronic filing are encouraged, whenever appropriate in the discretion of the secured party, to use standard collateral codes in electronically filed documents in order to minimize magnetic media storage space. Any secured party authorized for electronic filing may petition the secretary of state to adopt a standard collateral code by sending a letter of request to the Business Services Division, Hoover State Office Building, Des Moines, Iowa 50319. The following standard collateral codes are adopted:

X1 INVENTORY: All inventory of the borrower, whether now owned or hereafter acquired, and wherever located.

X2 EQUIPMENT: All equipment of the borrower, whether now owned or hereafter acquired, including, but not limited to, all present and future machinery, vehicles, furniture, fixtures,

manufacturing equipment, farm machinery and equipment, shop equipment, office and record-keeping equipment, parts and tools, and the goods described in any equipment list or schedule herewith or hereafter furnished to the lender by the borrower (but no such schedule or list need be furnished in order for the security interest granted herein to be valid as to all of the borrower's equipment).

X3 FARM PRODUCTS: All farm products of the borrower, whether now owned or hereafter acquired, including but not limited to (i) all poultry and livestock and their young, products thereof and produce thereof, (ii) all crops, whether annual or perennial, and the products thereof and (iii) all feed, seed, fertilizer, medicines and other supplies used or produced by the borrower in farming operations.

X4 ACCOUNTS AND OTHER RIGHTS TO PAYMENT: Each and every right of the borrower to the payment of money, whether such right to payment now exists or hereafter arises, whether such right to payment arises out of a sale, lease, or other disposition of goods or other property by the borrower, out of a rendering of services by the borrower, out of a loan by the borrower, out of the overpayment of taxes or other liabilities by the borrower or otherwise arises under any contract or agreement whether such right to payment is or is not already earned by performance, and howsoever such right to payment may be evidenced, together with all of the rights and interest (including all liens and security interest) which the borrower may at any time have by law or agreement against any account debtor or other obligor obligated to make any such payment or against any of the property of such account debtor; all including, but not limited to, all present and future debt instruments, chattel papers, accounts, loans and obligations receivable and tax refunds.

X5 GENERAL INTANGIBLES: All general intangibles of the borrower, whether now owned or hereafter acquired, including, but not limited to, tax refunds, applications for patents, patents, copyrights, trademarks, trade secrets, good will, trade names, customer lists, permits and franchises, and the right to use the borrower's name.

X6 GOVERNMENT PROGRAMS: All government payments or entitlements including, but not limited to, deficiency, setaside, conservation, PIK, sealed grain, reserve grain and storage.

721—6.7(554) Filing type codes. An electronically filed document shall be identified by one of the codes required in rule 721—6.4(554). The codes shall have the meanings designated in

this rule. The secretary of state, in responding to a request for a paper copy of an electronically filed document, shall print the full text of the statement corresponding to the code.

6.7(1) The code "1" shall be deemed as the following statement: "UCC-1 FINANCING STATEMENT — This financing statement is presented to the secretary of state for filing pursuant to the uniform commercial code."

6.7(2) The code "A" shall be deemed as the following statement: "UCC-3 CONTINUATION — The original financing statement bearing the file number transmitted in this document is still effective."

6.7(3) The code "B" shall be deemed as the following statement: "UCC-3 PARTIAL RELEASE — The secured party releases property described in the financing statement bearing the file number transmitted in this document. This document contains a description of all collateral that remains secured under the security agreement."

6.7(4) The code "C" shall be deemed as the following statement: "UCC-3 ASSIGNMENT — The secured party certifies that the assignee named in this document has been assigned the secured party's rights under the financing statement bearing the file number transmitted in this document."

6.7(5) The code "D" shall be deemed as the following statement: "UCC-3 TERMINATION — The secured party certifies that a security interest no longer is claimed under the financing statement bearing the file number shown on this document."

6.7(6) The code "E" shall be deemed as the following statement: "UCC-3 AMENDMENT — The financing statement bearing the file number shown on this document is restated in its entirety, as described in this document."

6.7(7) The code "F" shall be deemed as the following statement: "UCC-3 AMENDMENT — The financing statement bearing the file number shown on this document is amended to change the name of the secured party."

721—6.8(554) Identification of secured party. When a rule governing electronic filing requires the name of the secured party, the name of the secured party of record, or the address of the secured party, the filing party shall transmit to the secretary of state a secured party identification number designated by the secretary of state. The secretary of state, in responding to a request for a paper copy of an electronically filed document, shall print the full name and address of the secured party corresponding to the identification number. A list of secured parties identi-

fied by the secretary of state pursuant to this rule shall be maintained for inspection by the secretary of state in the Hoover State Office Building, Des Moines, Iowa.

721—6.9(554) Date of electronically filed document. An electronically filed document is filed on the date and time the transmission is received by the secretary of state.

6.9(1) The secretary of state shall provide the filing party with a confirmation of all documents in a transmission that meet the requirements of this chapter and the date and time of filing.

6.9(2) A record transmitted to the secretary of state that does not contain the information required by this chapter shall not be filed, and the secretary of state shall provide the filing party with a notice that identifies the record and states the reason for rejection of the record.

APPENDIX B*

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
AL	Yes	Traditional form filing	Direct-access off-site, or traditional written request	Depends on number of filings or searches	Debtor name is input as it appears on filing, except periods are replaced by spaces; X-index; addresses entered	Exact match of debtor name as requested; can view addresses and name variations	Yes; certifies that it is a list of all statements on file in debtor's name
AK	No	Traditional form filing	Computer; walk-ins access to computers; written request	Typically forty-eight hours	Debtor name is input as it appears on filing; no X-indexing	Exact match of debtor name; variations can be searched as well	Yes; UCC-11 form
AZ	No	Traditional form filing	Computer; changing to imaging written or walk-ins	Five days	Filed exactly and X-index multiple debtors and DBA debtors	Exact match; can show name variations	Yes

* The PEB REPORT, *supra* note 68, at 81-108, and an internal Article 9 Filing Project report prepared by Patricia Pardun Bogenrief (on file with authors) served as a basis for this Appendix.

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
AR	No	Traditional form filing	Manual searches only either in person or by written request	One or two days	Debtor name is input only; no X-indexing	Exact match of debtor name; variations can be searched as well	Yes; contains the seal of the Secretary of State
CA	Yes	Traditional form filing	Access limited to state employees	Eight to ten days	Debtor name is input as it appears on filing; X-indexing available upon request	Exact match; variations will not be provided for spaces or punctuation	Yes; certifies that it is a list of all filings in debtor's name
CO	Yes	Traditional form filing	Computer and manual searches conducted by Secretary of State, will accept written request	Ten working days	Filed exactly and X-index multiple debtors and DBA debtor	Exact match; can check variations but not unless requested	Yes; all searches are certified

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
CT	Yes	Traditional form filing	Computer and manual searches conducted by state	Thirty days	Debtor name is input; no X-indexing available	Exact match; able to search variations of the name	No
DE	Yes	Traditional form filing	Combined on-line and manual, by employees of the State	Within twenty-four hours	Debtor name is input as it appears on filing; X-index multiple debtors; all addresses entered	Exact match of debtor name as requested, except punctuation	Yes; all searches are certified and guaranteed correct
DC	Yes	Traditional form filing	Public access to computer and manual files in office; or traditional written request	N/A	Debtor name is input as it appears on filing; X-indexing; no addresses entered	Exact match of debtor name as requested; variations can be obtained by directly accessing manual files	No

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
FL	Yes	Traditional form filing [Nearing testing stage for electronic UCC filing]	On-line search through Compu-Serve; public access in state office; or traditional written request	Two or three days	Debtor name is input as it appears on filing; X-indexing; no addresses entered	"Compact"—searches name requested w/o punctuation or spaces; "actual"—exact match	No; certify copies of documents, not searches
GA	N/A; all filings are made locally	—	—	—	—	—	—
HI	No	Traditional form filing	Public access through manual search conducted by state	One week	Debtor name search only; X-indexing by addresses only	Exact match only	No
ID	Yes	Traditional form filing	Remote computer access available; traditional written request	Three to five days	Debtor name search only; no X-indexing available	Exact match; it is possible to search variations of the name	Yes; certified as to the accuracy of information

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
IL	Yes	Traditional form filing	Computer: walk-in or written request conducted by State	Immediately	Exact spelling and no punctuation; X-indexing and DBA filed	Exact match; unless request any/all variations	Yes; seal of Secretary of State
IN	No	Traditional form filing	Manual: written or walk-ins; state employees conduct the searches	Twenty-four hours	Filed exactly as styled on form; X-indexed, all DBA listed in card files	Exact match; unless request any/all variations	Yes; contains a gold embossed seal
IA	Yes	Traditional form filing	Computer; walk-in, fax, or written conducted by State	Immediately	Exact spelling and no punctuation. X-index and DBA filed	Exact match; will provide variations upon searching	Yes; UCC-11 form
KS	Yes	Traditional form filing	Computer: written searches only conducted by state employees	Immediately	Filed exactly, no punctuation; Tax ID needed; X-index and DBA	Exact match unless request any/all variations	Yes; provides that all current info has been reported for debtor name

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
KY	No	Traditional form filing	Manual searches; no searches offered by state employees	N/A	Filed exact including punctuation; X-index and DBA additional charge	Exact match including punctuation	Not available
LA	Yes	Traditional form filing in any of the 64 Parishes	In the office of the Parish Clerk of Court; larger Parishes have public access; all take traditional written requests	N/A	Debtor name is input as it appears on filing, except: initials have no spaces; written numbers are entered numerically; any individual's name in debtor name is entered last name, first name	Exact match of debtor name and/or tax ID # as requested; supplemental listings are provided with variations on the requested name	Issued by clerk of court

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
MD	Yes	Traditional form filing	Through vendors who purchase bulk data; or public-access terminals in state office	N/A	Debtor name inputted as it appears on filing; except individuals are always last name, first name; X-indexing multiple debtors; No addresses entered	Exact match of debtor name as requested; variations will appear on screen	NOT available
MA	Yes	Traditional form filing	Direct access off-site and in state office; or by traditional written request	One week	Debtor name inputted as it appears on filing; X-index up to 2 names; 1 address entered per filing	Exact match of debtor name as requested; variations will appear on screen	No; UCC-11 search only signifies that search was conducted
MI	No	Traditional form filing	Computer; walk-in or written conducted by state employee	Three weeks	Filed exact by spelling; X-index and DBA, no punctuation used	Exact match, but will provide variations on request	Yes; includes a "sealed" document and often used in legal proceedings

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
MN	Yes	Traditional form filing	Computer; fax, walk-in or written	Depends on number of filings on file	Filed exact by spelling; X-index and DBA; no punctuation	Exact match, but will provide variations on request; punctuation omitted	Yes; Secretary of State certifies information to be true and correct
MS	Yes	Traditional form filing	Direct-access off-site; or traditional written request; no public access in office	Next day	Debtor name inputted as it appears on filing, X-indexing; all addresses entered	Exact match of debtor name, except for punctuation	Yes; certification of all presently effective financing statements
MO	No	Traditional form filing	Computer; written request conducted by state employee	Same day	Filed exact by spelling; X-index and DBA, no punctuation	Exact match; no Variations offered	Yes; can be used in court
MT	Yes	Traditional form filing	Remote computer access; walk-in service; traditional written request	One to two days	Debtor name search and X-indexing available	Exact match; variations provided for middle initial of debtor's name	Yes; certifies that data supplied is true and correct

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
NE	Yes	Traditional form filing	Computer; written request conducted by state employee	Same day	Filed exact by spelling; X-index and DBA, limited punctuation	Exact match; show any/all variations with request	Yes; no significance in certification
NV	Yes	Traditional form filing	Remote access available; traditional written request	One to one and a half weeks	File by debtor name only	Exact match No variations provided	Yes
NH	No	Traditional form filing	—	One day	—	—	No
NJ	No	Traditional form filing	—	Eight and one half business hours	—	—	—
NM	No	Traditional form filing	Computer; walk-in only (self service terminal); no searches provided by state employees	N/A	Filed exact by spelling, limited punctuation; X-index and DBA	Exact match; Show close variations on the system	No

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
NY	No; data input in progress	Traditional form filing	Manual search of the files	One to twenty-four hours	Debtor name as it appears on filing; X-index multiple debtors	Yet to be determined	Yes; certifies that information is from statutory specified data-base
NC	Yes	Traditional form filing	Direct access off-site; public access in office; or traditional written request	Next day	Debtor name is input as it appears on filing, minus punctuation (except ") X-indexing; addresses entered	Exact match; state will provide variation name listing	Yes; certifies that search conducted by trained personnel
ND	No	Traditional form filing	Computer: searches conducted by state; walk-ins with limited computer time	Fifteen minutes	Filed exact by spelling, X-index and DBA, limited punctuation.	Exact match; show any/all variations offered in system	Yes
OH	No	Traditional form filing	Computer: walk-in or written conducted by state employees	Two to ten working days	Filed exact with punctuation. X-index and DBA filed.	Exact hit; variations only as requested	Yes; certifies validity of the search

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
OK	No	Traditional form filing	Computer; written of fax conducted by state employees	Eight hours	Filed exact with punctuation. X-indexed and DBA filed.	Exact hit and variations provided with all searches	Yes; it then becomes a legal document
OR	Yes	Traditional form filing	Remote access; walk-in service; traditional written request	Two days to one week	Debtor name and X-indexing available as a special request	Exact match; variations of the name provided	Yes; certifies that a complete search has been conducted and signed by authorized agent
PA	Yes	Traditional form filing	Via vendor who purchases bulk data; public access in state office; or by traditional written request	Twenty-four to forty-eight hours	Name is input as is, without punctuation except ' or -; personal initials with spaces; X-indexing; input up to 10 addresses	Exact match; condenses information by removing most punctuation	Yes; certifies date that search covers
RI	Yes	Traditional form filing	Computer search conducted at the Secretary of State office	One to three weeks	Debtor name as it appears on filing; no X-indexing	Exact match only.	Yes; certifies that all financing statements are effective as search date

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
SC	Yes	Traditional form filing [pilot program for electronic filing about to begin]	Direct access off-site; or traditional written request	Same day	Debtor name inputted as it appears on filing; X-indexing; all addresses entered	Variation on exact match; will match initials regardless of how filed; knows "&" = "and"	Yes; certifies that report contains all information on file
SD	Yes	Traditional form filing	Computer; walk-in or written conducted by state employees	Two to five days	Filed exactly with punctuation. X-index and DBA filed	Exact hit; if close in variation they will show, but at their discretion	Yes; certifies that search is true and correct
TN	No	Traditional form filing	Manual; walk-in or written searches by state employees	Two or three days	Filed exactly by first names on filing; no X-index or DBA.	Exact hit and no variations provided	Yes; certifies that information is true and correct

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
TX	Yes	Traditional form filing	Computer: walk-in, fax or phone	One to three days	Per instruction manual; X-indexed for additional fee	Direct hit plus algorithms; supplemental listing of similar names	Yes; certifies officers' report of filings for a particular debtor and copies of documents
UT	Yes	Traditional form filing	Computer: walk-in, fax or written by any person	Same day to twenty-four hours	Filed exact with punctuation and will X-index and file DEA	Exact hit (if common need SS#) and provide variation	Yes; no real significance
VT	No; about to begin	—	—	—	—	—	—
VA	Yes	Traditional form filing	Direct-access off-site; public access in office; or traditional written request	Twenty-four hours	Debtor name is input as it appears on filing; X-indexing; all addresses entered	Exact match; also shows alphabetical listing of names beginning with name entered	Yes; certifies that what is on file is true and correct

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
WA	Yes	Traditional form filing	Remote access available nationally; traditional written request	Two hours	Debtor name is input as it appears on filing; X-indexing by multiple debtor names	Exact match; variations provided by addresses and multiple debtors	Yes; certifies that it was completed by filing officer designated by statute
WV	In Process	Traditional form filing	Traditional written request; state employees do combined on-line and manual search	Varies on number of searches pending	Debtor name is input as it appears on filing, except for punctuation; X-indexing; no addresses entered	Exact match of debtor name, except for punctuation	Yes; admissible in court
WI	No, but soon this year	Traditional form filing	Computer: micro fiche and printout; walk-ins and fax	Two days	Filed exact with no punctuation and will X-index and file names	Exact hit with variations shown and provided upon request	Yes

State	On-Line	Electronic Or Traditional Filing	How Searches Are Conducted	Turn Around Time For Search	General Data Input Rules	General Search Rules and Logic	Certified
WY	Yes	Traditional form filing	Computer: walk-in fax and written conducted by state employee	Two to five days	Filed exact with all punctuation and will X-index and file DBA	Exact hit only and no variations provided	N/A